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A PRACTICAL TREATISE

ON THE

CAUSES, SYMPTOMS AND TREATMENT

OF

SPERMATORRHŒA:

BY

M. LALLEMAND,

FORMERLY PROFESSOR OF CLINICAL SURGERY AT THE UNIVERSITY OF MONTPELLIER, ETC.

Translated and Edited by

HENRY J. McDOUGALL,

MEMBER OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND, ETC. ETC.

Fifth American Edition.

TO WHICH IS ADDED,

ON DISEASES OF THE VESICULÆ SEMINALES,

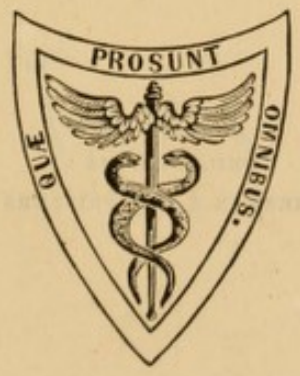
AND THEIR ASSOCIATED ORGANS:

WITH SPECIAL REFERENCE TO THE

MORBID SECRETIONS OF THE PROSTATIC AND URETHRAL MUCOUS MEMBRANE.

BY

MARRIS WILSON, M.D.



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PUBLISHER'S NOTICE.

A CONSIDERABLE period having elapsed since the publication of the work of M. Lallemand, the publisher has thought that the value of the present edition might be enhanced by the addition of the little treatise of DR. MARRIS WILSON. The reader will thus have the advantage of comparing the views advanced by M. Lallemand with recent results of professional experience, embodying the present state of the subject investigated with the aid of modern pathology.

PHILADELPHIA, July, 1858.

AUTHOR'S PREFACE.

DURING a period of fourteen years, I have collected more than one hundred and fifty cases in which involuntary seminal discharges were sufficiently serious to disorder the health of the patients considerably, and even sometimes to cause death.

Most of these patients have been sent to me on account of suspected cerebral affections of more or less standing. Hence, by a singular chance, it has been in consequence of the publication of my "*Recherches Anatomico-Pathologiques, sur l'encephale et ses dependances,*" that I have obtained the most remarkable cases of diurnal pollutions; and I have correctly refused to acknowledge the presence of disease of the brain or its membranes in many cases where the existence of such disease had previously been considered indisputable.

Many other of these patients were supposed to suffer from chronic gastritis, or gastro-enteritis; from aneurisms near the heart, the early symptoms of phthisis, &c., &c.; and in other cases from nervous affections, and especially from hypochondriasis.

These few words show how frequent, important, and difficult of detection, are involuntary seminal discharges, and to what deplorable errors of treatment they daily give rise: it may be foreseen, too, that their causes must be very varied, and their treatment present considerable difficulties.

The *brochure* of Wickmann and the commentaries on it by Sainte-Maria,[1] are the only writings we possess, on a disease that degrades man, poisons the happiness of his best days, and ravages society! Of the researches of these conscientious observers, too, the profession are almost ignorant.

They have, nevertheless, done all in their power to call the atten-

[1] Dissertation sur la pollution diurne involuntaire; par Wickmann; traduction de Sainte-Maria.—*Lyons*, 1817.

tion of practitioners to a subject of which they fully felt the importance, and they have stated many valuable truths. Why is it, then, that a more lasting impression has not been made on the medical world? Doubtless because they have not supported their statements by a sufficient number of well-detailed cases, and especially because those related are vaguely and generally stated.

Although Wickmann and Sainte-Maria have stated facts which have not been appreciated, they have left numerous omissions to be supplied, and more than one serious error to be corrected.

The materials I possess permit me to hope that I shall be more successful; at all events, I consider it my duty to publish them.

EDITOR'S PREFACE.

In laying the following condensed edition of M. Lallemand's important work on Involuntary Seminal Discharges before my professional brethren in an English dress, I have been actuated by the conviction that the disorder treated of is little understood by the profession generally in this country. The patients affected by it are always hypochondriacal—indeed, the symptoms of hypochondriasis and mental derangement are generally by far the most prominently marked in them—and after the usual remedies for digestive disorder and liver disease have been had recourse to without benefit, the practitioner becomes tired of attending a disease which is at best obscure and does not yield to the usual remedies, and either treats his patient as a *malade imaginaire*, or leaves him a prey to the wretched balsam-selling quacks, who are unfortunately permitted to pollute every periodical publication with their disgusting advertisements.

The subject of Spermatorrhœa is an uninviting one—especially to the fastidious—perhaps too fastidious English taste;—hence, with very few exceptions, it has been generally avoided by regularly educated practitioners in this country. An abstract of M. Lallemand's views was indeed published by my friend, Mr. Phillips, in the Medical Gazette in the year 1843, and about the same time some papers appeared in the Lancet on the same subject by Drs. Ranking and Dangerfield, and Messrs. Ryan, Chatto, and Dudgeon. These publications, however, from their transitory nature, were not calculated to remedy the want felt by the profession, of a systematic treatise on this important subject. Mr. Phillips, indeed, in the conclusion of his paper in the Medical Gazette, takes occasion to remark: "Since the publication of the first part of this paper, I have been painfully impressed with the conviction, that the evil is more widely spread than I had before conceived; and that it will not be largely alleviated by the means I have adopted for advocating the relief of a particular remedy. . . . . The pages of a strictly Medical Journal do not meet the eyes of the great mass of sufferers."

In a notice also of M. Lallemand's work, in the British and Foreign Medical Review, the reviewer took an opportunity of pointing out the importance of the subject. Nevertheless, authors have always seemed to avoid the subject as dangerous ground, and with the

exception of an excellent chapter in Mr. Curling's work on Diseases of the Testis, and some observations published by Dr. Smyth in a work entitled "Miscellaneous Contributions to Pathology and Therapeutics," I believe the present to be the first attempt to render the profession familiar with this disorder, by any special work in the English language.

Indeed, in Dr. Golding Bird's otherwise excellent book on Urinary Deposits, the author, although he admits that the spermatozoa are frequently discovered in the urine by microscopic examination, takes occasion to express his opinion, that the subject of spermatorrhœa is one by no means deserving the importance attached to it. He adds, "It certainly is not very consistent with our national character, to dilate so freely on a subject which, in the great majority of cases, can be treated of only as the effects of a most degrading vice." That any physician should relieve himself from the investigation of a most afflicting disease, because the subject treated of is an unpleasant one, appears to me unworthy the general character of our profession. Had similar opinions been held respecting syphilis—a subject quite as repugnant to English feelings as spermatorrhœa—what misery would have been entailed on the human race?

Lecturers on surgery, while entering fully on other diseases of the urethra, appear either not to have been aware of, or by common consent to have omitted, spermatorrhœa from their oral lectures and text-books of surgery. Professor Miller, of Edinburgh, having given a short notice of spermatorrhœa in his "Practical Surgery," published in 1846, is, as far as I am aware, the only exception to this rule.

At an early part of my professional life my attention was much engaged by two cases, which to me presented peculiar features of interest. One, the case of a near relative, since dead, proved particularly unfortunate. The other, the case of a friend of about my own age—also studying medicine—recovered after several relapses; and the patient is at present practising his profession in her Majesty's service. In both cases the best advice the West of England afforded was obtained without success, or, indeed, even slight improvement, and in neither case was the cause of the disorder, which particularly affected the brain and digestive organs, recognized.

The interest I took in these cases led me to suspect, from certain hints thrown out by the patients, that their disorders were somehow connected with the genital organs. Further experience has convinced me that my suspicions were correct.

A brief outline of these cases may not be uninteresting.

R. H——, æt. thirty-nine, passed the early part of his life in the country, and was in the habit of taking much and violent exercise. About the age of sixteen, he entered a banking establishment in London, in which by great diligence and steadiness of conduct he rose, before he was twenty-five, to the post of cashier. The affairs of the house fell into disorder, and ultimately a bankruptcy occurred; Mr. H——, from the amount of confidence reposed in him by the

partners of the firm, was much harassed during these unfortunate proceedings. Soon afterwards he became manager of a large mercantile establishment in the city, and about this time commenced some speculations in foreign bonds. From fluctuations in the share market he was a loser to a considerable extent; his mind was much harassed, and he began to suspect those about him of dishonesty towards their employers. On investigation these suspicions were proved to be totally unfounded; Mr. H—— gave way to great violence of conduct and resigned his situation. About this time his father died; and Mr. H—— was much disappointed at finding that property, which he had incorrectly believed entailed, and consequently his, as eldest son, was left by will to be equally divided between himself and the rest of his family. His conduct at this period was of the strangest description. He dreaded to go out into the streets of the town where his family resided, refused to join in their meals, and ultimately abruptly left their house to return to London. In 1837, his state had become such that in consequence of his repeated letters, members of his family visited London, and on their return took him with them into Devonshire. About this time his mental disorder put on a decided aspect; and I had then, as well as later, ample opportunities of observing his conduct; and frequently heard his complains. Emissaries were constantly on the search for him to arrest him for *unnatural* crimes committed in London; every one who met him in the street read in his countenance the crimes he had committed; tailors made his coats with the sleeves the wrong way of the cloth, in order to brand him with infamy; the sight of a policeman in the street alarmed him beyond measure; and often, if a stranger happened to be walking for some little time in the same direction as himself, he would exclaim that he was one of the emissaries sent to seize him. At other times he would lock himself in his room and weep by the hour. He never took his meals with the family, and never tasted food or drink without first preserving a portion for chemical analysis, as he was convinced his friends were in a conspiracy to poison him slowly, in order to wipe out the memory of his crimes. These ideas haunted him night and day. His digestion was much disordered; his sleep broken and restless, and his bowels excessively constipated. His face was flushed, and periodical attacks of cerebral excitement occurred, during which he complained of vertigo, noise in the head, loss of sight, &c. He complained also of loss of memory, and frequently of bodily weakness and lassitude. The best medical advice the neighborhood afforded was obtained, unavailingly; the opinions of the gentlemen consulted were, that Mr. H—— was laboring under aggravated hypochondriasis, complicated with monomania. Various causes were suggested as giving rise to the disorder, but no previous case of insanity was recollected in any branch of the family. Mr. H—— now began to talk of leaving England for America, in order to avoid his persecutors; and to prevent this he

was placed under the care of a private keeper; while with this person he frequently and bitterly complained of constant pollutions while at stool, with darting pain, and a sense of weight between the rectum and bladder. He had also urethral irritation attended with discharge, pains in his loins, and in one groin, weakness of his legs, thick urine, piles, and obstinate costiveness. He kept a diary at this time, which is at present in my hands. Not a day is passed in this diary without mention of the distressing seminal discharges from which he suffered. These were treated as of no importance by his medical attendants, although he never ceased to complain of them, and solicited aid so long as he continued in confinement in England. When led away from his disorder into any discussion on public matters, he was, however, a most amusing and instructive companion; as a man of business he was equally acute, and to a stranger, as long as nothing was done to offend him, he was, to all appearance, a man of observation and experience in life. For about two years and a half he was under the care of various gentlemen, devoted to the insane, and at length he was discharged from an establishment near Bath, by the visiting magistrates, as a person confined without due cause. His first act was to commence legal proceedings against his friends for his detention, and having gained his action, he immediately proceeded to London, and waylaid and violently assaulted a gentleman of high commercial standing in the city. After this offence he was confined for a considerable period in default of bail, and immediately on his liberation it is believed that he proceeded to America. From this time nothing was heard of him until September, 1843, when a letter was received by a gentleman who formerly attended him, in which he stated that the same course of persecution was pursued towards him in America as had been followed in England. He complained of not being able to obtain efficient medical treatment, although he had applied to the most eminent practitioners in Cincinnati, and afterwards at Philadelphia and New York. After this, nothing more was heard of Mr. H—— until the year 1845, when an American newspaper was forwarded to his friends by an unknown hand, containing an account of his death, and of an inquest held on him, headed, "Death of a Hermit in West Jersey." It was stated that he lived on a small farm, entirely alone, with the exception of a dog, and that he had shunned all intercourse with his neighbors. He was taken suddenly ill, applied to a neighboring farmer for assistance, but died in the course of the following day. From information subsequently obtained by his friends, it is believed that he died of apoplexy, or, perhaps, in one of the attacks of congestion of the brain, from which he frequently suffered before he left his native country.

The symptoms of this unfortunate case strongly resemble those of the thirty-second and fifty-sixth cases related by M. Lallemand. It was more aggravated, however, and presented the somewhat uncommon feature of the patient's discovering the frequent pollutions, and con-

stantly complaining of them; these, unfortunately, were treated as matters of no importance. Mr. H——'s insanity, at first, constantly had reference to his having either committed or been accused of committing unnatural crimes, and this idea never entirely left him, although during the latter part of his life, his more prominent hallucinations had reference to imaginary persecutors constantly watching him, and endeavoring to ruin him by spreading false reports, and to poison him by adulterating his food, and infusing noxious gases into the air. There can be little doubt, on taking into consideration his complaints of weight between the rectum and bladder, with darting pains, &c., in the same region, that the pollutions arose from irritation in the neighborhood of the prostate, and I think, that if at an early period of his disease this had been relieved, there would have been considerable hope of his recovery from the hallucinations he manifested.

The other case to which I have alluded as particularly attracting my attention, and which came under my notice about the same time, was that of a young man of high intellectual power and general talents, studying medicine. This gentleman was one of my most constant companions, when almost suddenly a serious change came over him—he shunned society, especially that of females, was morose, taciturn, and frequently shed tears; he sat sometimes for hours in a kind of abstraction, and on being aroused from it, he could give no explanation of his thoughts and feelings; he constantly expressed to me his conviction that he should never succeed in his profession, and frequently exclaimed that he was ruined both here and hereafter—body and soul—and by his own folly. About twelve months previous to this depression of spirits, he had a very severe attack of blennorrhagia, with orchitis and phimosis. This left a degree of irritability in the bladder which required him to pass urine frequently. His digestion became so disordered that the simplest food would not remain on his stomach, and he had frequent eructations of fluid which blazed like oil if spit out into the fire. This gentleman's father was a physician, and being naturally anxious for his son, obtained for him the advice of many of the most eminent of the faculty. No improvement took place, however. After he had been six months in this state, I had an opportunity of spending three weeks by the seaside, and my friend accompanied me. We slept in the same room, and he was scarcely ever out of my sight. Before our return his health was almost re-established, and his spirits had returned to their natural condition. Twelve months later, however, he again fell into the same state of despondency, and this time his condition was much worse than on the former occasion. He frequently remained in bed three parts of the day, and no threats or entreaties on the part of his father could induce him to get up. His intellectual faculties were totally prostrated, and a vacant stare which took the place of his naturally lively expression, induced considerable fears of his ultimately becoming idiotic. I was the only person who possessed

any influence over him, which may perhaps be attributed to his feeling that I was aware of the cause of his disorder. This state continued between three and four months, during which time I was with him as much as my other duties would permit, and frequently showed him the folly of the course he pursued. At the expiration of this time he gradually recovered. He has since had a slight relapse once only; he has pursued his professional studies with success, and is at present a medical officer in her Majesty's service.

On this case, I need only remark that the symptoms did not arise from involuntary seminal discharges, but from excessive discharges caused by abuse. The various treatment recommended by the distinguished practitioners consulted, proved unsuccessful, because the origin of the disorder was unrecognized, and the remedies consequently useless, while the habit of abuse was continued.

Such were the two cases which first attracted my attention to the influence of the generative organs over the system generally, and the brain especially; and my suspicions once awakened, further observations soon convinced me of their correctness, as well as of the frequent occurrence of such cases. I was soon convinced, too, that the profession generally, either were not aware of the immense importance of these discharges, or that, by a kind of common consent, they neglected to recognize a subject certainly repugnant to delicacy. As a consequence, sufferers finding themselves neglected by their ordinary medical attendants, rush to find relief wherever there seems to them the slightest chance of its being obtained; and the ignorant and rapacious advertising quacks have a rapid and profitable sale for their injurious nostrums. Several cases of gross imposition by these charlatans have come under my notice, which it is my intention, at some future period, to lay before the profession in one of our medical periodicals. Their introduction here would swell these prefatory observations to an inconvenient length.

It now remains for me to make a few remarks on one or two points of my own experience respecting the symptoms and treatment of spermatorrhœa. One symptom which I have three times met with as the result of masturbation, is little more than alluded to by M. Lallemand—I mean epilepsy. Masturbation is admitted by most medical men to be a frequent cause of epilepsy; and I am surprised to find that M. Lallemand has related no cases in which epilepsy occurred. Two of the three cases to which I have alluded were simple uncomplicated cases of epilepsy brought on by masturbation. In these, after the masturbation had been arrested the effect ceased. The third case, however, was by no means so successful; it occurred in a lad of weak intellect aged sixteen. The attacks of epilepsy frequently took place as often as twice in the day. He admitted that he was in the constant habit of practising masturbation, and even seemed aware of the influence the practice had in producing his fits. I have reason to believe that this lad corrected himself; but from the weakness of his intellect, much dependence could not be placed on his statements.

As long as he continued to attend the dispensary at which I saw him, little improvement took place in his general health, and the epileptic paroxysms continued very frequent. I regret that I took no notes of this case, and still more that I lost sight of the patient, as I am inclined to believe that the epileptic paroxysms might have been kept up by involuntary seminal discharges, after having been once excited by masturbation. This is a point which I earnestly recommend to the attention of the profession.

Another very frequent symptom in cases of spermatorrhœa, is the occurrence of urethral discharge from very slight excitement. Several cases of this kind have come under my notice, the patients having consulted me on account of the discharge. These cases often give rise to distressing suspicions, and much family unhappiness, especially as they often occur in married men. The symptoms are often almost as severe as those of a virulent clap, and the discharge is attended with great irritation in the neighborhood of the prostate, and frequent desire of micturition. The discharge came on in one case of a married man who consulted me, after taking a single tumbler of whiskey and water at night—this gentleman not having been in the habit of taking spirits for several years, on account of continued ill health. The discharge in these cases is thicker than that of ordinary clap, and sticks in patches on the linen. These patches may be scaled off, after which there is little mark left, and the discharge seldom penetrates through calico, so that on the opposite side of the shirt there is little or no appearance of stain. On wetting the linen, the discharge feels slippery, and it is washed off with difficulty. I am inclined to believe that these discharges are not contagious; but notwithstanding this, sexual intercourse should be avoided on account of the injury that may result to the patient himself. In most cases, indeed, connection is impossible during the first stages of the discharge, on account of the painful chordee to which excitement gives rise.

I have generally, on questioning these patients, found that such discharges were connected more or less with deficiency of generative power. In the case I have above alluded to, impotence was almost complete; and in another similar case occurring in the person of a married surgeon, the powers had greatly declined. Both these patients were in the prime of life, and both had, in their youth, led very irregular lives.

The irritation in these cases, I am inclined to believe, is situated in the posterior part of the urethra. Indeed, the surgeon whose case I have just alluded to, believed himself affected by enlarged prostate—many of the symptoms of which generally accompany the discharge I have described, especially frequent desire to pass water, and a feeling as though the bladder were never completely emptied, or as though two or three drops of urine were retained in the posterior part of the urethra.

In the treatment of these cases, I have found the application of

the solid nitrate of silver most effectual. The condition of the mucous membrane is immediately modified by it; within twelve hours the patient experiences a degree of comfort to which, very frequently, he has long been a stranger. The condition of the membrane, too, seems permanently altered by this treatment; and the discharge has never, as far as my experience goes, returned after subsequent excitement—a circumstance which is very apt to occur when the discharge has been arrested by other means. The involuntary seminal discharges often present in these cases, and to which the diminution of virile power is generally due, are also at the same time arrested, and the patient experiences a return of vigor wholly unexpected.

This peculiar form of urethral discharge has hitherto for the most part, I believe, been confounded with contagious clap; indeed, many members of our profession are in the habit of setting down all discharges from the urethra indiscriminately as the result of impure connection, however positive the patient may be that such has not taken place. In all the cases I have hitherto met with, however, the patients have admitted that they had previously been affected with contagious clap—frequently on more than one occasion. The discharges I have described are, I am inclined to believe, from the number of cases I have met with since my attention was first attracted by the subject, by no means uncommon, and certainly deserving the careful attention of the profession.

The diagnosis of spermatorrhœa, in aggravated and long-standing cases, is by no means easy. When frequent diurnal pollutions have deteriorated the patient's health—discharge of watery semen taking place almost every time the patient makes water—the spermatozoa are often only distinguishable under the microscope after a long-continued and patient manipulation; and perhaps for no researches connected with medical science is it more important to possess one of the best microscopes. When I first commenced the study of this subject, I was more than once tempted to give it up in despair, in consequence of my not possessing a perfect microscope. At present I use one of Powell's instruments, which I prefer to those constructed by Ross, on account of the greater convenience of the motions of the stage—a matter which will be found of much importance in all researches requiring delicate manipulation. The eighth of an inch object glass will be found almost indispensable in the study of these cases, although the spermatozoa in healthy semen can be perfectly well examined with an object glass of a quarter of an inch focal length.

M. Lallemand has described the operation of cauterization as a very painful one, and its after effects as very severe. This by no means accords with my experience. In no case in which I have performed the operation has the pain been severe, or the subsequent inflammation violent; indeed, I have several times had difficulty in persuading the patients to remain twenty-four hours in bed after the operation—a precaution which I have thought advisable in all cases.

At first I feared that sufficient inflammation had not been excited, and that the operation would require to be repeated—this has only happened in my practice once, however, and in that case I am inclined to think that the caustic was not properly applied to the surface of the prostate on the first occasion.

The instrument commonly sold for the purpose of cauterizing the prostate, by instrument makers in this country, is, in my opinion, exceedingly defective. From its being made nearly straight, it is by no means easily introduced while the patient is lying down—and in no other position ought the operation to be attempted. The irritability of the canal, too, increases the difficulty of introduction, and consequently every possible facility should be given to the operator, by having the instrument constructed of a convenient form. It is difficult, also, to measure the length of the passage exactly by applying a curved catheter to a nearly straigt *porte-caustique*. I have, therefore, had an instrument constructed of precisely the same curve as the catheters I generally use. This instrument is rather larger than those generally sold, being about the size of a number 6 catheter, and its bulbous extremity is two sizes larger, or as large as a No. 8 catheter; with this instrument many of the difficulties of cauterization are avoided. It can be easily introduced like an ordinary catheter while the patient is lying on his back; the moment when the bulb enters the neck of the bladder is clearly distinguishable by the sensation communicated; and the caustic, on account of the greater size of the curvette, is more fairly applied to the whole of the inferior surface of the urethra, which is to a certain extent distended by its presence. With regard to other precautions to be used, I quite agree with M. Lallemand.

In translating the following pages, I have endeavored more to render the sense of the author in as few words as possible, than to give a full and literal translation. I must beg my readers to bear in mind, that M. Lallemand's treatise consists of three thick octavo volumes. These having been written at different periods, there are of course many repetitions, which I have as much as possible, endeavored to avoid. The total number of cases related by M. Lallemand is one hundred and fifteen. Of these I have selected sixty-two, which, after mature consideration, appear to me to illustrate the subject sufficiently. The same reason which induced me to omit so many of M. Lallemand's cases, has prevented me from inserting cases from my own experience. As I have endeavored to render this entirely a practical work, I have omitted M. Lallemand's interesting researches on the spermatozoa, except as far as they refer to the diagnosis of spermatorrhœa, as well as several digressions made by M. L. to topics of no practical interest in this country; of these a disquisition on the character of J. J. Rousseau is one of the most remarkable.

In speaking of spermatorrhœa arising from contagious urethritis, I have avoided the word gonorrhœa as being a misnomer, substi-

tuting for it *blennorrhagia*, which is certainly more correct in its derivation, although also liable to some objections.

In conclusion, I must beg to express my thanks to M. Lallemand for the kind and complimentary manner in which he was pleased to grant me permission to undertake my task, as well as for the aid he has more than once afforded me in performing it. If through the medium of the following pages the profession becomes more fully acquainted with, and consequently better able to relieve, one of the most distressing disorders that affects mankind, I shall feel perfectly satisfied in the conviction, that the time I have appropriated to the subject has not been entirely misspent.

29 Berners Street.

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ON

SPERMATORRHŒA.

CHAPTER I.

INTRODUCTION.

Involuntary discharge of the seminal fluid presents itself under various conditions, which differ much in their respective degrees of importance.

When it occurs spontaneously during sleep in a healthy and continent individual, it doubtless exerts a beneficial influence on the economy, by freeing it from a source of excitement, the prolonged accumulation of which might derange the animal functions. In these cases, it has an effect analogous to that produced by the epistaxis, common and beneficial during youth. But the discharge may become excessive, or, from the condition of the parts, it may outlive the state that excited it; then, like repeated nasal hemorrhage, it gives rise to inconveniences proportioned to its frequency, its quantity, and the constitution of the individual. Involuntary seminal emissions may be caused by too great excitement of the genital apparatus, following venereal excesses of masturbation. A state of irritation remains in the spermatic organs after such excitement, which induces an increased secretion and hurried discharge of the secreted fluid, without complete erection, and almost without sensation. Lastly, the relaxation of the ejaculatory canals accompanying this state of irritation, may allow the expulsion of the semen without either erection or enjoyment, and this takes place especially during defecation and the expulsion of the urine. The transition between these different stages of seminal evacuation is sometimes so insensible, that it is impossible for the patient, or even for the medical attendant, to specify its exact period.

Every extreme evacuation of the spermatic secretion, in whatever manner caused, is capable of producing the same effects on the system. The different species of spermatorrhœa need not therefore be separated either in theory or in practice.

Ordinary nocturnal emissions are easy of diagnosis and of cure; I shall therefore pass them over, and only treat of those evacuations which are sufficiently serious to injure the health, or which are connected with discharges not ordinarily perceived.

I shall use the expressions *diurnal* and *nocturnal pollutions*, because involuntary discharge of the spermatic secretion certainly occurs during the night without erection and without pleasurable sensations, as well as in consequence of lascivious dreams after sunrise. Neology is only to be excused when used for the prevention of errors; and I think no one will be deceived respecting the meaning of these expressions, which, indeed, are at present generally understood. In order, however, to avoid the repetition of many words, I shall express, by the term SPERMATORRHŒA, every excessive spermatic evacuation, from whatever cause it may arise.

Diurnal pollutions are not always, as is generally believed, the result of venereal excesses, or of vicious habits. Many other varied causes, whose influence may be single, successive, or simultaneous, also give rise to them.

Some of these causes are already understood, but of many others the medical world is completely ignorant; and these are the most dangerous, because their influence is the most difficult of appreciation.

In all sciences the study of causes is the most important and the most difficult. This is true of medicine, and especially of the affection forming the subject of this work; for it is principally from the cause of the spermatorrhœa, that we learn its therapeutic indications. It is true that we must also, in each case, take into account the particular condition of the genital organs, and the constitution of the individual; but these considerations are of little importance with respect to the treatment to be employed, and it is especially in a practical point of view, that I wish to consider this disease. In consequence of not having properly distinguished its causes, explanations, as often false as true, have been published respecting spermatorrhœa, and modes of treatment have been recommended, whose general application has been sometimes useful, but more often injurious.

It is, however, of great importance to study attentively the symptoms of involuntary spermatic discharges; they are little known, very varied, and capable of simulating a host of other affections; but their character is independent of the first cause of the disease, and they furnish few indications for the regulation of its treatment.

On the other hand, the history of this affection is so much in its infancy, that I feel the necessity of proceeding as if I were treating an entirely new subject. I shall, therefore, relate many single cases, before I attempt to arrive at general conclusions. As these cases are very numerous, I must classify them according to some arrangement, and I shall place the CAUSES first in this classification, since they are the most important part of it. Proceeding from the evident to the

doubtful, and from the simple to the compound, I shall examine first the causes whose action is most direct and undoubted; and whilst studying the influence of each cause, I shall bring forward the cases in which its action has been energetic, isolated, and, when possible, proved by post-mortem inspection, and I shall afterwards cite cases in which several causes have acted successively or simultaneously.

After having examined many cases in this manner, I shall make a general *résumé*, in the course of which, I shall comment on whatever relates to the symptoms of the treatment.

I shall also pay attention to the analogous phenomena which may be observed in the female.

I propose then to consider this affection of the genital organs in all its varied phases; I shall pass rapidly over what is already known; I shall, on the contrary, insist on the most remarkable errors, and comment fully on all that may seem doubtful or obscure.

If I were to relate all the cases that have come under my notice, tiresome repetitions would result: I shall, therefore, choose only those which best show the characteristic features of the most important distinctions.[1]

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[1] I have thought it advisable, on account of the great number and length of these cases, to select a few of the most striking only. In answer to a communication from me on this subject, M. Lallemand has favored me with the following observation: "As regards the cases their number may be reduced, now that facts are being daily multiplied in confirmation of those I have related; it will be sufficient for you to give the most characteristic."—[H. J. McD.]

CHAPTER II.

Inflammation of the Spermatic Organs.

Pathological Anatomy.

Inflammation of the organs for the secretion of and excretion of semen, is the most frequent and the most active cause of spermatorrhœa. The influence of this cause may be very easily conceived, and its traces may be detected in the organs after death: I shall, therefore, commence the subject by its consideration.

Works on pathological anatomy have hitherto afforded us very little information respecting this important and delicate matter; the omission arises from several circumstances.

Inflammation of the spermatic organs does not threaten life at its commencement; when the patient dies at an early period of the affection, it is in consequence of some other more serious disease, which engrosses the care of the attendants, so that after death examination of the spermatic organs is neglected.

When the continued influence of this inflammation produces diurnal pollutions sufficiently serious to destroy life, the periods of their occurrence are very distant; the symptoms are insidious, and their true cause, in many cases, is not even suspected. Whatever the care taken, then, in examining the body, it generally happens that every part is inspected except the genital organs; incomplete cases are thus published, which are received with the more confidence because the dissection of the viscera, generally, has been made with care.

The situation of the prostate and seminal vesicles is another reason why their examination is neglected. In order to inspect these parts with the minute care requisite, it is necessary to divide the crural arch near its centre, to remove the abductor muscles of the thighs, to cut through the horizontal rami of the pubes, and the rami of the ischia, so as to remove the testicles, the vasa deferentia, the rectum, and the perineum undisturbed.

It is by this means only that we can obtain a good view of the organs situated in the lower part of the pelvis, examine their relations with care, or observe their color, consistence, and dimensions—circumstances requiring attentive study—since serious symptoms may follow almost imperceptible lesions. Thus, for instance, the orifices

of the ejaculatory ducts may have been rendered uneven by some slight ulceration; their form may have been altered, or their size increased, of which I have met with several cases; and we can easily conceive the consequences which may result from even the partial destruction of their little sphincter muscles. The color, firmness, and exact size of these canals also furnish information of much importance.

The examination of all these parts requires considerable time, patience, and skill; it is necessary to inspect them thoroughly, in order to appreciate all changes affecting them, and this is impossible if the removal of that portion of the pelvis, to which they are attached, be omitted. Thus the section I have described becomes in a measure indispensable; nevertheless, in general practice it is never had recourse to, except for the purpose of examining some rare affection of the bladder or prostate. In order to understand, thoroughly, the conditions of these parts when diseased, it is necessary, also, to have seen them very frequently while healthy: this is neglected even by men who devote themselves specially to the study of pathological anatomy. On this account I shall illustrate their pathological changes by some cases which would under other circumstances be devoid of interest.

CASE I.

Blennorrhagia—Diurnal pollutions—Hypochondriasis—Chronic affection of the Brain and its Membranes—Death.

AUTOPSY.—*Right kidney in a state of suppuration—Prostate nearly destroyed—Ejaculatory ducts ulcerated—Seminal vesicles altered. Nothing remarkable in the other organs.*

In the month of January, 1824, I was requested to see M. De S——, affected with symptoms of cerebral congestion, from which he had suffered for some time. During several consultations I gathered the following facts.

M. De S—— was born in Switzerland, of healthy parents, and his father died suddenly of affection of the brain. M. De S——, possessing a strong constitution and an active mind, received an excellent education, and at an early age turned his attention to the study of philosophy and metaphysics; he afterwards studied moral philosophy and politics.

After having spent some years in Paris pursuing his favorite subjects, he was obliged to undertake the management of a manufactory, and to attend to details which wounded his pride. He became, by degrees, peevish and capricious—passed, without apparent cause, from an extravagant gayety to a profound melancholy—was irritated by the slightest contradiction—showed no pleasure at fortunate events—and gave way to anger on improper occasions: at length he appeared to feel disgust and fatigue at correspondence or mental exertion.

At this period he married, and Dr. Butini, of Geneva, his medical attendant and friend, wrote respecting him as follows:

"With this marriage the most happy period of his existence seemed to

commence; but soon the germs of the disease, which so many causes had contributed to produce, became rapidly developed. It was perceived that M. De S—— wrote slowly and with difficulty, and his style presented signs of the decay of his faculties; he stammered and expressed his ideas very imperfectly; he experienced, also, at times, attacks of vertigo, so severe as to make him fall, without, however, losing sensibility, or being attacked by convulsions."

One day an attack which frightened the patient seriously, and left a deep impression on his family, came on whilst writing an ordinary letter. His medical attendants attributed his attack, which left a weakness of the right side of the body, to apoplexy. Twenty leeches were applied to the anus, and the danger seemed at an end.

Similar attacks, however, occurred at Geneva and Montpellier, and several distinguished practitioners were consulted: some of these, struck by the misanthropic irritability of the patient, and his solitary habits, regarded the affection as purely hypochondriacal or nervous; others, taking into consideration his digestive disorder, considered it an affection of the liver; but the greater number were of opinion that there existed a chronic affection of the brain, such as encephalitis, or chronic meningitis, arising from hereditary predisposition. This last opinion was held by Dr. Bailly (of Blois).

At all these consultations, the necessity of abstaining from serious occupation, the utility of travelling—of various amusements, and of a strict regimen—and the importance of free evacuations from the bowels by means of purgatives and injections, were agreed on. Many of the practitioners recommended the frequent application of leeches to the anus, with milk diet, &c.; others thought that assafœtida, baths, and camphor, were indicated.

None of these modes of treatment produced any considerable amendment; the leeches weakened the patient, and the milk diet disordered his stomach. His constipation continued. Cold plunge baths, and cold affusion to the head, relieved the insupportable spasms M. De S—— experienced in his legs and face: the waters of Aix, in Savoy, and the use of douches also appeared to produce some improvement.

Still M. De S—— became more irritable, and at the same time more apathetic. His attacks were more frequent and more violent, and he manifested greater indifference towards the persons and things he had before been partial to. The weakness of his limbs increased to such an extent that he frequently fell, even on the most level ground. His nights were restless, his sleep very light and often interrupted by nervous tremors, or acute pains accompanied with cramp. The cerebral congestion increased, and the imminent fear of apoplexy rendered leeches to the anus, venesection in the foot, tartar emetic ointment, blisters, mustard pediluvia, and the application of ice to the head, necessary.

Notwithstanding the employment of these energetic measures, another violent attack of congestion occurred. I was summoned on this occasion, and I found the patient restless, agitated, and incapable of remaining two minutes in the same place; his face was red, his eyes projecting, injected, and fixed; his physiognomy expressed extreme dread; his walk was uncertain, his legs bending under the weight of his body; his skin cold, and his pulse small and slow.

The last circumstance attracted my attention, and I also recommended the application of leeches to the anus. M. De S—— immediately threw

himself into a violent passion, and asserted that leeches had *always weakened him without giving him any relief.* I was too much afraid of the occurrence of apoplexy to pay attention to this assertion; and I succeeded in obtaining the application of six leeches.

The next day I found the patient very pale, and so weak that he was unable to walk—a source of much annoyance to him, as he manifested a constant desire for motion. An œdematous swelling of the parotid gland and of the right cheek followed, which was succeeded, a few days after, by a similar state of the left leg and foot.

Sleep had become indispensable, and the patient was much reduced from the want of it; he told me, with tears in his eyes, that he had lost his appetite, and could no longer relieve his bowels. I also learned that he was habitually costive and flatulent; that he often had recourse to injections and purgatives in order to relieve his obstinate constipation; and, lastly, that his walks, and the evacuation of his bowels had lately become the sole objects of his thoughts and conversation.

Having observed analogous symptoms in almost every person affected by diurnal pollutions, I made further inquiries respecting the attack, in which it was supposed that the right side had been paralyzed, and I was soon convinced that the intellectual powers had been wanting, and not the power in the hand which held the pen: both sides of the body had, in fact, retained an equal degree of strength.

Struck by a remark of Dr. Butini's respecting the progress of the disease soon after marriage, I made inquiries of Mme. De S——, and learned that the character of her husband had become so uncertain, irritable, and tormenting, that his friends thought he must be unhappy in his marriage. I then suspected that the origin of the patient's disease had been mistaken, and I requested that his urine might be kept for my inspection. The appearance of the urine was sufficient to convince me that my suspicions were well founded; it was opaque, thick, of a fetid and nauseous odor, resembling that of water in which anatomical specimens have been macerated. By pouring it off slowly, I obtained a flocculent cloud, like a very thick decoction of barley; a glairy, ropy, greenish matter remained, strongly adherent to the bottom of the vessel, and thick globules of a yellowish white color, non-adherent, like drops of pus, were mixed with this deposit. I was therefore convinced that spermatorrhœa existed, together with chronic inflammation of the prostate and suppuration in the kidneys.

Notwithstanding the state of M. De S——'s intellect, I was able at a favorable moment to obtain further information. At the age of sixteen he had contracted blennorrhagia; this he carefully concealed, and succeeded in curing by the use of refrigerant drinks. The following year the blennorrhagia returned, and was removed by astringents. Two years afterwards, from drinking freely of beer when heated, the discharge again appeared, and after some time it again returned, from the effects of horse exercise. Since that time, M. de S—— had felt little sexual desire, and had abstained from intercourse without regret. Ejaculation during coitus had always been very rapid. Fully convinced by combining all these circumstances, I explained to M. De S—— the nature of his disease, and he promised me to observe carefully.

The next day he called me aside, and told me that the last drops of urine were viscid, and that during an evacuation of the bowels, he had passed a sufficient quantity of a similar matter to fill the palm of his hand.

Eight days after, another attack of cerebral congestion occurred, followed by stertorous breathing, cold skin, and an inappreciable pulse; the patient fell into a kind of syncope, of which he died on the 1st of March, 1824.

POST-MORTEM INSPECTION, TWENTY-SIX HOURS AFTER DEATH.—The general emaciation of the body was extreme.

Head.—Between the dura mater and the arachnoid several bubbles of air appeared, mixed with a viscid serosity; the vessels of the pia mater were slightly injected; the arachnoid was a little opaque near the falx, but neither thickened nor granular; two or three spoonfuls of limpid serum were found in the ventricles, without any apparent alteration in their serous lining; the brain was slightly injected and soft throughout, but without appreciable alteration in any one particular part; the cerebellum, also, was very soft, of natural size, neither more nor less injected than the brain, and without any particular alteration. Three or four spoonfuls of serum were found at the base of the brain and commencement of the vertebral canal.

Chest.—Pleura pulmonalis everywhere adherent by a dense cellular tissue to the pleura costalis; lungs crepitant and pale, except at the posterior part; heart of the ordinary size, and firm.

Abdomen, tympanitic, green, and exhaling a very fetid smell; liver of natural color and very firm; a spoonful of bile in the gall-bladder; spleen small and of a violet color; stomach distended by gas; mucous membrane thin, soft, and of a brownish-gray color; small and large intestines equally distended by gas, pale, and thin in their structure, containing a small quantity of brown, excessively offensive liquid fæcal matter.

Left Kidney of the ordinary size, of a healthy red, and very firm.

Right Kidney a third larger than natural, adherent by a dense, resistant cellular tissue to the surrounding structures; containing in its parenchyma about forty little abscesses, varying from the size of a pea to that of a nut, some of recent formation, and without cysts, others old and encysted, all containing thick and creamy pus; the structure of the kidney reduced in four-fifths of its extent to a dense coriaceous membrane, full of cloacæ; the lining membrane of its pelvis red and villous; the ureter thin, distended, brownish, and much injected on its mucous surface.

Bladder rising as high as the umbilicus, and containing two pints of transparent urine. Its parietes thin; the muscular fibres weak and scattered; mucous membrane rose-colored and slightly injected, but thin and scarcely altered in appearance.[1]

Prostate projecting three or four lines behind the neck of the bladder, over about an inch and a half in superficial extent. In the Trigone Vesicle there was an effusion of albuminous matter, half a line in thickness and about two inches in extent, uniting the seminal vesicles to the anterior wall of the rectum.

The Left Seminal Vesicle small and brown, but in its normal position.

The Right separated from the corresponding vas deferens, folded on the posterior border of the prostate, atrophied and surrounded by a very dense fibrous cellular tissue, which was very difficult of dissection.

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[1] In order to examine the genital organs with greater care, I removed the parts with the rectum, by means of the section before described.

The Prostate double its normal size, and projecting into the rectum; hard on the sides of the neck of the bladder, soft in the centre. Its fibrous envelope having been divided with a bistoury, an opaque, thick, ropy, elastic matter escaped, like pus in color, and the mucus of the nostrils in consistence. There was a cavity occupying the whole of the anterior and middle parts of the prostate, about fifteen lines in size in every direction, when the purulent matter had been removed; the gelatinous mass was observed to divide into a number of filaments which became impacted in numerous small foramina; the canal of the urethra being closed, these filaments came out by the openings of the mucous follicles of the prostate. When this cavity was emptied it became evident that the two inferior thirds of the prostatic part of the urethral mucous membrane had been detached, and had covered the cavity in the prostate in the same manner that the cribriform lamella of the ethmoid bone covers the nasal fossæ in the dried skull.

The *openings of the Ejaculatory Ducts*, in place of being circular and nipple-shaped, formed a long slit, which was ulcerated, especially on the side towards the bladder; two probes of considerable size introduced through the vasa deferentia passed easily through these openings. The ejaculatory ducts were long and thin, as though dissected, and formed part of the superior wall of the cavity in the prostate. The posterior border of the prostate was not destroyed, but was pale, soft, and easily torn, like all the parts in the neighborhood of the principal abscess.

The Urethra presented no remarkable appearances.

The Testicles were small, flaccid, and pale.

I leave this case just as I wrote it when under impressions formed at the time, because its recital is well fitted to show those serious errors in diagnosis which are much more common than might have been suspected.

Now that we have seen the more obscure parts of this case cleared up by degrees, let us consider the chronological order of the facts:

A urethral discharge, badly treated in the beginning, reappeared from very slight causes, whose action, however, was easily appreciable. The follicles of the prostate, from repeated attacks of inflammation, became disorganized; the ejaculatory ducts were laid bare, and their orifices became ulcerated; the inflammation extended to the seminal vesicles, and the peritoneum adjoining.

Soon after, a new train of symptoms set in, which became much aggravated after the patient's marriage, in consequence of the unaccustomed exercise of the disordered organs. Ejaculation was rapid, because the ejaculatory ducts were in a state of irritation. The erections were incomplete, and at length ceased altogether, because the semen was habitually expelled as soon as secreted. This discharge was considerable, for the testicles shared the irritation of the other parts. During all this time inflammation was creeping along the urinary apparatus, and ended by destroying the right kidney. Hence the symptoms observed previous to death; hence the very remarkable appearance of the urine, an excretion to whose changes sufficient importance is not attached at the present day, from its ex-

amination having been once rendered ridiculous through the pretensions of quacks.

CASE II.

Blennorrhagia—Spermatorrhœa—Hypochondriasis—Frequent attacks of cerebral congestion—Death.

AUTOPSY.—*Suppuration in the seminal vesicles—Ossific deposit in the vasa deferentia—Cystitis—Phlebitis—Old adhesions of the arachnoid and pleuræ—Abscesses in the muscles of the neck and shoulders.*

On the 25th of September, 1825, Professor Brousonnet granted me the examination of one of his patients who was supposed to have died from cerebral hemorrhage. Before commencing the post-mortem I learnt the following particulars:

Francis Maurice, aged seventy-three years, formerly a soldier, had complained for some time of weakness in his legs; he staggered whilst walking as if he suffered from giddiness, and he would often have fallen if he had not been assisted. Occasionally he had attacks of congestion in his head; his face became red, he lost his senses, and experienced very varying spasmodic symptoms. After these his face became pale, and fainting occurred. These attacks had been treated by bleeding, derivatives, antispasmodics, and leeches.

At length, on the 22d of December, a violent attack of congestion in the head occurred; his face became purple, and the next day he died.

These symptoms seemed to indicate a chronic affection of the brain or its membranes, producing attacks of congestion, the last of which terminated in apoplexy. On inquiry I could not learn which side of the body had been paralyzed; but it seemed certain that no distortion of the face had ever existed. This circumstance made me suspect that the paralytic symptoms had always been general.

The cause of the disease was attributed to some hidden care. The patient had spoken little, and always presented a sad and silent appearance: he had complained of a host of different diseases, the greater number of which seemed imaginary, or, at least, much exaggerated. He complained of pain about the occiput, the neck, and the back; colic, distension of the lower part of his belly, and borborygmi affected him frequently. Notwithstanding his weakness he had a constant desire for motion: he could not remain quiet in bed, and often had recourse to the night-stool. He had an irritable manner; he tormented the nurses and snubbed the pupils, and was generally looked upon by the latter as a hypochondriac.

I learnt also that he had experienced several attacks of retention of urine, and I recollected having introduced a catheter for him, a few days before his death.

I suspected, therefore, that the symptoms he had manifested arose from unperceived spermatorrhœa.

The following are the results of the inspection of the body:

Head.—Cerebrum and cerebellum slightly softened throughout, but not more so in one part than in another; the cerebral substance slightly, but equally, injected, especially in the posterior lobes; several old cellular adhesions, five or six lines in extent, in the inferior occipital fossæ, intimately uniting the corresponding surfaces of the arachnoid; the cerebellum equally

adherent to the pia mater in the same situation, and incapable of being detached without injury to its structure. In the other parts of the interior of the cranium there was not the least local change that could be considered a result of recent disease.

Thorax.—Lungs healthy; a few old adhesions of the pleuræ on both sides; heart flaccid, of the color of wine lees, and easily torn; the principal veins without firmness, and of a dark violet color; the iliac and crural veins presented the same conditions.

Abdomen.—The mucous membrane of the stomach slightly injected; the small intestines in much the same state; nothing remarkable in the other abdominal organs; the kidneys and ureters healthy.

Pelvis.—The bladder, which contained a large quantity of muddy urine, was united to the rectum by cellular adhesions; its mucous membrane was of a dark red, highly injected, and covered by small ecchymoses, from extravasation of blood in its structure; the prostate was of its natural size and firmness.

The Seminal Vesicles were much dilated, their parietes were very thick and dense, and they presented no markings or inequalities. These organs were attached by strong and much-injected cellular tissue to the neighboring parts, and each of them contained about a spoonful of thick yellowish pus inclosed in three or four cavities communicating with each other and with the ejaculatory ducts. The inner surface of these abscesses was uneven, rugous, and lined by a sort of false membrane formed by a layer of thickened pus.

The Vasa Deferentia were tortuous, and completely ossified for the extent of about three inches, but not obliterated. They contained a slightly viscid fluid.

The mucous membrane of the urethra was much injected, especially from the bulb as far as the bladder; the mucous follicles much developed. The neck of the bladder was thickened, of a reddish brown color, without tenacity, and fissured by several recent lacerations.

Some days after, the pupils, who were dissecting the muscles of this subject, told me that they had found the subscapularis, and the supra- and infraspinatus muscles on both sides, as well as several muscles of the neck, in a state of suppuration.

Some time after I succeeded in learning the following facts.

Maurice whilst in service at the age of twenty-three years contracted a violent blennorrhagia accompanied by orchitis and inflammation of the spongy tissue of the urethra, which he neglected after the relief of the most urgent symptoms. His character, previously very gay, now changed by degrees; he experienced attacks of profound melancholy, during which he imagined that every one disliked him; when these attacks were over he gave himself up to dissipation; he drank freely, but when no longer excited he relapsed into melancholy, and often complained of pains in his head towards the occiput.

At first he experienced nocturnal pollutions, and soon after he perceived that in evacuating his bowels, especially when costive, he sometimes had a spermatic discharge. By degrees his digestion became much disordered, constipation became habitual, and the spermatic discharges at stool increased. He reformed and gave up drinking: his health was, however, ruined; he took cold easily, and suffered from pain in his side and frequent pains in his limbs and loins; he was constantly tormented by flatulence, colic, and diar-

rhœa or obstinate constipation. His legs were weak, and his body was frequently affected with tremors; yet he could not remain in bed, he was tormented night and day by a constant desire for motion, and being very weak he frequently fell.

After some time he had difficulty in supporting his head, and he complained of a constant pain in his neck and shoulders, accompanied by tenderness in the vertebral column. The evacuation of urine, previously irregular and difficult, now became often impossible without the aid of a catheter.

Latterly, he became subject to frequent attacks of cerebral congestion, during which his face was purple; he was insensible, convulsed, and appeared to be threatened with an attack of apoplexy. The practitioner, called under these circumstances, never failed either to bleed from the arm, or to apply leeches, and as the attack did not last long, he attributed its relief to the abstraction of blood. Immediately afterwards, even when bleeding had not been practised, the patient remained exceedingly pale; and at the close of one of these attacks he died.

The same causes produced the same effects in this, as in the preceding case; the same symptoms led to the same errors in diagnosis: it was just as difficult to discover the truth, and the same appearances were found after death. Cases of this nature are not then so rare as might have been expected.

Supposing that in these two cases we had proceeded to examine the bodies, with the pre-convictions arising from an observation of the symptoms; it is clear we should have found nothing in the cranial cavity, which would have accounted for the cerebral symptoms, for a general and uniform softness of the cerebral matter is observed after all chronic diseases, especially when decomposition has made any progress; it is evident also that we should have found nothing more satisfactory in the other viscera: who knows then, to how many errors these observations might not have given rise?

Among the cases cited by the believers in *nervous apoplexy*, and *special spasmodic* affections, I am convinced that a great number arise from spermatorrhœa; but, from the non-examination of the genital organs, it has been impossible hitherto to prove the correctness of this opinion. I trust that soon all practitioners will be able to avoid such errors. But let us reconsider the case of Maurice: at the age of twenty-three he had urethritis, accompanied by chordee and orchitis. As soon as the worst symptoms were relieved, he resumed his old habits, and gave himself up to excesses of all kinds. By degrees his health failed under the influence of nocturnal, and afterwards of diurnal pollutions; he became hypochondriacal, and notwithstanding his forced abstemiousness, he at length died in the same state as M. De S——.

Why did this patient resist the action of the disease longer than the first? Because the alterations were much less serious, and even the state of the pus found in the prostate seemed to announce that the inflammation had taken on an acute character only during the last stage of the disease.

Can diurnal pollutions, sufficient to destroy life, exist at the age of seventy-three years? Undoubtedly they can, since the vasa deferentia still contain, at this age, a viscid secretion, consisting of badly formed semen; besides, the patient had told his friends, shortly before his death, that in going to stool he had passed semen in the palm of his hand.

I have before said that Maurice passed for a hypochondriac, and that his diseases were considered imaginary, or at least very much exaggerated; nevertheless, we found, in various organs, recent and old changes, to which we must refer his complaints.

By degrees, as his health broke up, he became more easily affected; he complained of pains in his side—his lungs were attached to the walls of the chest by cellular adhesions; he often complained of pains in the head, fixed towards the occiput—the cerebellum was found adherent to the meninges at several spots, at the same time that the membranes were attached to each other: latterly, he complained of constant pains in the neck and shoulders—the subscapularis and supra- and infra-spinatus muscles of both sides, together with several muscles of the neck, were found in a state of suppuration: the patient was subject to attacks of retention of urine—the neck of the bladder, together with the urethra and vesical mucous membrane, were thickened, and of a brownish-red color.

I ought to add, that the principal abdominal, and even the femoral veins, were softened, and of a violet hue, and presented traces of phlebitis.

We see, therefore, that most of the disorders of which Maurice complained depended on so many really existing local inflammations.

I know that many of the symptoms experienced by patients affected with spermatorrhœa are purely nervous, and that we find often after death, no trace of alteration in the organs which have been supposed to be diseased; but I also know how the majority of post-mortem examinations are conducted.

We forget that the slow and progressive weakening of the constitution, following disordered digestion, causes an increased nervous susceptibility in hypochondriacs; and that a less energetic resistance of the different organs to the action of causes capable of altering their health also results from it; hypochondriacal patients are thus much more liable to every disease, at the same time that they suffer more from the diseases affecting them.

A few words more on the other lesions: the vasa deferentia were ossified in several points: this ossific deposit was not the effect of age, as might be supposed, for I have met with it under similar circumstances in very young subjects: it must, therefore, be attributed to old-standing inflammation.

In the orchitis that follows blennorrhagia, the inflammation extends from the mucous membrane of the urethra to the testicles, by the ejaculatory ducts, seminal vesicles, and vasa deferentia; the latter

are almost cartilaginous in their normal conditions; in chronic inflammation, therefore, they may easily become incrusted with phosphate of lime.

The neck of the bladder was fissured by several recent splits. When the internes requested me to catheterize this patient, it was because they had been unable to enter the bladder. I learned that they had always used the smallest instruments; by, on the contrary, using the largest I could find, I reached the bladder without difficulty.

CASE III.

Blennorrhagia—Retention of Urine, &c.—Apoplexy—Death.
AUTOPSY.—*Effusion of Blood into the left ventricle of the brain—Hypertrophy of the heart—Gastro-enteritis—Abscess and tubercles in the kidneys and prostate—Stricture, &c.*

Gojon, at the age of forty, contracted an acute blennorrhagia, with orchitis. Treated by irritating medicines, which produced diarrhœa and violent colic, it diminished, but did not entirely disappear, a slight urethral discharge continuing for ten years, with pain in the prostatic region and fossa navicularis. He was also annoyed by obstinate constipation. Between the ages of fifty and sixty he experienced difficulty in discharging his urine, a feeling of uneasiness in the urinary apparatus, weakness of the body, difficulty of digestion, considerable loss of flesh, and a remarkable diminution in his intellectual powers. Still later he had frequent attacks of retention of urine, successfully treated by baths and demulcents, intolerable pain in the kidneys and bladder, hypochondriasis, a strong aversion to frequent places, melancholy, and serious debility.

On the 1st of February, 1827, retention of urine occurred, for which leeches were applied to the perineum, and general baths and demulcents were employed without relief; active inflammation of the perineum and cellular tissue of the scrotum took place, for which fomentations were applied.

On the 5th the skin of the perineum gave way in three places, and a large quantity of urine mixed with pus was discharged.

On the 10th of February this patient was brought to the hospital. He was sixty-five years of age, his skin was warm, and his pulse full and strong; cheeks red, eyes watery, with pain under the orbits; ideas pretty clear, tongue red and dry, severe thirst and desire for cold drinks; abdomen sensitive on pressure, especially in the hypogastric region; attempts at catheterism unsuccessful. Fomentations were ordered to the abdomen.

On the 11th an attack of apoplexy occurred, and on the 12th he died.

POST-MORTEM APPEARANCES.

Head.—Considerable effusion of florid blood in the left lateral ventricle.
Chest.—Lungs crepitant. Hypertrophy of the left ventricle of the heart.
Abdomen.—Mucous membrane of the stomach red throughout its whole

extent; covered by little spots of ulceration scattered here and there; the injection of the intestines becoming more and more remarkable in the neighborhood of the anus. Some ulceration in the rectum.

Genito-urinary organs.—From ten to twelve abscesses were found in each kidney; and in the left, crude tubercles, about the size of a bean existed. The ureters were dilated, and their lining membrane red and injected. Bladder hardened and columnar, an inch in thickness. Mucous membrane of a violet color, thick, soft, and ulcerated in several points. Prostate three times its normal size; more developed under the neck of the bladder than towards the rectum; furnishing, by pressure, a very abundant purulent discharge, and containing about thirty little abscesses and as many crude tubercles. This prostate resembled the tissue of a lung full of tubercles, of which some are empty, and others suppurating, and others immature. The seminal vesicles and vasa deferentia thickened.

There was a circular stricture in the urethra, about half an inch in front of the prostate, formed by a tissue of a horny consistence, and scarcely permitting the introduction of a No. 2 catheter. An enormous dilatation of the urethra was observed between the stricture and the neck of the bladder, and the mucous membrane of this portion of the canal was thickened, fungous, and softened, and presented in its posterior part a fissure whence three fistulæ took their origin.

The cellular tissue of the perineum and scrotum was full of pus. The testicles were healthy.

This patient died the day after his entry into the hospital, and during this short space his state had not permitted us to think of involuntary spermatic discharges, always very difficult to detect in cases of this nature. This stricture was, however, seated a little in front of the orifices of the ejaculatory ducts, and the prostate mucous membrane was disorganized by inflammation; nothing is more common than spermatorrhœa under these circumstances. On the other hand, the prostate was considerably altered, and the seminal vesicles and vasa deferentia were much thickened. It is then to be presumed that the loss of intellect, the great debility of the system, &c., arose, as in the preceding cases, from habitual spermatic discharges.

Death was caused by a large effusion of blood in the left lateral ventricle. Was the hemorrhage the result of one of those cerebral congestions of which we have spoken in the preceding cases? Analogy seems to indicate that it was.

Hypertrophy of the left ventricle of the heart was present, however, and the influence which the increased development of this organ exercises on the brain is well known. If this hypertrophy were not the sole cause of the effusion, it had, without doubt, a large share in producing it. In obscure questions like that which occupies us we must only admit facts that are incontrovertible, and we must resist as much as possible the attraction of preconceptions. I have, therefore, reported this case, because it confirms what I have stated respecting the facility with which inflammation of the mucous mem-

brane of the urethra extends to all the other mucous membranes connected with it.

The first disease was urethritis with orchitis. Thus, at the beginning the inflammation extended from the urethra to the testicles by their excretory ducts, and the manner of this extension cannot be doubted, because twenty-five years afterwards the vasa deferentia and vesiculæ seminales were still thickened. The extension of the inflammation in the direction of the urinary passages was still more evident, for not only the prostatic mucous membrane was thickened, fungous, and softened, but that of the bladder was thick and softened, also, violet colored and even ulcerated in several points; the ureters were dilated, and their inner surfaces red and injected; lastly, each kidney contained ten or twelve abscesses, tubercles also existing in the left.

The prostate is the principal seat of blennorrhagic discharges; being situated at the junction of the urinary with the genital apparatus, it cannot fail to be affected by disorders which extend to tissues very far from their points of origin; thus it was still more diseased than the kidneys. It was three times its normal size, and independent of the purulent matter furnished by its mucous follicles it contained about thirty small abscesses and as many crude tubercles.

I shall remark, as I proceed, that the circumstances under which the tubercles of the prostate and left kidney were developed, and the existence of these tubercles by the side of recent abscesses, leave no doubt as to the cause of their formation.

Before concluding these reflections, I must also notice that traces of acute gastro-enteritis, and even of ulceration of the rectum, were present. It is to this complication that we must attribute the redness and dryness of the tongue, the extreme thirst, and the sensitiveness of the abdomen to pressure—characteristic symptoms of inflammation of the digestive organs, which we must not confound with derangement of their functions, or with the gastralgia that so frequently accompanies spermatorrhœa; neither must we confound the hemorrhage that caused death with the cerebral congestions of which I have spoken in the two preceding cases.

Unfortunately, these distinctions are very difficult to be established in some cases, as alterations of tissue often follow purely sympathetic functional derangements so suddenly, that it is impossible to specify the moment when the affection becomes really idiopathic. This is, above all others, the circumstance which has hitherto thrown so thick a veil over cases of spermatorrhœa; and which renders the minute examination of each case so necessary.

CASE IV.

Mental derangement—Belief in a change of Sex—Death.
AUTOPSY.—*Thickening of the arachnoid—Great alteration of the prostate—Atrophy and obliteration of the ejaculatory ducts.*

I find the following particulars related by Professor Rech respecting an insane person who died under his care. "The intellect had been disordered for a long time; the patient believed he had changed his sex, and, thinking himself a woman, spent much of his time in writing to an imaginary lover; sometimes he fell on his knees and seemed to dig the ground for hours together. He had entirely lost the power of vision in the left eye. His death took place from exhaustion after an obstinate diarrhœa. At the post-mortem inspection, the dura mater was found healthy throughout; the arachnoid was thickened in several points, and opacities were found on its surface which obscured its transparency. The pia mater contained a considerable quantity of serosity, especially between the cerebral convolutions. The brain, cerebellum, and medulla oblongata were healthy in all their parts. The optic nerve of the right side was atrophied behind the commissure to the extent of half an inch, of a grayish color and very soft. In the left eye, the retina was separated from the choroid by a considerable serous effusion; the vitreous humor, apparently atrophied, formed a reddish and irregular mass. The lungs and heart were healthy, but the latter was remarkable for its small size.

"The mucous membrane of the intestines, from the cæcum downwards, was red and thickened; and this alteration increased in intensity near the rectum, in which numerous ulcerations existed.

"The prostate projected into the bladder, and was nearly two inches in extent in its long, and fifteen lines in its transverse diameter; its structure contained three small abscesses. The ejaculatory ducts were softened, atrophied, and *obliterated*. The vasa deferentia and the vesiculæ seminales were on the contrary larger than ordinary."

The patient died of a chronic diarrhœa, and the intestinal mucous membrane was injected, thickened, and ulcerated; he had lost his power of vision in the left eye, and this eye was extensively altered, as was also the right optic nerve, before its entering the optic commissure; he believed himself to be a girl, and the functions of the testes must have been abolished, since the ejaculatory ducts were atrophied and obliterated. If this singular alteration of the genital organs were not the cause of the patient's derangement, it must at least have influenced its peculiar character.

SUMMARY OF THE PRECEDING OBSERVATIONS.

SYMPTOMS.—In the first two patients only, were involuntary spermatic discharges discovered, and their general symptoms well described. The other cases are hardly of importance, except in respect

of their pathological illustrations. It is only in the first two cases that the progressive deterioration of the spermatic organs can be well followed, from the first blennorrhagia to the patient's death; and that the ever increasing influence of spermatorrhœa over the whole economy, but especially over the cerebro-spinal system, can be appreciated.

The delusions produced in both patients by the last class of symptoms are well fitted to open the eyes of practitioners as regards cases of this nature. The consequences resulting from them in a therapeutic point of view are so serious, that we cannot well attach too much importance to their due consideration.

But how can extreme cases of spermatorrhœa so closely simulate affections of the brain, or of its membranes? and by what characters can we distinguish their symptoms from those arising from idiopathic affections of the same organs? In order properly to discuss questions of this kind, it is indispensable to have before us all the facts influencing them; but in passing, we may hastily consider those with which we are already acquainted.

In the first two cases, the cerebral symptoms were preceded, during a long period, by a remarkable derangement of the other functions: thus, digestion was performed badly; the stomach no longer bore fermented drinks, spiced meats, or very nutritious food; stubborn constipation supervened; the intestinal tube was habitually distended by flatus; sexual intercourse became more and more rare, the act more rapid, and at last entirely impossible. The patients, in these cases, discontented with themselves and their friends, and tormented by flatus, of which they want continually to relieve themselves, shun society and its trammels; they dislike everything which recalls to them pleasures they are unable to share; they become melancholic and irritable, misanthropic and hypochondriacal; ever occupied by the consideration of their health, they manifest the utmost indifference for all things which do not affect it.

The cerebral functions are not more weakened than all the rest, but their disorder produces more serious consequences, and is more readily perceived. It is soon remarked, that memory becomes impaired, that the train of thought is easily interrupted, and that the least excitement of the intellect induces congestion towards the head. Difficult digestion, more obstinate constipation, and abdominal distension by flatus, supervene in these cases, which end by attacks of congestion in the fatigued and weakened brain.

But these congestions are accompanied with a remarkable feebleness of the pulse, chilliness of the limbs, general uneasiness, anxiety, agitation in every sense, and a remarkable desire for motion. They are immediately followed by pallidity of the countenance, general debility, and alarming faintness, *without any one part of the body being more affected than the rest.*

Apoplectic congestions are never preceded for years by a progressively increasing weakness of the economy; the pulse is full, and there is a tendency to drowsiness.

The patient whose case I have related in my third observation, died in consequence of an extensive cerebral hemorrhage, which came on suddenly in the left lateral ventricle of the brain; but this patient had hypertrophy of the heart, and the first attack promptly caused death; it is, therefore, probable that the congestion was not due to the same cause, and it certainly did not present the same characters as in the two preceding cases.

The disorder observed in the ideas of such patients cannot be confounded with delirium; whenever delirium has been really present in these cases, true meningitis has been found to exist, of which I have seen numerous examples. The state of the intellect, in these affections, manifests, perhaps, a greater resemblance to demency; but demency commonly follows mental derangement; besides, it is always easy to obtain, in the cases I am considering, clear and connected answers.

It is impossible also to confound the disorder of the digestive functions with the symptoms of inflammation of these organs; in all cases in which inflammatory symptoms are observed, gastro-enteritis is actually present.

Lesions.—It is chiefly on account of the alterations discovered in the spermatic organs that the cases I have hitherto recorded are of value. The influence of the urethra on all the organs which open into it, is an important phenomenon in the history of spermatorrhœa. To have a clear idea of this influence, it is necessary especially to prove the facility with which inflammation creeps along the mucous membranes, to even their most distant continuations.

Prostate.—Blennorrhagic discharge arises from the mucous follicles of the urethra, and of the prostate especially, where they are most developed and most numerous: the prostate, in fact, is formed of these follicles, united by cellular tissue.

During the first days after contagion, a tickling in the urethra is felt, with itching heat and pain, especially during the emission of urine. The secretion of the canal is increased, and changes its appearance, but it is not until the inflammation has reached the prostate, that the discharge acquires its greatest severity. It is then principally secreted by the prostate, and experienced patients seem to be aware of this, for in doubtful cases we see them compress the urethra from the perineum to the glans penis, in order to expel the secretion. Besides, post-mortem examinations permit no doubt to remain on the subject.

But the irritating matter which excites the disease is not deposited on the surface of the prostate, and it is not because this matter contains a contagious principle, that the inflammation is propagated so rapidly from the orifice of the urethra to the prostatic mucous follicles, for leucorrhœa, the menstrual discharge, or the lochia, are frequently sufficient to excite a profuse discharge, the seat of which is equally in the mucous follicles of the prostate.

It is not the passage of the irritating matter from one point of the mucous surface to another, that favors this propagation, for the discharge passes from behind forwards, and the inflammation extends in the opposite direction.

However it may arise, the fact is constant, and it clearly explains the frequency of prostatic disease as a sequel to blennorrhagia.

In the beginning of a very acute inflammation, the prostatic follicles are gorged with a thick adhesive pus, and form a firm and yellowish body like a scrofulous tubercle; the cellular tissue surrounding them is so far, however, perfectly healthy, so that the follicles can be easily separated from one another throughout their extent, and the nature and seat of their changes can thus be proved.

At a more advanced period of the disease, we find the prostate infiltrated with pus or a pultaceous matter, which may be pressed out in the form of granules; the cellular tissue is now, therefore, attacked by the inflammation, but suppuration is not yet well established.

At a still more advanced period, by slightly compressing the prostate, pus may be made to exude from all its excretory ducts, and it contains, besides, little abscesses from the size of a linseed to that of a pea. Here the suppuration of the cellular tissue has begun to form into distinct collections.

In the third case I have related, the prostate was three times its normal size, and furnished, on pressure, a very abundant purulent matter; it contained besides this about thirty little abscesses, and as many crude miliary tubercles. We observe here the same progress of the inflammation, but the abscesses, in place of discharging their contents, were transformed into tubercles by the absorption of the fluid parts of the pus.

In the first case I have reported the prostate was partly destroyed, and contained in its fibrous envelope an elastic and purulent matter, which passed into the canal of the urethra, through a number of foramina in the mucous membrane. These foramina were the orifices of the mucous follicles whose parietes had been destroyed by suppuration.

We see by these observations, then, that the inflammation extends from the urethral mucous membrane to that lining the mucous follicles of the prostate, and afterwards to the cellular tissue uniting them; that abscesses form, and either discharge their contents by the mouths of these follicles after having destroyed their parietes, or in other cases form tubercles, which end in the same way; that the prostate becomes destroyed by degrees, and is reduced to a fibrous envelope, quite perfect, and covered by a kind of perforated membrane, the foramina in which vary in form and size, according as the excretory orifices remain distinct, or are united together by the destruction of the intervening tissue which separates them.

When the inflammation of the prostatic cellular tissue is less severe, in place of pus, an albuminous matter is deposited, which infiltrates

the part and gives rise to indolent engorgement, and if this be not dispersed promptly and entirely, induration of the prostate will result. I have seen many cases in which this has occurred.

Spermatic Organs.—The frequency of orchitis arising from blennorrhagia shows with what facility inflammation of the urethra extends to the testicles. This extension takes place by means of the mucous membrane. Injury, exposure to cold, &c., may indeed favor the development of orchitis; but its principal cause, often its sole cause, is the influence of the urethral mucous membrane over that lining the excreting organs of the semen.

Both patients and practitioners are in many cases much puzzled to understand the appearance of orchitis, and they would be still more so if preconceived opinions did not facilitate its explanation. Sometimes it is from having walked too far, or from having sat too long, sometimes from having worn too tight a pair of trousers, or from having bruised the testicles by crossing the legs, that the disease has arisen. But who is not exposed to the action of such causes? I admit that it is often immediately after a circumstance of this kind that the patient experiences for the first time, a more or less sharp pain in the testicle, which is soon afterwards followed by the other symptoms of orchitis; but those patients who observe carefully never fail to remark that they first experience a sense of weight in the inguinal region, and of dragging and pain in the spermatic cord. On examining the cord of the affected side, the vas deferens is then found to be swollen and very sensitive, and it even sometimes happens that the swelling of the cord is so great as to cause a kind of strangulation in the inguinal canal.

When, afterwards, the inflammation extends to the body of the testicle, it is attributed to the first cause which drew attention to the morbid sensibility of the organ, and then it is that the urethral discharge diminishes or becomes suppressed, according as the new inflammation is more or less severe. The suppression of the discharge makes the patient imagine that the affection itself has attacked the testicle, and many medical men even believe that the suppression does give rise to orchitis. They are deceived by taking the effect for the cause; but it is not the less true on this account, that the inflammation of the canal has originated that of the testicle; indeed the succession of the symptoms ought to be sufficient to show the course the disease has taken.

When both testicles have been affected, both ejaculatory ducts are found altered, and when both seminal vesicles or both vasa deferentia have been inflamed, the same alteration is remarked in both the ejaculatory ducts. When one only of the spermatic organs has been inflamed, I have always been able to trace the inflammation to the orifice of the corresponding ejaculatory duct, whilst the other has been found unaffected. I have also seen the inflammation spread without interruption as far as the tunica vaginalis of the testicle or of both testicles, according as the disease has extended on one side

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or on both. This affection of the tunica vaginalis may be easily explained, since any alteration of the glandular tissue is readily partaken by its fibrous covering, which is intimately united with the serous tissue coating the gland.

Inflammation of the seminal vesicles extends itself in the same manner, in some cases, to the adjacent peritoneum. In the first case I have related this inflammation was quite recent; the matter deposited on the surface of the serous membrane was still albuminous, soft, and unorganized; and in the second case, the bladder was united to the rectum by cellular adhesions, evidently due to the same cause.

These observations are of greater importance than they appear; they prove that general peritonitis might easily arise from the diseases we have been studying. The old and circumscribed adhesions of peritonitis which sometimes line the bottom of the pelvis, ought also to be noted as being almost certain proof of old inflammation of the seminal vesicles; they may, therefore, assist much in explaining the symptoms observed during life, when the alterations of the spermatic organs have passed away, or do not leave any very apparent traces. However this may be, these alterations of the peritoneum and of the tunica vaginalis prove that the inflammation is propagated by contiguity of tissue.

But it is necessary to examine a little more in detail the state of the different spermatic organs.

Orifices of the Ejaculatory Ducts.—In the patient who was the subject of the first case, the orifices of the ejaculatory ducts, in place of being circular, formed one elongated and irregular cleft. The ducts themselves were very large. This enlargement has been noticed by Stoll[1] in a case related by him; and it was still more remarkable in a body I once saw in the School of Medicine, in which the opening admitted a goose-quill. In all these cases still more serious lesions existed, but it is easy to conceive that the dilatation or ulceration of the sphincters which terminate the ejaculatory ducts, may alone possess great influence over the production of spermatorrhœa, and I should not be surprised if we should find sometimes no other lesion capable of accounting for it.

The Ejaculatory Ducts generally share the alteration and dilatation of their orifices; besides which, they may be insulated, as though dissected, by the suppuration of the prostate, or thickened, hardened, and cartilaginous, or they may even contain osseous granules. These alterations, much more serious than those of their orifices, must dispose very much to the involuntary escape of the semen. The ducts having lost their elasticity, and even their power of contraction, are no longer able to drive back the semen into the seminal vesicles; or at least they are incapable of retaining it, however gently these reservoirs may contract, or however little they may be compressed.

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[1] Pars prima rationis medendi.

The pressure exerted on these ducts, by the swelled tissue of the prostate, may cause their atrophy or obliteration, whence, of course, ensues the more or less complete loss of their functions.

Seminal Vesicles.—It would appear that pus formed in the seminal vesicles should be easily expelled; but these two receptacles, composed of ramified cells, are placed out of the direct course of the semen, to be used as reservoirs for it; and they only communicate with the vasa deferentia and the ejaculatory ducts, by a very narrow opening, in front of which the seminal fluid may pass to be discharged directly from the testicles to the urethra; it seems that the swelling produced by inflammation may so much lessen this opening as to form an obstacle to the exit of pus, for a shorter or longer period; in one case which I had an opportunity of examining, the pus had acquired a considerable thickness, and that at the bottom of the cells was still more thickened, exactly resembling tuberculous matter. The residence of the pus in this situation may be even still more prolonged, should the watery part be more completely absorbed; in these cases we find only a yellowish homogeneous substance, soft, like plaster, or even chalky, the true origin of which has been entirely mistaken.

It is almost unnecessary to notice that the presence of pus prevents the entrance of the semen into the reservoirs intended for it, and that it becomes, from this alone, an immediate cause of spermatorrhœa. We can easily understand, also, that after the expulsion of the pus, the parietes of the vesicles must be thickened, and that they may always remain hardened, altered in shape, thickened, cartilaginous, or even bony. In more favorable cases, also, their lining membrane must preserve, during a long time, an abnormal sensibility, the influence of which must be very injurious.

It is not, however, necessary that such serious alterations should exist in the seminal vesicles in order to account for the irregular and spasmodic contractions of which they are sometimes the seat; or for their influence on the production of spermatorrhœa; but it is useful to understand fully the most striking changes in order the better to appreciate the slighter ones.

The *qualities of the semen* found in the seminal vesicles should also be carefully noticed: I have seen it resemble meconium in one of these receptacles whilst pus existed in the other; and it is probable that the alteration of the secretion of the one testicle was due to a similar influence which, in the same case, had acted still more evidently on the opposite organ.

Vasa Deferentia.—Pus formed in the vasa deferentia is not in all cases easily expelled; swelling of their walls may bring about complete obliteration of these vessels in one or more points, whilst in others they are distended by the accumulation of the pus, so that pouches, more or less dilated and separated by contractions, somewhat resembling irregular chaplets, are formed. This disposition may extend itself to the epididymis, and to the corpora Highmori-

ana, the mucous membranes of which are continuous with those of the vasa deferentia at one part, and with those of the secretory tubes at another.

Pus, thus separated and submitted for an indefinite time to the action of the absorbents, becomes more and more solid, and gives rise to deposits resembling those of tuberculous matter, the aspect and consistence of which may present every degree of alteration in the same individual, according to the age and size of the abscess.

From this obliteration of the vasa deferentia, retention of the semen in the testicles also results, so that the generative power is lost; but it does not necessarily follow from this that the patient should be free from spermatic discharges. If the abscesses of the epididymis open externally, we can understand that the semen will escape immediately through this rupture of the excretory canal, and that in this way a true spermatic fistula is formed; and should this take place on both sides, it is clear that the patients would be exposed to the same phenomena as if they were affected by spermatorrhœa.

If the obliteration of the excretory canal be not followed by rupture, it is probable that the secreting organ, after having been a long time distended, swollen, and painful, will in the end diminish by degrees, and will become completely atrophied, as happens to other glands under the same circumstances. Thus, certain cases of atrophy of the testicles, after a very long and painful swelling of them, may be accounted for.

When the vasa deferentia are felt hard and knotty there can be no doubt as to the cause of this atrophy; but sometimes the alteration takes place in parts where manual examination is impossible, and in these cases the state of the prostate will be likely to furnish important information: when it is found irregular, swollen, and enlarged, the atrophy of the testicles must be regarded as the consequence of pressure on the ejaculatory ducts.

In an officer whose case I treated, the testicles were not larger than those of a child of six years; the patient had experienced a continued dull pain in them for a long time; the prostate was much altered; his moral faculties had experienced the same changes that occur in cases of spermatorrhœa, but the physical man was not much weakened; the reason of this is evident.

Chronic atrophy of the testicles, following more or less acute pain in them, is by no means rare: these pains are usually considered nervous, and the insensible wasting which follows them has not been as yet satisfactorily explained. All the patients of this kind whom I have had an opportunity of observing, had suffered previously from blennorrhagia, of which I am convinced this atrophy was the distant but direct result.

We often find the vasa deferentia thickened, hardened, cartilaginous, or even quite ossified, in patients who have had orchitis. These cases confirm what I have stated respecting the mode of transmission

of inflammation from the urethra to the testicles, for all these shades of induration are so many results of inflammatory action.

Testicles.—Every surgeon knows how slowly enlargement of the epididymis and corpus Highmorianum, following orchitis, is dispersed. This fact alone is sufficient to prove that it is by the vas deferens that the inflammation reaches the testicles, because it is by means of the corpora Highmoriana that the secretory tubes open into the excretory ducts. It is not then surprising that this part of the testicle should be the one most seriously altered, and often even the only one affected.

Purulent collections formed in the testicle are not able, like those in the organs we have already considered, to empty themselves by the excretory canals, and the fibrous envelop which incloses the secretory vessels is very resistant; it must, therefore, often happen that slight and very circumscribed inflammations are arrested before suppuration has been able to appear externally. If in these cases complete absorption do not take place rapidly, the thicker part of the pus may form tubercles, the presence of which will, in its turn, be a cause of new inflammation, and the vessels secreting the semen may, like the follicles of the prostate, be destroyed by degrees, so that the gland may become reduced to its envelop only. Other products besides pus may be formed in the cellular tissue of the testicle; when the inflammation is slight, but of long duration, or frequently recurring, a gelatino-albuminous matter is deposited, which thickens and becomes a source of organic alterations like those in the prostate, and the first cause of these also may be usually traced to long-neglected chronic affections of the urethra.

I have attached much importance to the thorough understanding the mode of transmission of inflammation from the urethra to the testicles, because the establishment of this point explains in the most simple way why the presence of a sound in the urethra, or the existence of a stricture, so often excites congestion and inflammation of those organs, and even in some cases the development of hydrocele, as well as why the removal of the cause suffices generally to make the effect cease.

The conciliation of all these circumstances is especially of importance to the study of spermatorrhœa; and the intimate connection of the urethra with the testicles by means of the vasa deferentia should suffice to forewarn us of the influence which the condition of the mucous membrane surrounding the orifices of the ejaculatory ducts, must exercise on the secretion and expulsion of semen.

Urinary Organs.—Analogous phenomena present themselves in the organs secreting and excreting the urine. The inflammation extends from the urethra to the kidneys by means of the bladder and ureters; it is even easy to trace its progress, without interruption; hence the violet-colored spots of congestion, the ecchymoses, and even ulceration of the mucous membrane lining these organs; hence the swelling and injection of the kidneys; hence the abscesses

of all sizes and all stages, encysted and non-encysted, and mixed with crude or suppurating tubercles, which have been found in the kidneys.

As a sequel to these successive attacks of inflammation, I have seen the tissue of the kidney destroyed like that of the prostate or of the testicle; almost reduced, in fact, to its external fibrous envelop.

There is then an exact similitude between these two classes of organs, and if the kidneys could be as easily examined as the testicles, this resemblance would appear still more strikingly.

Comparison of the two sets of Organs.—We often see, after exposure to cold or excessive drinking, a blennorrhagia diminish or cease entirely, and the patient experience at the same time violent and deep-seated pain in the loins: the urine is scanty, and high-colored, and sometimes even bloody. If in these cases we could examine the kidneys as we do the testicles, we should, perhaps, find that attacks of nephritis following blennorrhagia are nearly as frequent as those of orchitis.

I am convinced that, in the cases I have seen, alterations of the kidneys have been more frequent than those of the testicles. It is not only as a sequel to blennorrhagia or stricture that nephritis takes place; every inflammation of the urinary canals may extend to the kidneys; and this is why acute or chronic cystitis, and the presence of stone in the bladder, are such common causes of inflammation of these organs; this is why the kidneys are so often found disorganized when the bladder has been long irritated by the presence of extraneous matters, or by repeated attacks of retention of urine.

I believe I have now more than sufficiently shown how easily acute inflammation of the urethra extends to the secreting organs of the semen and urine, by means of their excretory ducts; I have compared together the phenomena that occur in both classes of functions, because they are presented at the same time, in very nearly the same degree, and with analogous characters. But this resemblance is not observed in cases of acute inflammation only; it is more easily shown in these cases, and on this account I have commenced with their consideration. Similar phenomena are, however, observed under the influence of less active causes.

When the bladder is irritated the secretion of urine is increased in quantity and altered in quality; and at the same time that it becomes more abundant and more watery, it remains a shorter time in the bladder; the desire of micturition is felt oftener and more suddenly; however the patient may wish to retain the excretion, the sensation is so painful, and the bladder contracts so violently, that the urine is often expelled in spite of every effort, and before the patient has had time to prepare himself for its discharge. The fluid is passed each time in small quantity, the jet is short and feeble, and falls within a little distance of the patient's feet: should this state continue any length of time, the muscular coat of the bladder becomes more developed, the parietes of the organ are thickened, and its capacity dimin-

ishes in the same proportion. Those who have noticed the coincidence of this limpidity of the urine with its frequent expulsion, have concluded that the more watery the fluid secreted the more it irritates the mucous membrane. But it is impossible for us to admit that the urine should irritate the bladder most when it contains least salts in solution. It is evident that the effect has here been mistaken for the cause. It is because the bladder is irritable that it cannot longer bear the presence of the urine, and this fluid is more watery, because the irritable kidneys secrete it in greater quantity, and it remains a shorter time in the bladder; that this view is correct, is proved by the vesical mucous membrane, when it possesses its normal sensibility, submitting for a long time to the presence of a large quantity of watery urine, as occurs daily after meals.

If this irritation be prolonged, it may produce in the end a kind of relaxation of the secreting vessels, and degenerate into diabetes. The urine entirely loses its chemical characters; the urea and uric acids are replaced by a saccharine matter, and the system wastes in consequence of furnishing so superabundant a secretion.

Exactly the same phenomena are observed in the spermatic organs when they are submitted to the influence of a similar irritation; the testicles secrete an increased quantity of semen because they are irritated, and their secretion is more watery, because it is less perfectly formed, and remains a shorter time in its reservoirs before expulsion; it is more rapidly expelled because the seminal vesicles are more sensitive to the impression produced by its presence, and are more readily excited to action.

The spasmodic contractions of which these organs become the seat commence by producing ejaculation very rapidly either during sexual intercourse or after erotic dreams; this renders coitus rapid and incomplete, and nocturnal pollutions very frequent; afterwards the weakness and irritability are increased, the semen becomes more abundant, and still more fluid, and the convulsive contractions of the seminal vesicles are more frequent; during this state the approach of a female, or even a lascivious idea may suffice to excite ejaculation; but the semen is no longer projected with energy, erection is never complete, and scarcely any sensation accompanies emission.

These injurious contractions are at last excited even by still less distinct causes; the patients feel them come on when least expected, they dread their consequences, and still they are quite unable to prevent them. Lastly, there are cases in which the debility of the genital organs is such that a true *spermatic diabetes* may be said to be present, as well by the quantity and quality of the secreted fluid as by the frequency of its emission.

We have been unable to make the same chemical experiments on the altered semen that have been made on the urine of diabetic patients; but the semen in such cases contains no more spermatozoa than the urine does urea. Let it not be thought that this statement is founded only on analogy; the fact really exists in practice. I have,

at this moment, a patient under my care, who is dying, worn out by the effects of diabetes with diurnal pollutions of the same kind.

Here, then, we have, from the action of the same causes, the kidneys, testicles, bladder, and seminal vesicles affected in the same manner, and producing analogous results; and further, these affections seldom occur singly; thus, in stricture, the urinary passages are, indeed, chiefly affected, but I have seen cases in which the spermatic organs have been almost as much disordered; it is not inflammation alone which may extend in both these directions, but even a simple irritation of the urethral mucous membrane.

Diurnal pollutions are too little understood to have been generally noticed in these cases; they are always obscure, and the attention is fixed usually on another object; but I have so often satisfied myself of their presence as a sequel to strictures, that I regard spermatorrhœa as the true cause of all the cases of hypochondriasis, ischuria, and debility, which are attributed to affections of the urinary organs. This position is, I think, proved by the weakness and rare occurrence of erection, the rapidity of ejaculation, and the increased fluidity of the semen observed in most of these patients.

Cases of diurnal pollution uncomplicated with chronic catarrh or irritation of the bladder are sometimes rare; and this often renders diagnosis difficult, not only on account of the symptoms of catarrh being present, but also on account of the mucus secreted by the bladder and prostate. On this account, when I see the urine cloudy, I always inquire respecting diurnal pollutions, so that I may not confound mucus with semen.

It is very remarkable, also, that those who give themselves up to venereal excesses or masturbation, frequently experience a desire to micturate; this fact gave rise to the saying of the ancients, "*raro mingitur castus.*" I have ever been struck by the truth of this axiom; and the fact proves how easily the urinary organs share the excitement of the spermatic.

Another very important circumstance in the history of diurnal pollutions proves how correct is the analogy I have established between irritation of the bladder and that of the seminal vesicles. It is almost always at the end of the emission of urine that the semen escapes; the bladder then contracts forcibly to expel the last drops of urine, and the seminal vesicles also enter into action, and expel with the urine a greater or less quantity of their contents.

It has been wrong to attribute this viscid discharge to the prostate, because it does not present all the qualities of ordinary semen; the evacuation is sometimes very abundant, and that it is semen, cannot, in these cases, be mistaken. Besides this, when the patients have their attention called to the circumstance, they know very well how to estimate the contractions of the seminal vesicles, which are even in general proportion to the extent of the evacuation.

Most patients remark also that when they are threatened with a relapse, it is preceded by a more frequent and very sudden desire

to micturate, whether this increased sensibility of the bladder arise from cold or from an excess either of drink or of coitus. This proves that the same causes act at once on both sets of organs.

Persons affected by diurnal pollutions experience, generally, injurious effects from the use of diuretics. Nearly all those who have taken squills, nitrate of potass, digitalis, &c., have noticed during their use a remarkable increase of the seminal evacuations, and a few, after having been cured during a longer or shorter period, have experienced relapses which could not be attributed to any other cause, and which have spontaneously passed off as soon as they have relinquished the use of these medicines.

It is also well worthy of notice that children subject to incontinence of urine, are particularly liable to nocturnal pollutions at the age of puberty; and at a later period to diurnal pollutions.

Lastly, I cannot conclude this parallel of the two sets of organs without mentioning that obliteration of the spermatic excretory ducts may be followed by the formation of spermatic fistulæ, in the same manner that strictures of the urethra give rise to urinary fistulæ.

To resume: All the mucous surfaces of the genito-urinary organs have the gréatest analogy and the most intimate connection with one another. It is by them that inflammation creeps by degrees to the secreting organs of the urine and of the semen. The portion of this membrane which lines the prostate, being in intimate connection with that of the mucous follicles, with that of the ejaculatory ducts, and with that of the bladder—this portion then is the one, the different conditions of which have most effect on all the rest. This connection takes place by means of the lining membrane of the ducts; and is by no means to be considered the result of sympathy, such as exists between the uterus and breasts.

The excretory canal, transmitting the inflammation, must necessarily share its influence. The seminal ducts and vesicles, then, cannot remain unaffected by the action they transmit to the testicles, and this is an important consideration when we recollect that these are as much the acting organs in the emission of semen, as the bladder is the organ for the expulsion of urine.

We shall often find it necessary to apply these facts to the study and treatment of diurnal pollutions, and in passing, it is as well to notice that the influence of the excretory canals on the secreting organs is not an isolated phenomenon occurring only in the kidneys and testicles, but that it is the result of a general law, applicable to all glands.

Suction excites the secretion of milk and changes its qualities; the first drops drawn from the nipple are watery, and the milk afterwards becomes more abundant and better formed in proportion as the suction continues. The introduction of extraneous bodies between the eyelids increases the lachrymal secretion, which sometimes even is so changed, that it irritates and excoriates the skin

of the cheeks. The presence of food in the mouth, especially when spiced and savory, increases the secretion of the salivary glands. During digestion the liver and pancreas are excited; and the use of emetics and purgatives produces the same effects. The ejaculatory ducts open on the surface of the prostatic mucous membrane; is, then, the important part this membrane plays in the production of spermatorrhœa, a cause for wonder?

CHAPTER III.

CAUSES OF SPERMATORRHŒA.

Blennorrhagia.

The first case of diurnal pollutions which I had occasion to treat occurred in a student of medicine, twenty years of age, who studied his disease with much care, and described its causes and symptoms with remarkable perspicuity. The following are the facts:

CASE V.

Lymphatic temperament—Blennorrhagia — Orchitis—Nephritis—Nocturnal and diurnal pollutions—Abuse of mercurials—Injurious effects of cold and tonics—Cure by means of leeches, the use of flannel, and milk diet—Fresh attacks of Blennorrhagia—Same treatment with the same results.

M. N——, of lymphatic temperament, tall and thin, with a pale face, red hair, white, and habitually cold skin, narrow chest, and soft, feeble voice, had never suffered from any diseases except those about to be described. In January, 1821, M. N—— contracted blennorrhagia, which was treated by emollient drinks, general baths, and corrosive sublimate. In the month of April, several doses of Chopart's[1] mixture were taken, and arrested the discharge, after a duration of four months. Six weeks afterwards he contracted a second blennorrhagia, and in September, swelling of the left testicle occurred after horse exercise. This swelling was in a great measure dispersed, but a flaccid state of the scrotum remained, causing painful dragging pains in the spermatic cords, which were relieved, however, by the use of a suspensory bandage. At the commencement of 1822, the discharge still continuing, local astringents and mercurial frictions were employed, with iodide

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[1] The following is the composition of Chopart's mixture:

℞.—Balsam copaib.,
Alcoholis, sp. gr. 33°,
Syrupi simplicis,
Aq. menth. pip.,
Aq. flor. aurant., ää partes sexaginta;
Sp. æther. nitr., partes octo.
M. ft. mist. cujus cochlear. minim. unum nocte maneque summend.

of potassium and bichloride of mercury internally. Under this treatment the discharge diminished, but did not entirely disappear.

Whilst taking these remedies, M. N—— was exposed to severe cold. Cutaneous exhalation was suppressed, and pain in the loins supervened. This was generally of a dull character, but was rendered acute on the least exposure to cold; about the same period M. N——'s digestion became impaired. He attributed this to weakness of the stomach, and sought to stimulate the organ by a generous diet, and by the use of rhubarb and wine. These means, however, only increased his disorder, and, about the month of June, 1822, it became very serious. As soon as food reached the stomach he felt an impression at the præcordia, with difficulty of breathing, general lassitude, and sometimes a desire to vomit; his tongue was white and pasty; his bowels constantly distended with flatus, and he suffered from obstinate constipation, with occasionally slight fainting fits; he was quite unable to fix his attention on any subject requiring mental exertion.

Although without appetite, he forced himself to eat to keep up his strength, but his digestion became more difficult, and he felt himself much overcome by lassitude after meals. He endeavored to assist digestion by the use of coffee, and with the same view he bathed every morning in cold water; he was however, unable to remain immersed more than a quarter of an hour at a time without shaking in all his limbs; no reaction took place afterwards, and he always remained a long time before he was able to regain a comfortable degree of warmth. He obtained relief from eating ices, however, and took them frequently.

A slightly urethral discharge still continued, and on waking in the morning he perceived a viscid pearly matter at the orifice of the glans. Part of this matter, remaining in the canal, was expelled with the urine, and remained suspended in the fluid like a cloud, which after some time was deposited on the bottom of the utensil.

Towards the close of the year 1822, when the cold weather commenced, his bad symptoms increased; he became sad and absent, was unsettled, without fixed motives, and very timid. He became shivered on the least exposure to cold, the rigor commencing in the lower extremities, and extending over the whole body. He suffered severe pains in the loins, and passed urine frequently, and he now had difficulty in expelling the last drops, which were viscid and always partly passed on his shirt. He no longer had erections or sexual impulse. He often passed semen during sleep, without lascivious dreams or any turgidity of the penis, and he constantly felt an irresistible drowsiness. Towards the commencement of 1823 he perceived an abundant reddish sediment in his urine.

About the end of February his state had become deplorable: he then applied to me, and I ordered the following treatment—twelve leeches to the anus, cold lotions to be applied to the scrotum and perineum three times a day, iced milk, flannel next the skin, very little wine to be taken with his meals, and, after a short time, complete abstinence from all fermented liquors. A few days after he felt a remarkable change; his digestion was performed better; the pain in his loins and the lassitude disappeared. He became less sad, less timid, and he applied himself to study with ardor; his genital organs acquired energy, and he threw aside his suspensory bandage; his urine no longer deposited a sediment, and erections reappeared. Leeches were applied a second time, fifteen days after the first, and he continued the remainder of the treatment for two months. By that time—about the end

of April—his health was re-established, and the warmth of summer proved sufficient to confirm it. In the month of July, 1823, however, he contracted a third blennorrhagia which did not affect his general health. A month after its appearance it was treated successfully by means of leeches and small doses of copaiba: but when he took the latter in too large quantities he suffered acute pain in the loins. Sea-bathing during the month of September contributed much to strengthen the genital organs. M. N—— was afterwards appointed, by concours, senior surgeon to a very important hospital, which proves that he was able to apply himself, after his recovery, to severe study. I have since seen him several times, and have learned that his health continues excellent, but that he is obliged to guard carefully against the effects of cold, and against every over-excitement of the digestive organs. He finds it necessary every winter to return to milk, with mild and light food, and to drink water with his meals.

This patient while suffering under blennorrhagia used horse exercise; soon afterwards orchitis occurred; painful dragging sensations were experienced in the spermatic cords, even for a long time after the abatement of the inflammation. It was then by the vas deferens that the inflammation was transmitted from the mucous membrane of the urethra to the testicle. A short time after from exposure to cold, perspiration became suppressed, and pain in the loins was experienced. This pain was probably situated in the secreting organs of the urine; since, simultaneously, its emission became very frequent, the last drops were expelled with difficulty, and its composition was much altered. The inflammation then extended by means of the bladder from the urethra to the kidneys, in the same manner that it extended by the vasa deferentia to the testicles.

The urine deposited an abundant gravelly sediment, and at the same time contained semen in suspension. The bladder had become more sensitive to the presence of urine, for the desire to empty it was often and very suddenly renewed. The seminal vesicles were exactly in the same condition, and the semen was passed without erection during sleep; in addition to which, the contractions of the bladder necessary for the expulsion of the last drops of urine caused contractions in the seminal vesicles, and the fluid expelled was viscid and glairy. Both classes of symptoms ceased, reappeared, and were cured at the same time; and they were evidently due to a state of inflammation, for the antiphlogistic treatment was the only one that succeeded in removing them.

The injurious effects of cold were very evident in the case of M. N——, and may be attributed partly to his lymphatic temperament, but we often find analogous phenomena in patients of a very different constitution. However this may be, I am convinced that without the habitual use of flannel next his skin, M. N—— would not have been able to preserve himself from further relapses, or permanently to strengthen his constitution.

M. N—— had undergone several courses of anti-venereal treatment, although he had only suffered from blennorrhagia, and the

effects of mercury were very injurious to him, as his constitution was little fitted to withstand its action. He fell also into other very common errors, which are the ordinary result of an almost universal false reasoning on the part of the sick. Perceiving that he lost flesh, he ate heartily, and chose the most nutritious kind of food: digestion being performed badly, and accompanied with the development of flatus, because the stomach shared the general weakness, he had recourse to rhubarb, generous wines, and spices. Hence frequently arise the attacks of chronic gastritis, which so constantly accompany old cases of spermatorrhœa.

M. N——'s intellectual functions were weak in common with the rest; he was habitually drowsy, and he took coffee and tea to rouse himself.

At length M. N——, like many other practitioners, began to treat symptoms, and allowed himself to be influenced by the names given to medicines; his urine was thick, deposited a sediment, and was passed with difficulty; he took nitrate of potass as a diuretic, without reflecting that the increase of secretion which this medicine produces, is the result of excitement of the urinary organs, and that his were already too much irritated. His bowels being constipated, he took purgatives without seeking the cause of constipation, and without troubling himself about the effect which irritation of the rectum produces on the bladder, the prostate, and the seminal vesicles. These are errors of daily occurrence.

The abuse of cold in cases of nocturnal and diurnal pollutions is very common. By bathing in the river M. N—— followed the advice laid down by all writers on the subject: it proved injurious to him, however, because the genito-urinary mucous membranes were too irritable not to receive a hurtful shock from immersion in cold water. The patient should have foreseen this result from the bad effects cold had always produced on him; besides this, he was too weak to obtain a proper degree of reaction after bathing. I shall show by and by that cold baths employed without distinction in cases of spermatorrhœa, have done much more harm than good. Still the patient found that sea-bathing at a later period gave tone to his genital organs, and he was unable to reconcile to effects of so opposite a nature; yet nothing is more simple. When he took sea-baths he was cured; the irritation of the organs had passed off, and their normal condition had returned; the first shock of the cold then was no longer injurious, and the consecutive reaction followed rapidly. It is true that considerable difference exists between sea and river bathing; but it is chiefly to the different states of the system that the two very opposite effects of cold on this patient must be referred.

From not having attended to this important distinction, general directions have been given respecting the use of these powerful agents—directions which daily lead to the most disastrous results.

CASE VI.

Masturbation—Blennorrhagia—Diurnal pollutions—Failure of the ordinary modes of treatment—Cauterization of the prostatic portion of the urethra—Rapid recovery.

Alexis Poit, æt. 20, short, stout, and of a sanguineous constitution, applied at the Hôtel Dieu, Montpellier, to be cured of a venereal taint, which, he said, existed in his system, in consequence of an attack of blennorrhagia contracted three months previously, and cured in a few days by the simple use of dandelion tea.

Nothing in the appearance of the patient confirmed this statement. He complained, however, of violent pain in his head, pain in his bones, frequent spasmodic tremors in his limbs, and a constant agitation which prevented his enjoying an instant's sleep, of stunning sensations and vertigo, with ringing in his ears; of a sense of suffocation with palpitation of the heart, and of itching in the skin: his eyes were injected, dry, and very sensitive to the impression of light.

Out of all his symptoms, the ossific pain was the only one that could favor the idea of a venereal taint; the patient said that he suffered most during the night, but his answers were very obscure and often contradictory. His skin, however, was hot and dry, and covered with pimples. I prescribed for him venesection, baths, and refrigerant drinks.

The next and following days, discharges occurred, and he seemed still more satisfied that he labored under a syphilitic taint. His constitution seemed strong, and his appearance proclaimed health. I thought, therefore, at first, that he had some motive for feigning various diseases, but as he did not eat, and seemed inclined to submit to moxas and other means of the same nature, I observed him more closely. The pupils looked on him as a hypochondriac or a maniac, because he complained of a fixed pain in the hypogastrium, although his tongue was neither red nor dry; and because he said he heard a continual noise in his belly, and felt a hand of iron pressing on his intestines for several hours together, and then relaxing them suddenly.

When this oppression came on, he felt something ascending from the epigastrium that almost suffocated him, and ceased suddenly on his passing flatus. He was habitually costive, his fæces were very offensive. He passed water very often, and complained of pain in the penis and bladder during micturition; this he attributed to the suppression of the blennorrhagic discharge. Twelve leeches were ordered to the anus, with general baths, which relieved the pains in the bladder and penis.

I advised the patient to get up and take exercise, but he pretended that his legs were unable to support him, and he spent all his time with his head under the bedclothes, groaning and sighing.

Having observed many of these symptoms in persons suffering from spermatorrhœa, I questioned Poit on this subject; but he had never noticed any discharge resembling semen, either while passing urine or fæces. He had never had intercourse with any female, except her from whom he had contracted blennorrhagia, and with her very rarely, and at very distant intervals.

From the way he deplored the moment of folly to which he owed his

sufferings, I suspected that he had been addicted to masturbation; he denied it obstinately, however, before the pupils, but he told me privately that he had practised it from the age of ten, even five or six times a day; at first he experienced a very lively tickling sensation, accompanied by discharge, and soon changing into a painful sense of burning. About the age of twelve, having perceived that these injurious practices injured his health, he became more careful; but about fourteen he again gave himself up to the vice almost madly. The irritation was now often carried so far as to produce pain; the veins of the spermatic cords swelled, and there existed in his whole body, especially in his loins and joints, a sense of debility, attended by obtuse pain. He had continual vertigo, with noise in his ears, and his memory became impaired. From sixteen to eighteen he restrained himself by degrees, and regained his strength and stoutness. At this time he first had sexual intercourse, soon after which blennorrhagia came on.

I requested the patient to preserve his urine, and to notice carefully what passed from the penis when he was at stool. I found the urine red, thick, and muddy, with a flaky cloud suspended in it; the sides of the vessel were lined by a brickdust-like powder, and a glairy and tenacious sediment was adherent to its bottom. The patient noticed that the last drops of urine were thick and viscid, and were passed with sudden and involuntary contractions of the bladder. After passing fæces he found a thick, granular, and transparent matter at the orifice of the urethra.

I prescribed for him milk three times a day, taken as cold as possible, and mixed with Eau de Spa or lime-water; a vegetable diet; two cold hip-baths daily, each of a quarter of an hour's duration; and a cold enema night and morning, to facilitate the passage of the fæces.

These means which I had seen recommended by Wickman and Saint Marie, and which had succeeded in other cases, did not produce any improvement in this. The patient became more restless and hypochondriacal, and did not sleep an hour during the night. Emollients and leeches relieved his pain, but at the same time relaxed his system; he suffered less, but he passed much more semen. Tonics and cold diminished for a time the seminal discharge, but they increased the pain and irritation.

After about three weeks of these fruitless essays, I gave up general means altogether, and as I was convinced that the spermatorrhœa arose from a state of chronic inflammation of the prostatic mucous membrane, the irritation of which extended to the ejaculatory ducts and seminal vesicles, I considered that by removing this state of the membrane by means of cauterization, I should put an end to the irritation of the spermatic organs, and especially to the spasmodic contractions of the seminal vesicles.

The beneficial effects which I had obtained from the use of nitrate of silver in analogous cases of irritation, made me little dread the danger said to be attached to cauterization of the prostatic portion of the urethra, on account of its vicinity to the bladder.

In order to empty the bladder, and to take the exact length of the urethra, I was obliged to introduce a catheter, which had scarcely entered an inch or two into the canal, when violent spasmodic contractions commenced, which prevented it from advancing, and almost made me suspect the existence of stricture; after a few seconds these spasms ceased, and the catheter passed as far as the neck of the bladder. Here the pain and spasms were redoubled, and the bladder seemed perfectly closed. At length, after a considerable time, I was enabled to introduce the point of the catheter into the

neck of the bladder, and the instrument was immediately powerfully drawn into the vesical cavity, as though by a kind of suction. When untouched, the catheter was several times suddenly attracted and repelled alternately, by the convulsive action of the muscles of the perineum and bladder; and its extraction was almost as painful and difficult as its introduction had been, so firmly was it held by the neck of the bladder. The vesical contents were rapidly and forcibly discharged.

All these circumstances confirmed me in the diagnosis I had formed respecting the cause of the disease, and I immediately applied the solid nitrate of silver to the prostatic portion of the urethra. The application was rapid—lasting only long enough to incline the caustic to the right and left, so as to make it pass quickly over the inferior surface of the canal.

During the first twenty-four hours, the patient suffered much while passing urine. On the second day, the pain was much less severe, and on the third day, it was scarcely worth notice. During these three days, the urine was thick and muddy, and the last drops were streaked with blood. After this time it became transparent, and the patient was able to retain it much longer.

Twelve days after the cauterization, the urine was quite normal without either deposit or cloud—the last drops were expelled easily, and were as transparent as the first. The patient no longer experienced tension or uneasiness in the perineum, or involuntary contractions of the neck of the bladder; but when the bowels were confined, he still noticed a viscid matter at the orifice of the urethra.

The first improvement noticed was in his sleep, which became sounder and longer; then the moral and physical man became more energetic; and lastly, the activity of the digestive organs returned. Within fifteen days erections reappeared, and after some time the patient experienced nocturnal pollutions, preceded by erotic dreams and accompanied with lively sensations. The intellectual powers were the last to be entirely re-established; but they did not appear to have ever been very active in this patient.

At the expiration of a month, his health was quite perfect, and he wished to resume his former occupation.

This patient was the first on whom I practised cauterization as a remedy for spermatorrhœa; and I have related his case chiefly to show the active and painful contractions of the neck of the bladder and urethra which occur in such cases. These facts may give an idea of the extreme state of irritation of the urethral mucous lining, and of the influence which this condition must exercise over the seminal vesicles.

The phenomena above described are very often observed in patients affected by spermatorrhœa; their study is therefore important in deciding on its treatment—thus, for example, I have noticed that the greater the state of irritation the more certain are the effects of cauterization; in these cases, also, tonics, ice, and cold hip-baths, are by no means proper. In the case I have just related spermatorrhœa was, without doubt, caused by the blennorrhœa, but the excessive masturbation to which the patient had been addicted, even

before puberty, must have contributed much to produce this unfortunate disease, and, probably, from this circumstance it arose that a cure was impossible by the employment of the usual simple means.

CASE VII.

Abuse of spirituous liquors—Blennorrhagia—Nocturnal pollutions—Impotency—Frequent discharge of urine—Cauterization—Cure.

J. D——, at an early age, accustomed himself to an excess of alcoholic drinks, but in other respects was remarkably abstemious; at the age of twenty he contracted blennorhagia, which disappeared of its own accord at the end of about three weeks. A short time after, he noticed that nocturnal pollutions occurred very frequently, sometimes happening eight or ten nights consecutively. The day following these discharges, D—— was depressed in spirits and suffered from headache, noise in the ears, and dazzling before the eyes: these symptoms induced him to submit to venesection three times, and to apply leeches to the temples, after which D—— entirely lost all virile power.

After the disappearance of the blennorhagia a yellowish discharge from the anus came on several times, and was accompanied with a very troublesome itching. Soon after this the patient had a tetter on the face, for which he took alteratives and mercurials. The skin disease disappeared, but symptoms of irritation of the bladder supervened.

In 1824, D——, aged twenty-four, came to the hospital of St. Eloi, in the following state. He was of the middle height, and well made, his skin was pale, his hair black, his face very red, his manner gloomy and taciturn; he was fond of solitude, showed perfect indifference towards women, and great horror of masturbation. His intellect was dull, his digestion painful, and his limbs weak. He passed urine two or three times an hour during the day, and five or six times in the course of the night, attended by scalding and pain in the canal.

The introduction of a silver catheter of moderate size excited spasmodic contraction and acute pain in the neck of the bladder, which induced me to propose cauterization to the patient: he agreed to it without hesitation, and I performed it immediately.

I introduced the caustic-holder into the bladder so as to cauterize the parts near its neck, and I passed the caustic over the prostatic surface as well as over the membranous portion of the urethra in withdrawing it. Immediately afterwards there was a pressing desire to micturate, and blood passed with the urine. Baths and barley-water were ordered.

During the following night he experienced a painful seminal emission; he passed urine only once, but with an acutely burning pain.

On the following day the patient only passed urine four times, but always with burning and a slight discharge of blood.

On the third day he no longer passed any blood, and the scalding was very slight.

On the fourth day the emission of urine took place every three or four hours only, and the discharge arising from the cauterization had ceased.

On the following days, emptying the bladder was performed less and less frequently; seminal discharge no longer followed; the patient regained his spirits; his health became perfectly re-established, and about the fifteenth day after the cauterization he left the hospital.

In this patient the blennorrhagia had not been preceded by excessive sexual intercourse or masturbation: but the abuse of alcoholic stimulants is almost as pernicious in its effects on the genito-urinary organs; besides this he possessed a strumous habit, which showed itself by the tetter on the face and the abscess at the margin of the anus. It is especially in cases of this kind, that tonics, ice, and cold bathing fail, and are even injurious; happily, we possess a powerful remedy in cauterization.

In this case the tetter on the face having disappeared, inflammation of the vesical mucous membrane occurred; this was very intense, the patient passing urine two or three times in the hour; from this time the urinary symptoms predominated, on which account catheterism was accompanied with acute pain in the prostatic region, and spasmodic contractions of the neck of the bladder.

Not long since cauterization of the prostatic portion of the urethra was looked on as the extreme of rashness, so much was the introduction of the least particle of the nitrate of silver into the bladder dreaded; although these fears were only founded on argument, they were generally received, and seemed so natural that I was influenced by them for several years. I have stated in another place the means by which I shook off these foolish fears, and the successful results that have followed the application of the nitrate of silver to the mucous membrane of the bladder in catarrhal affections of that organ.[1] Since that time, whenever I meet with cases in which the affection of the prostatic mucous membrane extends to that of the bladder, I begin by cauterizing the latter, and I continue the application as far as the bulb of the urethra whilst withdrawing the instrument, by inclining it rapidly to the right and left. It is not to take the length of the canal that I introduce a catheter in these cases, but in order to empty the bladder completely, so that the nitrate of silver may act with more energy. We have just seen the effect of this treatment: a patient who previously passed urine two or three times in the hour was enabled to retain the excretion as long as is usual, and at the same time the spermatorrhœa from which he suffered was cured.

This case also confirms in a remarkable manner what I have above stated respecting the relations that exist between the disease of the urinary, and those of the spermatic organs.

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[1] *Vide* Leçons de Clinique, &c.

CASE VIII.

Masturbation—Blennorrhagia, repeated anti-venereal treatment—Diurnal pollutions—Increasing weakness, especially of the mental faculties—Extreme emaciation—Cauterization, and cure after sixteen years. Venereal excesses, relapse—Cauterization again performed with success.

M. V——, of spare habit and nervous temperament, was addicted to masturbation about the age of puberty, but abstained when he perceived his health affected. He again practised it as soon as his strength began to return, and renounced it as soon as he perceived his health endangered. He again regained his strength, and applied himself with diligence and success to the study of the law.

At the age of eighteen he contracted blennorrhagia, which was treated during six months with injections of acetate of lead, sulphate of copper, &c. The discharge disappeared after a journey on horseback—again came on soon after and again stopped. Urethral discharge was afterwards often excited by very slight causes.

Independently of tonics, injections, and astringents, which were prescribed for this patient without the least discretion, bichloride of mercury, mercurial pills, sarsaparilla, and friction with mercurial ointment, were recommended. His health became more and more disordered; he was subject to headache and pains in the limbs and loins, accompanied with debility, loss of sleep, and frequent attacks of fainting.

M. V—— attributed all these symptoms to the presence of a venereal virus of the system, and as they increased several times after sexual intercourse, he was persuaded that he had on each occasion received fresh infection. At length the care of his health became quite a kind of monomania. He abandoned the career he had followed for eight years, and came to Montpellier to study medicine for the sole purpose of arriving at the cause of his complaint, and finding a remedy for it. Returning always to the idea of a syphilitic virus, he submitted himself successively to all the anti-syphilitic modes of treatment he could discover recommended by authors, and combined them together in various ways.

Still, however, his strength diminished by degrees; his digestion became painful and laborious; and he was annoyed by flatus and obstinate constipation, which he combated by the frequent use of purgatives. His intellect became so far weakened that he could not fix his attention during a lecture, and soon even he became unable to comprehend what he read.

He attended the courses of the faculty, but he was unable to remain during half a lecture without experiencing fatigue and impatience: his head became congested, and he felt a constant desire to change his position, or to walk.

Though formerly competent to argue with pleasure on the most abstract propositions, he was now unable to follow the simplest reasoning; and the most recent and important facts escaped his recollection. He was tormented by attacks of vertigo, loss of sight, and noise in the ears. The least intellectual excitement induced fits of pain in the head; and slight congestions were often excited by the digestive process, by flatulence, or by efforts at stool.

The patient having his mind continually occupied by these symptoms at

length persuaded himself that part of his cerebral substance had been absorbed, and that his cranium only contained the nerves of sense; he thought he could feel these bathed in serum, and he was obstinately of opinion that he was threatened with an attack of apoplexy.

On the other hand, his character became sad, variable, and unsociable; he disliked music, of which he had previously been passionately fond; he slighted all his friends, and his misanthropy became so great that when he saw an acquaintance in the street he turned on his heel in order to avoid him. Tormented by a constant desire for motion, he was unable to remain long in the same place; and this restlessness, together with his love of solitude, made him wander constantly in all the by-ways of the neighborhood of Montpellier. He was careless of everything, and often in distress from having neglected his affairs.

At length, after remaining seven years at Montpellier, M. V—— came to consult me. From the first words he said to me I suspected that he suffered from diurnal pollutions, and I questioned him closely on this head; but he had never noticed spermatic discharges either whilst passing urine or fæces, and he persisted in the opinion that his disorder arose from a venereal virus still existing in his system.

A short time afterwards, to relieve an attack of cerebral congestion, he applied leeches to the anus, and was unable to leave his bed for three months.

The observations he made during this period convinced him that my diagnosis was correct, but he still wished to treat himself, and, among other means, placed pounded camphor between the glans penis and prepuce, in order to act directly on the genital organs: a few hours after, on going to stool, he passed a large quantity of semen, fainted, and remained some time before he was able to call assistance.

I never witnessed a more repulsive sight than that I saw on reaching M. V——'s residence; the disorder and dirt that surrounded him evinced the most perfect carelessness. Muddy urine, of a fetid smell, filled a dirty vessel placed near the head of his bed on a chair covered with dust and clothes. He was extremely pale, and greatly emaciated; he threw himself about on his bed like a person moribund; his limbs were cold, and his pulse weak and irregular.

As soon as he was able to understand me, I proposed cauterization of the prostatic mucous membrane to him; he joyfully consented, and I performed it the same day.

The moderate sized silver catheter, which I introduced first to empty the bladder, excited spasmodic contractions of the canal, and appeared to give considerable pain, especially in the prostatic region—further confirming me in my opinion that the prostatic portion of the urethra had been a long time the seat of chronic inflammation.

The application of the caustic presented nothing worthy of record.

Two days after the operation, the patient experienced a feeling of vigor in the genital organs, and of general comfort which gave him hope. Soon after he regained his spirits, appetite and sleep returned; his voice acquired strength; he felt his taste for music return; he sought out his friends; his face entirely changed its expression, and his mirth became even boisterous.

At the expiration of fifteen days from the operation he experienced venereal desires, and erections were frequent and energetic. His appetite was good and his digestion acted with an unusual energy.

His health continued to progress favorably until, to hasten his restoration, he introduced a paste containing acetate of lead and copaiba into the urethra. After this the spermatic discharges reappeared, inflammation extended to the testicles, and suppuration occurred in the left, notwithstanding active measures. An ounce of pus, which seemed to me to be discharged from the tunica vaginalis, followed a puncture on the left side; after the escape of this, all the disorders disappeared by degrees, and convalescence proceeded rapidly. Within a month, all M. V——'s functions were performed with a regularity which he had not enjoyed for twenty years previously.

M. V—— possessed considerable natural talents, and related the sensations he had experienced, the opinions he had formed on his disease, and the motives of his most extraordinary actions, in a very lively manner.

Two months afterwards, however, M. V—— came to me as sad as ever. He informed me that, being tormented by frequent erections, he had more consulted his desires than his strength. This want of restraint had reproduced in a fortnight all the irritation under which he had previously suffered, with the disorders following it. He had then broken off these habits, but his health had not become re-established because diurnal spermatic discharges had reappeared.

I performed a second cauterization similar to the first, and with an equally good result; and this time M. V——, having gained experience, became more moderate in his conduct and returned to his residence.

This case ought to be placed by the side of the first two I have related, in which the post-mortem appearances are recorded. The symptoms were almost as severe; they presented the same characters, and gave rise to the same delusions as to the state of the brain.

The rapid re-establishment of the intellectual functions in M. V—— proves that he had no greater cerebral disorganization than the other patients; it seems probable, however, that in the first cases the alterations of the spermatic organs had proceeded further than in the case just related.

The obstinacy with which M. V—— continued to treat an imaginary venereal affection is remarkable; we have already seen an instance of it in the fifth case I have recorded. In neither case were there syphilitic symptoms, either primary or secondary. Such preconvictions are very common in nervous patients, and their surgeons sometimes share them. The wandering, dull, and deep-seated sensations complained of are especially liable to be mistaken for the pain in the osseous system which follows syphilis.

This case is well suited to show how difficult it is for patients to discover those seminal discharges which take place whilst emptying the bladder and rectum. M. V—— had only one wish—to discover the origin of his disorder. To this desire he sacrificed every consideration, and for this end he came to Montpellier to study medicine: he was not far from the truth, for he thought constantly of the blennorrhagia which had preceded the disease, yet after fifteen years of daily observation and seven years of application to medical studies he had not even suspected the existence of involuntary spermatic discharges.

Let us judge by this how many *hypochondriacs* owe their torments to the same cause.

CASE IX.

Blenorrhagia, followed by excoriations of the glans penis—Spermatorrhœa —Cauterization unsuccessful—Artificial sulphur baths—Cure.

M. B——, Lieutenant of Light Cavalry, affected with varicocele, contracted blennorrhagia in 1818. Emollient drinks and warm baths reduced this attack at the end of a month to a slight discharge, which soon after entirely ceased; excoriations had, however, previously appeared around the orifice of the glans penis. These excoriations healed in about twenty days, under the use of cold lotions: they reappeared four months after, and were cured by the same means; they afterwards showed themselves periodically every three or four months, and were not in any way affected by anti-venereal treatment of a very active kind, which the patient submitted to. Each time their appearance was preceded by pain in the perineum and testicles increased by the passage of fæces.

After the expiration of five years, the excoriations ceased, and the pain, which had previously been relieved by their appearance, became permanent, and was accompanied by discharge of semen during defecation. The patient suffered pain in the region of the kidneys, which became insupportable after remaining under arms for a few minutes; his urine deposited a whitish sediment.

Sea-bathing increased the pain in the perineum, and the difficulty of passing urine: fresh-water bathing increased the pain in the loins: his digestion was disordered.

When M. B—— came to ask my advice, I at first suspected that a stricture existed, and endeavored several times to examine the urethra with a soft wax bougie; each time, however, the instrument was arrested in a different situation, and when withdrawn, presented a different form. After a few days' rest, I introduced an ordinary catheter into the bladder, without meeting with any permanent obstruction, but with severe pain to the patient, especially in passing the bulb of the urethra. There was, then, in this patient, only a state of extreme irritability of the urethral mucous membrane. I hoped to cure this by means of cauterization with the nitrate of silver, as I had done before; but, on this occasion, no effect was produced.

Recollecting, then, that the disappearance of the excoriations on the glans penis had been followed by an increase of the disease, I prescribed artificial sulphur baths, containing two ounces of sulphuret of potassium in each. At first, the baths produced an excellent effect, but afterwards a severe irritation of the stomach, and the return of all the symptoms were occasioned. I discovered, however, that sulphuric acid had been added to the last baths: this was omitted, and as soon as the patient resumed the use of the baths containing sulphur of potassium only, his state improved rapidly.

At the expiration of a month, his pain had disappeared, his urine was transparent, and the passage of fæces was no longer accompanied by seminal discharge; digestion became active, and M. B—— soon regained his strength and stoutness.

M. B—— previously to the attack of blennorrhagia, had never suffered from any cutaneous affection; from this date ulceration appeared periodically around the glans penis; this might be supposed to have arisen from a syphilitic affection, but it resisted the most active anti-venereal treatment. Its appearance put an end to the pain in the perineum and testicles: as soon as the sores healed, these symptoms returned, and diurnal spermatic discharges accompanied them.

It seemed probable that the application of nitrate of silver would lessen the morbid irritability of the urethral mucous membrane; it produced no appreciable effect, however.

Artificial sulphur baths were used with advantage when they contained only sulphuret of potassium; when sulphuric acid was added, in order to increase their activity, all the symptoms reappeared; on resuming the use of the sulphuret of potassium alone, the cure proceeded with rapidity.

It is remarkable, also, in this case, that river bathing always increased the pain in the loins, while sea bathing aggravated the pain in the perineum. Anomalies of this kind abound in the treatment of spermatorrhœa, and much careful research is often necessary to explain them; the relation of such cases will, however, put practitioners on their guard by furnishing analogies for their guidance.

Baths containing sulphuret of potassium are especially indicated whenever a cutaneous affection coexists with considerable sensibility of the mucous surfaces; but, when the irritation of the genital organs is very severe, they are often contraindicated. In such cases cauterization, though it may not cure, at least will diminish the excessive sensibility.[1]

Causes.—I have before stated that the cause of spermatorrhœa is a most important circumstance for our consideration. The truth of this becomes more evident as we proceed; but it often happens that several causes act simultaneously or successively, and that we are not able clearly to discover which of them exercises the greatest influence in the production of the disease.

Blennorrhagia is the most active and the most direct, as well as the most easily appreciated, of all these causes, and this is why I have commenced by reporting cases in which it has played a principal part. When these cases are examined separately with some attention, we soon perceive that the discharge has been preceded, accompanied, or followed, by some circumstances capable, by their own action, of giving rise to spermatorrhœa. It is necessary to pay attention to this point.

In one patient I had occasion to treat, hereditary predisposition

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[1] M. Lallemand has reported many more cases of involuntary spermatic discharges following blennorrhagia; as, however, they differ very slightly from one another, and the same treatment was applied to all, I have thought it as well to omit the remainder of them. In fact, the connection between blennorrhagia and involuntary spermatic discharges, seems so well established by the cases above related, as to require no further confirmation.—[H. J. McD.]

probably existed, for his father had been also affected by spermatorrhœa; others had a very marked lymphatic temperament, as in the fifth case I have reported. Many were naturally weak, delicate, and nervous; or their health had been injured by bad habits, or a too sedentary life; others, again, suffered from tetters, hæmorrhoids, or varicocele.

By far the greater number of the patients who have come under my care, had committed excesses, either in coitus, masturbation, or the use of alcoholic stimulants.

Blenorrhagia in many cases is neglected; patients are too timid to mention it, or too careless, and too much occupied to pay attention to it; in other cases, the treatment is rendered useless by imprudence or excess; but, in many cases the inflammation produces injurious effects by its simple presence for a short time.

Many of my patients had had two attacks of blennorrhagia, and in one case as many as seven were experienced, before spermatorrhœa commenced; but, I must remark, that in these cases, the recurrence of the discharge is not always due to a fresh infection, as the patients and many surgeons believe; the facility with which blennorrhagia often recurs without coitus, is sufficient evidence that it may return spontaneously, or, at all events, from very slight excitement. This disposition to a recurrence of the discharge may be easily understood, if the increased development of the capillary system in the mucous follicles after repeated or continued attacks of inflammation be taken into consideration.

These patients almost always in the end suffer from spermatorrhœa. In fact it is difficult to avoid, sooner or later, an extension of the inflammation of the prostatic mucous follicles to the spermatic ducts. We must not, however, mistake for semen, the mucus which constantly moistens the urethral orifice in such persons; and, on the other hand, we must be careful to guard against repelling too lightly their apprehensions on this account, because chronic catarrh of the urethra often accompanies spermatic discharges, and is a sign of their presence by no means to be disregarded.

In some of the cases I have seen, involuntary spermatic discharges seem to have been kept up by venereal taint, and such have been relieved by anti-venereal treatment; on the other hand, in some cases, the seminal discharges have not seemed to be influenced either by the venereal affection, or the means employed for its cure.

Anti-venereal treatment is frequently also employed in patients who have suffered merely from blennorrhagia, and in a very numerous class of cases it produces a serious increase of the irritation in the genital organs, and causes the appearance, or exasperates the effects, of involuntary spermatic discharges.

Cases of this nature often present considerable difficulties of diagnosis; and the solution of these obscurities is always of much importance in determining the treatment to be followed.

Anti-venereals are not the only therapeutic agents which produce

such unfortunate effects; those which a blind routine of practice employs in cases of blennorrhagia have not been less injurious; among these it is especially necessary for me to mention astringent injections, copaiba, cubebs, tonics, and bitters employed too soon, or in extreme doses. All these means act more or less by exciting the genito-urinary organs; it is therefore easy to understand that their untimely or immoderate use must favor an extension of the inflammation from the urethra to the mucous membranes which are continuous with it.

I am far, however, from wishing to proscribe the use of these remedies, and I willingly bear testimony to their beneficial effects, after the inflammatory symptoms have been subdued. A time arrives when the mucous membrane of the urethra, like all other membranes of the same class, requires the employment of tonics and astringents; but in the way they are daily prescribed, I am convinced more harm than good results from their use.

Lastly, spermatorrhœa is often made worse by the very means employed for its removal, and among these may be ranked cold baths, ice, tonics, bitters, sulphur baths, &c.

In all the cases I have so far considered, blennorrhagia has exercised the chief influence in inducing spermatorrhœa; it is, however, rarely sufficient *singly* to bring on this fatal disease, and the causes, which in the cases I have related have been accessory only, may excite, each by its own action, more or less serious involuntary seminal discharges. These accessory causes exercise too great an influence to be passed over in silence: they are numerous and various, and succeed or are combined with one another in different ways—two cases seldom occurring which resemble each other exactly.

The further we advance the more plainly we shall see how necessary it is for the different forms of spermatorrhœa to be described as simple affections—how necessary it is to regard them in all their aspects, and take account of all the circumstances which assist in producing them. In practice we find it indispensable to weigh well all the points connected with a case of spermatorrhœa, before deciding on our diagnosis, prognosis, or, especially, on our treatment.

Mode of action.—In all the cases I have related the urethra retained an excessive irritability, especially in the prostatic region; the patients felt constant pain, weight, heat, darting or painful tickling in this situation; and these sensations were increased by the passage of urine.

Catheterism, though performed carefully, always produced acute pain and spasm, sometimes sufficiently violent to simulate stricture. The catheter was especially arrested at the neck of the bladder, and often it could only be passed on after waiting a considerable time. The patients felt as if the instrument had passed over spots of ulceration. They were convulsively agitated, and all the power of a determined will was often insufficient to restrain their expressions of agony. Their faces were distorted, and their whole bodies covered

by a profuse sweat. As soon as the catheter was withdrawn, a considerable quantity of florid blood was, in most cases, discharged.

These different phenomena, which occur with more or less severity in every case, sufficiently indicate that the mucous membrane of the urethra possesses an extreme irritability, especially in the prostatic region. Several of the symptoms are even sufficient to make one suppose that it is granular, and very vascular or excoriated. A few of the patients I have treated experienced symptoms indicating still more positively an affection of the prostate, such as swelling of the organ, sense of weight in the rectum and perineum, darting pains in the neck of the bladder behind the pubes, &c., and, in one case, the inflammation of the prostate ended in suppuration. In many cases the testicles were swollen, inflamed, and painful (as in the fifth and ninth cases). The spermatic cords also shared the condition of the testicles, as in these cases. Lastly, in some patients who have consulted me, the seminal emissions contained blood or pus.

Thus, in all such cases the blennorhagia leaves great irritation and morbid sensibility in the urethral mucous membrane, most severe in the neighborhood of the prostate, the principal seat of the primary disease. In many cases the inflammation extends its influence to the testicles by means of their excretory ducts, and this should make us suspect that the spermatic organs may retain the same irritability as the urethra.

The same phenomena are manifested in the urinary organs; indeed, their resemblance to the spermatic is remarkable in more respects than one.

Many of my patients had experienced acute inflammation of the bladder (as in the seventh case). Others had suffered from symptoms of chronic inflammation of that organ. In a few, the inflammation seemed even to extend to the kidneys, if we may judge from the pain, spasm, and dragging felt in the loins, and the changes observed in the urine.

These are the only circumstances which enable us to appreciate the state of the kidneys—organs out of reach of physical examination; but analogy confirms the results deducible from them. After having unequivocally proved the presence of orchitis, under similar circumstances we may well suspect the presence of nephritis, especially when we observe symptoms which are otherwise inexplicable. Post-mortem inspections have shown, in many cases, that these analogies do not deceive us, and I have found in the kidneys varied and serious alterations of structure which could only have been produced by inflammation.

All such patients, without exception, pass more urine during the twenty-four hours than natural: so that, although the kidneys may not be actually inflamed, it is evident that they are in a state of more or less active irritation, or, at least, of sufficient excitement considerably to increase their action. The same condition obtains in the testicles, for although they may not be the seat of either inflamma-

tion or pain, their activity is increased. The semen is not only expelled involuntarily, but it is also secreted in greater abundance than natural; for unless the secretion were increased the seminal emissions would not be so frequent, and the weakening and exhaustion would not proceed so rapidly.

The urine is not only more abundant, but its nature is also changed, even after the pus and mucus contained in it have been removed. It is paler and more watery, and contains less urea and uric acid than natural.

The semen also loses its peculiar odor, its color, and its consistence; it is, in fact, less perfectly formed than it ought to be.

Lastly, all these patients experience a frequent desire to micturate, depending on the irritation of the bladder. Some are unable to hold their urine more than half an hour or an hour (case seventh). In all, the desire of micturition comes on suddenly and imperiously; the spasmodic contractions of the bladder overcome all the efforts of the will, and the emission takes place suddenly and convulsively.

This phenomenon gives us an exact view of what passes in the vesiculæ seminales during involuntary seminal discharge; some patients even feel distinctly the contractions which announce an emission as inevitable; others have not sufficient practical knowledge to recognize them, but their statements show that the same phenomena are experienced, even when analogy would not lead us to admit their presence. The analogy is, however, very evident, for it is especially during the expulsion of the last drops of urine that the spermatic discharge takes place, and the two classes of symptoms are in general relieved or exasperated at the same time and by the influence of the same causes. This remarkable resemblance may be explained very simply by referring to the fact, that blennorrhagia has its principal seat in the prostate, where the spermatic and urinary apparatus meet, and the connection of the two classes of phenomena enables us still better to understand the causes and mechanism of spermatorrhœa.

Treatment.—It is by no means astonishing that in this state the application of the nitrate of silver to the prostatic mucous membrane should produce effects more direct and powerful than those of any other remedy. We know well how promptly and effectually nitrate of silver acts on tissues which are granular, injected or swollen from the effects of prolonged inflammation. Its results are especially evident in the chronic ophthalmia of scrofulous patients. Soon after the nitrate has been applied, the tissues empty themselves, contract and become paler, and they retain an energetic action which preserves them from a relapse, to which the patients are often liable when a cure has been obtained by other means. On this account I have employed nitrate of silver in the chronic inflammation of the vagina and neck of the uterus, which keeps up leucorrhœal discharge in so many cases, and in chronic catarrh of the bladder, which is so difficult of cure by other means; and I have always had cause to be pleased with its action in these affections. The nitrate produces the

same effects on the mucous membrane of the prostatic portion of the urethra; the organization and sensibility of the membrane are considerably altered, and this change is soon felt by the organs which are immediately influenced by its condition.

Hitherto relaxation of the ejaculatory ducts have been alone thought of in cases of spermatorrhœa, and this exclusive idea has been a cause of much malapraxis; but to attribute all cases of spermatorrhœa to irritation of the spermatic organs only, would be quite as erroneous and injurious. One patient I had occasion to treat was cured by tonics, another by antiphlogistics (case fifth); and I shall have to record other cases of the same nature, but they are very rare. There exist almost always at the same time irritability and debility, extreme sensibility, and loss of tone in the spermatic organs. This state, however, we observe in the chronic affections of all mucous membranes; indeed, we may even say, as a general rule, that the weaker the organs or individuals, the more easily are they excited.

By acting on the surface of the engorged tissue, its morbid susceptibility is changed, and a contraction is afterwards excited in it, which gives it energy. This is why one application of nitrate of silver generally suffices to produce a perfect cure.

But when the disease has existed a long time, the genital organs share the general debility of the system, and after the chronic inflammation has disappeared, it becomes necessary to aid the relaxed tissues to resume their former energy; nothing now contra-indicates the exhibition of tonics of all kinds, which complete the cure commenced by cauterization. This explains how cold and sulphur baths, ice, &c., are useful after cauterization to individuals who were injured by them at first (case ninth).

Symptoms.—Whilst examining the mode of action of blennorrhagia in producing spermatorrhœa, I have already referred to the symptoms which occurred in the cases reported; in the other cases I have seen, the symptoms have been common to all kinds of spermatorrhœa, and I cannot notice them here without being exposed, by and by, to useless repetitions. I shall, therefore, only call attention at present to the insidious character of the general symptoms produced by these discharges, which often simulate the characteristic marks of cerebral affections, gastritis, diseases of the heart, urinary calculus, &c.

The real cause of the symptoms is very difficult of detection in cases of spermatorrhœa: some of my patients had studied medicine for many years, in the sole hope of discovering it (case eighth); we may judge from this how frequently cases of spermatorrhœa are mistaken for other affections.

CHAPTER IV.

CAUSES OF SPERMATORRHŒA.

Cutaneous Affections.

THE following case is that of a student of medicine who came under my care. At my request, he put it into its present form for publication.

CASE X.

Itch during ten months at about the age of fourteen—Pain in the epigastrium—Tumor of the testicle—Chronic inflammation of the bladder—Diurnal spermatic discharges—Hypochondriasis—Cure by Cauterization at the age of twenty-eight.

"Up to the age of fourteen, my health was very good, but at this period I was afflicted with psora, which continued for ten months in spite of various modes of treatment. Scarcely was this cured than I felt a sharp cutting pain in the epigastrium, after a time becoming dull and extended. The itching I had before felt over the whole body seemed to affect my head, and when I had been exposed to cold or damp, or had kept my head uncovered, the scalp became covered with little pimples, which, when scratched, formed scabs.

"An induration of the left testicle, of about the size and shape of a bean, appeared, and continued during eight months. My digestion became deranged; my complexion darkened, and my shoulders became round; the epigastric region was so tender that I could not bear the weight of the bedclothes, and when erect I seemed to have a weight suspended within me. At this time I was at school, but during the vacation I took an opportunity of consulting my family surgeon; he attributed all I felt to too rapid growth. Not being satisfied with this explanation, I consulted a bonesetter well known in the neighborhood, who said my breast bone was dislocated, pretended to replace it, applied a plaster, and sent me away as I came.

"This state of things continued till I was eighteen, when I experienced a slight pain in making water, and became very costive. The epigastric pain diminished, however, and I gained flesh.

"At the age of twenty-two, after domestic trouble, and perhaps, also, from the effects of some slight excesses, I experienced the following symptoms: Progressive emaciation; lassitude after the least exertion; yellow, dry, and earthy skin; burning heat, especially in the palms of the hands and the soles of the feet; creeping sensations over all the body when I began to perspire; habitual sensation of internal heat; constant pain in the epigastrium and right hypochondrium; obstinate constipation; difficult digestion, attended with the secretion of flatus; acid eructations, smelling of putrid eggs; sometimes cold and clammy sweats, especially when I had

taken any acrid or acid substance, or when I experienced the slightest contradiction, for I had become very irritable; impossibility of enduring hunger; difficulty of holding my urine, with pain at the base of the glans penis, and spasm at the neck of the bladder during its emission; the urine presenting, when cold, a red muddy appearance, with an abundant brickdust sediment, and a cloud of flocculent matter in suspension; venereal desires, with entire loss of the power of coitus; a discharge of a transparent and viscid matter after the least erection; an abundant discharge of a white, serous, slightly opaque matter from the urethra on going to stool; scurf and itching of the head; noise in the ears; loss of memory; feeling of discontent with myself; extreme timidity; dislike to all amusements save solitary walks; deep melancholy without cause; loss of courage; sadness of countenance. All these symptoms were aggravated after horse exercise.

"I consulted various practitioners, all of whom considered my state as nervous, and told me I was hypochondriacal; some, however, recommended emollients, baths, a vegetable and milk diet, with exercise and amusement; others prescribed bitters, tonics, alteratives, preparations of sulphur externally and internally, an issue, &c. All these modes of treatment were useless, or rather they increased my disorders, and in my painful condition I tried to contract a new itch, without success.

"I now, at the age of twenty-eight, came to consult you. . . . . The introduction of a catheter gave me violent pain, and caused spasm of the urethra, especially near the bladder. The application of the nitrate of silver dispersed the chronic inflammation which kept up the involuntary discharge of semen, and eight days after the cauterization I felt stronger, my limbs seemed more free, my urine became clear, and I began to hold it longer; my countenance appeared gay, and my complexion became fair. I had a nocturnal emission, a thing I had not experienced for a long time. At the expiration of three weeks I found myself in a perfectly new state; during a period of ten years I had never felt so well. The cerebral functions, and those of the stomach, intestines, bladder, and genital organs, were performed with an unaccustomed energy; my skin had lost its yellow and earthy appearance. The internal burning and the cutaneous tingling were removed. Nocturnal emissions, however, have since become very frequent, and from the fourth to this day, the twelfth of July, I have had four; nevertheless, my strength has continued to increase daily, and I hope that a second cauterization will remove altogether a disease which all previous treatment had only served to increase."

I cannot now say whether I yielded to this patient's desire for a second application of the nitrate of silver, but I certainly did not share his uneasiness respecting the nocturnal emissions. When these *follow* involuntary diurnal discharges of semen, they show a considerable improvement in the state of the genital organs; they prove, in fact, that the semen is no longer expelled as before in an almost continuous manner. Indeed the patient experienced from this moment a rapid amelioration in all his functions, and an increase of strength which would be inexplicable under other circumstances. The desire for a fresh cauterization was not alone due to the fear of nocturnal emissions; it arose partly from a kind of blind faith in a remedy which had produced such prompt and satisfactory results.

The desire for a second application of the nitrate of silver is felt by many of the patients who have once experienced its effects, and I have often been obliged to resist it. We must only return to this remedy *when much remains to be effected, and when all improvement has been arrested for some time;* so long as progress is made, however slow it may be, there is reason for hoping that regimen, exercise, and a moderate use of the organs, will be sufficient to confirm the convalescence.

The rapid cure of the hypochondriasis, treated for so long a time, and with such little success, by so many different means, sufficiently testifies that it originated in the involuntary loss of semen. But to what cause can we attribute the spermatorrhœa? After the disappearance of the cutaneous affection, symptoms of chronic inflammation of the stomach, and afterwards of the bladder, appeared. Then a tumor arose in the left testicle. The connection between irritation of the skin and that of the mucous membranes is well known, and I have shown the manner in which affections of the urethra extend to the testicles. It is then easy to understand the course by which irritation extended to the spermatic organs, and excited spasmodic contractions of the seminal vesicles.

The pain which the patient experienced in the neck of the bladder proves, also, that the involuntary discharge was really kept up by chronic inflammation in that situation; the frequent desire of micturition and the state of the urine, together with the sensations produced by catheterism, and especially the rapid cure effected by the nitrate of silver, are further evidences in support of this opinion.

CASE XI.

Cutaneous affections—Repeated attacks of urethritis—Application of nitrate of silver—Cure.

M. N——, of an irritable constitution and subject to frequent and varied cutaneous eruptions from his infancy, suffered during youth from several slight attacks of urethritis, which always passed off rapidly; at the age of twenty-one he married. Still, however, the discharges reappeared several times with various degrees of duration and intensity, alternating sometimes with tetters and at others with boils. The urethritis supervened once on an eruption of pimples on the head which had lasted very long and left cicatrices similar to those of small-pox. At other times unyielding attacks of ophthalmia and violent rheumatic pains came on during the absence of the cutaneous affection. Several times slight excoriations became irritated in a remarkable manner, and a simple scratch on the leg kept the patient in bed for several months. In 1820, on an attack of numerous and large furuncles, a more intense and painful urethritis than usual supervened. I found M. N—— in an extreme state of prostration and agitation, excited by harassing suspicions as to the nature of this discharge, which was abundant and greenish, and resembled in all respects that of an intense blennorrhagia. As I knew my patient's constitution, I thought that the discharge depended

on the general cause which had excited the former attacks, and therefore prescribed antiphlogistics and derivatives, to which it yielded.

I afterwards advised emollients and alterative drinks, and still later the use of the warm sulphuretted springs: M. N—— went successively to Cauterets, Luchon, and Arles, near Perpignan.

At the expiration of three years his general health was improved, but the attacks of urethritis reappeared from time to time, especially in winter, when irritation no longer existed in the skin or any other organ; and he desired much to rid himself of these periodic discharges which embittered his existence. I had previously successfully used the nitrate of silver in substance in several cases of inveterate blennorrhagia, and I proposed its use to him with the hope of considerably modifying the action of the urethral mucous surface. He submitted to it with eagerness, and the results surpassed my most sanguine expectations.

Twelve years afterwards, M. N—— had not perceived the least trace of his distressing discharges, although he had travelled much, and had not restricted himself to any regimen or privation. But he soon perceived much more important changes. His venereal desires became more active and more imperious, his erections took on a new energy, and ejaculation no longer took place so precipitately as before; in fact, he found himself at the age of fifty-five more vigorous, in all respects, than he had been at twenty.

This single cauterization produced, then, a perfect revolution in the state of M. N——'s genital organs, and its effects remained even after the expiration of twelve years.

To obtain a correct idea of the importance of the change which had taken place in the urethral mucous membrane it is necessary to remark, that M. N—— remained subject to the same cutaneous eruptions, and that they alternated as before with ophthalmia, attacks of gout, wandering pains in the breast, abdomen, &c., but that from this time the urethra was never the seat of the inflammation, which still continued to attack the other organs. Thus, although the first cause continued to act on the other organs, the part cauterized remained, after twelve years, free from its influence.

On the other hand, if we may be allowed to judge by analogy with the preceding cases, and by the general symptoms which accompanied the repeated attacks of urethritis, they must have produced spermatorrhœa, although the patient himself did not suspect it. This is the only way in which we can explain the increase of energy in the genital organs notwithstanding the effects of age, and the increased vigor of the whole economy in spite of more frequent sexual intercourse.

In fact, then, the nitrate of silver not only put an end to the disposition to urethritis, but also destroyed a powerful and continually debilitating discharge, which was undermining the patient's constitution, without his being able to discover the cause of his weakness.

CASE XII.

Pruriginous eruption around the genital organs—Two attacks of blennorrhagia—Nocturnal and diurnal emissions—Cure by means of sulphuretted baths.

M. L——, at the beginning of the year 1824, was attacked by a pruriginous eruption on the scrotum, which extended rapidly and covered the genital organs. After the least irregularity of diet, the surface of the scrotum assumed an inflamed appearance, and secreted a fetid discharge accompanied with violent itching. Baths, lotions of milk, decoctions of various kinds, and sulphur ointment, only gave temporary relief.

In the month of June, 1824, four months after the first appearance of the eruption, M. L—— contracted a urethral discharge; the inflammation accompanying this was very slight, and the patient subdued it by baths and emollients. He attempted to take balsam of copaiba, but was soon obliged to leave off its use on account of the irritation it produced in the digestive organs. The urethral discharge diminished rapidly, but did not entirely disappear, a slight oozing of a viscid pearly matter remaining, which formed, at the orifice of the glans, a little crust which the patient was obliged to remove in order to give passage to his urine. This discharge he neglected, and shortly after he noticed that semen was passed in large quantity during defecation. In the month of January, 1825, he contracted a second urethritis, which was more severe than the first. Acute pain was present in the fossa navicularis, and after a time in the region of the prostate. In a few days the inflammation was accompanied by general fever. The patient was then submitted to a rigid antiphlogistic treatment, and at the expiration of a week the local and general symptoms were much relieved; shortly after the discharge ceased entirely.

In the month of February, M. L—— rubbed in mercurial ointment in order to prevent a venereal contagion. This inunction entirely removed the cutaneous disease of the scrotum, but a few days afterwards the old discharge reappeared, accompanied with itching of the anus, and contraction of the sphincter ani; feeling of arterial pulsation in the lower part of the rectum, especially after meals, when sitting, or during defecation; obstinate constipation; urine depositing a quantity of whitish flocculi, which formed on cooling an abundant cloud suspended in the middle of the fluid; constant oozing of a fluid resembling semen, which formed a crust at the orifice of the urethra; abundant seminal emissions during defecation; nocturnal emissions accompanied by pain of short duration, but sufficiently acute to arouse the patient from a deep sleep; extreme sensibility of the canal on the introduction of a catheter, with acute pain in the prostatic region; the retina very sensitive to the effects of light; noise in the right ear, worse at night than in the morning, and difficult digestion accompanied by abundant discharge of flatus.

I ordered for this patient twenty-four sulphuretted baths, containing at first one ounce, then one ounce and a half, and afterwards two ounces of sulphuret of potassium. These means alone sufficed to perform a perfect cure at the expiration of two months.

It is impossible that both attacks of blennorrhagia in this patient were contracted in the ordinary manner, by contact with blennorrhagic

virus; but at the same time this does not seem probable, because the suppression of the skin disease on the scrotum was followed by a return of the discharge. The mucous membranes, too, seem to have possessed an extraordinary sensibility, since the balsam of copaiba, given in the usual dose, induced great irritability of the digestive organs after a few days' administration. It is remarkable, too, that the cessation of the discharge followed the omission of the remedy. This susceptibility of the mucous membranes is very common in cutaneous affections, and explains the frequency of non-contagious attacks of urethritis in patients who suffer from them.

The disappearance of the disease in the skin of the scrotum was followed by the return of the nocturnal and diurnal pollutions, but this time the irritation was more severe than ever, and was not confined to the mucous membrane of the genito-urinary organs; it extended also to that of the rectum, and the patient experienced itching of the anus, spasm of the sphincter, and a feeling of pulsation in the lower part of the intestine.

This coincidence confirmed me still more firmly in the opinion that the previous urethral discharge had not been owing to blennorrhagic contagion, and led me to order sulphuretted baths; cauterization of the urethra would have produced no effect on the irritation of the rectum, and the latter would, alone, probably have sufficed to reproduce involuntary spermatic discharges. The patient's rapid and perfect cure shows that the indication followed was the correct one.

CASE XIII.

Herpes præputialis alternating in a remarkable manner with irritation in the prostatic portion of the urethra—Nocturnal and afterwards diurnal pollutions—Occasional impotence—Re-establishment by cauterization—Relapse—Cure by the baths of Vernet.

M. B——, a magistrate, of a lymphatico-sanguine temperament, had occasionally practised masturbation, but had never committed any venereal excesses. He was attacked, for the first time, at the age of eighteen, with an eruption on the prepuce, which disappeared spontaneously, returned soon after, and again disappeared. This eruption was called by his medical attendant herpes præputialis. From that time it continued to return at periods of increasing duration, and, at various times, presented circumstances worthy of notice. The eruptions generally appeared on different spots, to the number of five or six, and were not, at first, larger than a pin's head, but were accompanied by violent itching; by degrees the spots increased in size and became united, after which they were dried up, leaving only a degree of redness, which soon passed off. The appearance of these eruptions was always preceded, during three or four days, by a sensation of lassitude, and of weight at the root of the penis. During the eruption the lassitude left the patient entirely, and the sexual impulse and power were much greater than usual. The return of the eruption took place, at first, every two or three months, then every year, and after that every two years; and when M. B—— consulted me it had not appeared for three

years. As the eruption appeared more rarely it lost, also, much of its duration and intensity. It always yielded to lotions of cold water.

Two years after the first appearance of the eruption, M. B—— had an ulceration on the penis. This was regarded as syphilitic. Still later he had two attacks of urethral discharge, after which a swelling at the anus supervened. All these symptoms were attacked by a rigid and long-continued anti-venereal treatment.

During the twelve years that M. B—— has been married, he has very rarely had sexual intercourse, but he has generally experienced three or four nocturnal pollutions in the course of a month.

For the last four years he has felt greater sense of weight at the root of the penis; *spontaneous* erections have disappeared; those which he has been able to excite have been very rare, and seldom perfect. Ejaculation has always been hurried, and sometimes even has preceded intromission. It has never been accompanied with acute sensation. Intercourse has been followed by sleeplessness, general prostration, irritation and spasms in the stomach, especially if it has taken place in the evening. Nocturnal pollutions have been very abundant, have occurred almost without erection, and have been followed by much more serious symptoms than emissions following coitus. For the last two years, nocturnal emissions have become gradually more rare, and M. B—— has noticed, accidentally, on several occasions, that he has passed semen whilst at stool, although his bowels have not been constipated. On his arrival at Montpellier, M. B—— was forty-two years of age; his face was red, and he appeared in good health. But his digestion was badly performed; his sleep was disturbed; and he felt his memory and intellect much weakened. The progressive loss of power in the genital organs was a source of much regret to him. His urine was thick and very fetid; it contained a large quantity of mucous flocculi, and deposited a sediment of matter resembling semen. M. B—— told me this appearance had been present in it during twelve years. Thus the alteration in his urine dated from about the time of his marriage.

On the sixth of May, 1836, I cauterized the urethra from the neck of the bladder as far as the membranous portion; the effect of the operation was prompt and very evident. Sixteen days afterwards the urine was perfectly transparent, and the general state very satisfactory. He was then compelled to leave Montpellier suddenly. Three months afterwards M. B—— informed me that in spite of the irritation caused by travelling, his urine had continued transparent, and that his genital organs had acquired an accustomed energy. In fact M. B—— found himself so well that he considered it unnecessary to use the mineral waters as I had recommended him.

Two years afterwards M. B—— had a slight relapse, which yielded rapidly to the use of the sulphuretted waters of Vernet, near Perpignan.

I shall not inquire, here, whether there was really blennorhagic contagion in this case. I shall only remark that the herpes appeared a long time before any sexual intercourse had taken place, and that its return was accompanied by violent pruritus, and increase of sexual impulse; intercourse would in consequence take place more frequently during the presence of the eruption.

The singular connection of the skin affection, intermittent with attacks of blennorrhagia, is worthy of notice; it shows a continual

metastasis of the irritation of the prepuce to the mucous membrane lining the prostate. As soon, therefore, as the eruption appeared, the habitual sense of weight in the prostatic region was relieved, and the activity of the genital organs increased; the symptoms connected with the prostate reappeared when the herpes was cured. As the eruption diminished in frequency and intensity, and the intervals between its appearance became longer, the functions of the genital organs diminished, and at length, when the herpes had not come on for some time, the patient's impotence was complete. The urine was muddy from the period of the patient's marriage: it seems probable, therefore, that the greater frequency of sexual intercourse contributed to the production of diurnal pollutions. It is also worthy of notice, that as the nocturnal pollutions became rarer, the debility of the genital organs was shown in a more striking manner, and that from this period the seminal discharges during defecation were sufficiently abundant to be remarked by the patient. M. B——'s impotence was not absolute, because the involuntary discharges varied much in amount. This variation in the symptoms is a characteristic feature of slight cases of spermatorrhœa, and very probably explains the uncertainty of temper in such patients. In the case I have just reported it is not to be wondered at, when the intermissions of the cutaneous affection are taken into account.

Another very remarkable case in which blennorrhagia occurred several times as a consequence of the metastasis of cutaneous affections, will be found in my tenth chapter.

CASE XIV.

Lymphatic temperament— Various cutaneous eruptions alternating with other affections—Habitual bad health—Hypochondriasis—Spermatorrhœa undiscovered during twenty-five years—Cure by sulphuretted baths.

M. D——, of very lymphatic temperament, was subject, in his childhood, to chilblains and a cutaneous affection of the scalp; he had also many strumous abscesses in his neck. About puberty his health became better, but he was still subject to attacks of ophthalmia, discharge from the ears, and frequent cutaneous eruptions of different kinds, which were very difficult of cure, and alternated with sore throat or chronic affections of the different mucous membranes. He married at the age of twenty-one, and never committed excesses of any kind. He has had several children.

About the age of thirty, tetters appeared on his face, neck, arms, legs, scrotum, and perineum; these were sometimes dry and squamous, and changed their situation very rapidly. They were often followed by little pimples which appeared in different parts of the body, causing great itching; at other times boils followed them and lasted for months. M. D—— underwent various modes of treatment in order to rid himself of these unpleasant eruptions, but without success—some of the remedies even increasing his disease.

By degrees his health became disordered in a more serious manner; he experienced successively symptoms of pulmonary catarrh, of gastro-enter-

itis, and of chronic cystitis; he was also subject to frequent attacks of rheumatism, and was annoyed by obstinate constipation alternating with diarrhœa. His digestion by degrees became difficult, and he was often attacked with flatulent colic; his bowels were, indeed, always distended by flatus, of which he was obliged frequently to relieve himself. When attacks of colic came on he seemed on the point of being suffocated; blood rushed to his head; his face became purple; but at length all passed off on the discharge of immense quantities of flatus, which often continued to escape for several hours.

From this time he ceased to go into society, and saw only his most intimate friends, and by degrees he became nervous and hypochondriacal. An excellent man naturally, he now was ill-tempered, peevish, and capricious, and he showed great weakness of character and morbid sensibility. A slightly interesting tale, or the recital of an instance of courage or devotion, affected him to a foolish degree, and he was particularly alive to anything he considered an injustice.

His face was often congested, and he complained of stunning sensations, for the relief of which leeches were applied to the anus, and he used foot-baths and other remedies without benefit. At length his legs failed, and he was obliged to give up the frequent walks he had previously taken.

These symptoms were looked on as the forerunners of apoplexy. Leeches were again recommended to be applied to the anus, but the patient refused, because he had never been benefited by their application.

Under these circumstances I was consulted, M. D—— being then fifty-six years of age. I was for several days unable to discover the cause of these various symptoms, so long and complicated was the history of the complaint. At last the patient mentioned a tetter which had covered all the scrotum, and extended to the perineum and margin of the anus. I then inquired if he had ever experienced spermatic discharges during the passage of fæces, and I soon learned from the details into which he entered that he had been subject to spermatorrhœa during twenty-five years without suspecting it. He had always thought that the urethral discharge during defecation consisted of mucus, and had never attached the least importance to it. These discharges were not habitual nor equally copious at all times, and he was often quite free from them during many months. As well as he could recollect, these periods of immunity were when he was affected by cutaneous eruptions. He even thought that his "*humors*" escaped with the urine when he saw the spermatic discharges reappear, and he then experienced in the rectum and bladder a heat and irritation which he was only able to relieve by means of injections. From the first occurrence of these involuntary discharges his erections and sexual desire had constantly diminished, and had left him entirely for several years; this he attributed solely to the effects of age. His urine was often muddy and flocculent for a fortnight, and then became limpid during a variable length of time.

All these circumstances combined, were much too clear to leave the slightest doubt as to the nature of the disorder; I therefore recommended him to take the natural sulphuretted waters, and he went to those of Vernet, near Perpignan. After seven or eight baths a lively itching came on in his skin, especially on the legs. Numbers of small pimples appeared, from which oozed for a month so considerable a quantity of reddish serosity, that the patient was obliged to surround his limbs twice a day with several folds of linen. At length this discharge gradually diminished, and the epidermis came off in patches over the whole surface of the body.

During this time a complete change took place in the economy: the fæces were passed easily and regularly; the appetite increased; the involuntary spermatic discharges disappeared; the stomach digested with equal facility all kinds of food, and bore the patient's taking wine; his erections reappeared, and in fact M. D—— at fifty-six years of age experienced almost a return to youth.

In this case spermatorrhœa was unsuspected during twenty-five years, and the unhappy patient who thus suffered had passed during all the time for a hypochondriac. Enemas and medicines had been prescribed for him, without any attempt being made to seek the cause of his disease. I hope that these cases will in future receive more attention from medical men; although they do not speedily cause death, it must be admitted that they render existence wretched.

How was it that this patient could so long support so serious a disease? Probably because it was not constant. The spermatic discharges, in the commencement, seem only to have appeared when irritation occurred in the genito-urinary organs or rectum. At last, however, they threatened the patient's life, and suspicions arose of the presence of cerebral disease, or at least of the danger of apoplexy.

Causes.—The cases I have related are sufficient to show the intimate connection that exists between the genito-urinary mucous membranes and the skin, especially that of the scrotum and perineum. I do not, however, mean to infer that the connection between the mucous membrane and the skin is more intimate or special in the genito-urinary than in the other organs of the body. It depends on the same cause, viz.: the analogy of function between the mucous and the cutaneous tissues. In the tenth and eleventh cases which I have related, the genito-urinary organs were the last affected; the law, therefore, is a general one, but I can only here consider that part of it which relates to spermatorrhœa.

Nevertheless, cutaneous affections alone have not, in most cases, been sufficient for the production of this disease, for I have already stated that its causes rarely act singly. It is, however, necessary to consider them singly when we wish to discover the influence due to each, and we ought to take into account all the circumstances which may contribute to produce so serious a disorder.

I have reported in the preceding chapter an example (case ninth) of blennorrhagia complicated with cutaneous disease, for the cure of which it was necessary to employ special remedies; in the eleventh and twelfth cases, urethral discharges were present in more or less severity and frequency. It may appear that I should not have separated cases so much resembling each other, but I have been guided in so doing by the greater predominance of one or the other predisposing affection.

There is certainly no reason why an individual affected by cutaneous diseases should not expose himself to the risk of blennorrhagic contagion, and there is on the other hand every reason why he should

be easily infected by such exposure; I think, however, that we too generally confound the discharges to which such persons are subject with ordinary blennorrhagia, and if the patients speak of old cutaneous affections which have disappeared on the occurrence of the discharge, we too often smile, and, without taking further notice, prescribe the anti-blennorrhagic remedy which we are in the habit of using in all cases. Even well-educated and experienced practitioners constantly act thus, from not having sufficiently considered special cases; these cases, nevertheless, occur often enough to merit serious attention.

One of my friends, who had been affected for a long time by a pruriginous eruption, consulted an empiric, who ordered an ointment to be applied over all his body for its cure. He was scarcely well when he married. A few days after, an abundant greenish discharge appeared from the urethra, attended by pain, and all the symptoms of violent blennorrhagia. At this he was much alarmed, and consulted me. Knowing his history, I did not share his suspicions, but I recommended him to wear flannel from head to foot; in a few days the eruption reappeared, and the discharge subsided spontaneously.

I have at this time under my care a patient who, at the age of fourteen, suffered from an eruption on the scalp; this disappeared about the age of nineteen, and was followed by chronic inflammation of the pulmonary mucous membrane. After the cure of this affection, pain in the neck of the bladder, accompanied with uneasiness, acute cutting pain, and weight in the rectum, came on without any evident causes; urethral discharge appeared; the spermatic cord and testicles became swollen and painful, and the patient is now the victim of spermatorrhœa, with all its accompanying disorders.

In another case, for which I have been recently consulted, the patient had never had sexual intercourse. He suffered from cutaneous affections in early life, and at the age of eighteen experienced inflammation of the testicles from excessive excitement caused by reading an obscene book, and two years afterwards, after unsuccessful attempts to obtain the favors of a female, a severe blennorrhagia occurred, which lasted nine months.

After these facts, we should think twice before we pronounce on the nature of a urethral discharge occurring in a person subject to cutaneous eruptions, especially when their suppression has previously been followed by inflammation of some other mucous membrane. Yet we must always bear in mind that these persons are liable, in common with the rest of mankind, to the occurrence of blennorrhagia, which would even put on, in their particular cases, greater virulence than usual, and must therefore greatly increase the predisposition of persons subject to cutaneous diseases to suffer from spermatorrhœa.

We find in these cases, as in those recorded in the second chapter, that anti-venereal treatment is useless, and frequently injurious.

Mode of Action.—In what manner do cutaneous affections operate in producing spermatorrhœa? The cases I have reported are sufficient to show that they act by a metastasis to the mucous membrane

of the genito-urinary apparatus. Thus the patient suffered from repeated attacks of urethritis (as in the eleventh case), acute or chronic cystitis (as in the tenth case), active irritations of the bladder, inflammation of the testicles (tenth case), or the prostate, and pains in the spermatic cords. We find then in these patients the same symptoms that are manifested by those in whom spermatorrhœa has arisen from contagious urethritis. The metastasis of cutaneous affections to the urethral mucous membrane, therefore, produces the same effects as the blennorrhagic virus, and the irritation extends in the same course along the seminal passages.

Irritation of the Rectum.—Several of my patients have suffered from affections of the rectum, of which I have given no account in the preceding chapters. These affections have consisted of a sense of heat, darting pains, uneasiness, and a feeling of pulsation extending more or less high in the intestine (as in the twelfth case). These symptoms show that the cutaneous irritation had extended to the mucous lining of the rectum, as well as to that of the genito-urinary organs. Such a complication must increase greatly the chance of spermatorrhœa occurring, by provoking a spasmodic contraction of the rectum, whence results an obstacle to the passage of fæces, and a disposition to contraction in the seminal vesicles.

In the next chapter I shall consider the causes of spermatorrhœa which are connected with the rectum, and I shall only now observe, in passing, that their symptoms must not be confounded with those arising from irritation of the prostate. In both cases, constipation and a sense of weight, heat, and uneasiness in the rectum, may be present; but when these symptoms arise from an eruptive affection, an intolerable itching, and heat at the edge of the anus are felt, and on examining the parts, they are found red, excoriated, and wet; on drawing out the folds of the skin, a mucous and sometimes a purulent discharge is perceptible, and the portions of mucous membrane which can be brought into view are seen to be in the same condition: in a word, the margin of the anus presents unequivocal marks of cutaneous disease.

It is important to establish this distinction, because, in the first case, cauterization of the prostatic portion of the urethra may put an end to the chronic inflammation going on there; but, in the second case, symptoms which have their seat in the rectum are due to a special affection of its mucous membrane. It is, indeed, true that this affection is similar to that of the urethra, and that it arises from the same cause; but the cure of the urethral inflammation would have no effect on that present in the rectum, and we shall presently see that the latter may suffice to excite or keep up spermatorrhœa to a sufficient extent to alter the health seriously.

Treatment.—The only means that have been successfully employed in cases of this nature, are cauterization and the use of the sulphuretted waters.

CHAPTER V.

CAUSES OF SPERMATORRHŒA.

Influence of the Rectum.

I HAVE hitherto examined those causes which influence the spermatic organs by their direct action on the urethral mucous membrane. I now proceed to consider such as act on the seminal vesicles by the mechanical and sympathetic influence of the rectum.

CASE XV.

Spermatorrhœa from a mechanical obstacle to defecation—Division of the stricture—Rapid and complete cure.

Nicholas G——, the guard of a diligence, of strong constitution, at the age of twenty-five contracted a chancre, followed by bubo and warts. This attack of syphilis was treated with mercurials, without the patient giving up his employment, and, notwithstanding the fatigue consequent on his frequent journeys, at the expiration of six weeks all the symptoms had disappeared. Shortly afterwards he experienced difficulty in defecation, which slowly increased, so that in the course of four or five years considerable efforts were necessary to evacuate the rectum. The fæces were flattened, like a ribbon, four or five lines in width and about a line in thickness.

From this time G——'s health became gradually disordered; his appetite diminished, his digestion was impaired, and accompanied with the development of flatus; he lost flesh, and his weakness increased daily; his memory was impaired, and the genital organs underwent the same changes in their functions. When he first consulted me he had scarcely any venereal desires, his erections were imperfect, coitus was rarely possible, and ejaculation was long in taking place; sometimes it did not even occur at all, and it was never accompanied by any lively sensation.

The concurrence of all these symptoms convinced me of the presence of spermatorrhœa. The patient told me that for four years he had been in the habit of passing semen while at stool, and that its discharge in general bore a proportion to the efforts necessary for the expulsion of the fæces; on this account, in order to render them as fluid as possible, he had reduced himself to a vegetable and milk diet. He had often attempted to use enemata, but had been unable to succeed.

The abundant spermatic discharges had so worn this patient out, that at the age of thirty-four he presented the appearance of a man aged sixty.

On examination, I discovered, about two inches from the anus, a nearly circular obstruction, of about half a line in thickness, having an irregular opening in its centre, which would barely admit the extremity of the fore-

finger. This kind of diaphragm obstructed the passage of fæcal matter; it was thin and soft, and felt like a cicatrix.

I made transverse incisions through the obstruction by means of a straight probe-pointed bistoury passed along the index finger. These incisions were of very trifling depth, and I afterwards dilated the opening by introducing my finger deeply, and pressing it forcibly in the direction of each wound, until by tearing I reached the walls of the intestine. Four loose flaps resulted from this operation, and I prevented their reunion by the frequent introduction of my finger. The operation was attended with very little pain or loss of blood. Some time afterwards I showed the patient how to introduce a rectum bougie, of sufficient size to dilate the portion of gut which had been operated on; this I advised him to practise daily for some time. This simple means proved sufficient to procure separate cicatrization of the four flaps, after which, the expulsion of the fæces took place without difficulty, and the spermatic discharges ceased. All his functions were soon restored to their natural state, and Nicholas G—— resumed his former occupation.

This case gives a very clear view of the mechanical influence of constipation in producing spermatic discharge during the passage of fæces. The sole cause of the spermatorrhœa was the membranous obstacle above the sphincter; and the discharge was caused simply by mechanical pressure on the seminal vesicles during the violent efforts the patient was compelled to make in order to force the fæces through a narrow opening. As soon as the obstacle was removed, the spermatorrhœa ceased, and all the symptoms arising from it disappeared. The effects of mechanical compression were in this case then quite unmistakable.

Coitus was very long before ejaculation took place; sometimes even the completion of the act was impossible, and it was never attended by lively sensations. The cause of all this was that the seminal vesicles contained little and badly formed secretion; but these organs were not in a state of irritation, and the ejaculatory canals were neither irritable nor relaxed. In most cases of diurnal pollution, ejaculation is, on the contrary, very rapid, because the spermatic organs are either irritated or relaxed, if they are not at the same time in both these conditions.

CASE XVI.

Spermatorrhœa induced by chronic diarrhœa, and kept up by a mechanical obstacle to defecation—Removal of a scirrhous tumor from the anus—Rapid and perfect cure.

M——, of good constitution, entered the army at the age of seventeen, and served for eighteen years, during which he was exposed to considerable hardships. He also committed excesses of all kinds. His health, however, continued excellent. In 1814, M——, then aged thirty-five, contracted blennorrhagia, which he neglected; the discharge diminished but did not entirely cease before 1816, when he quitted the army. In 1820, M——

married, but did not indulge in any excesses. Some time afterwards, having been engaged as *concierge* to a club, he passed many nights almost without lying down. In 1824 he was suddenly seized with violent colic, which was relieved by means of emollient injections, repeated baths, and a severe regimen, but which did not entirely leave him.

Two years afterwards he had a severe hemorrhage from the rectum, accompanied with very painful tenesmus, during the violent spasms of which he noticed that he passed semen. This hemorrhage relieved the colicky pains he had suffered from, but a dysentery remained, which kept up the tenesmus and with it the involuntary seminal emissions, and caused the prolapse of several hemorrhoidal tumors with eversion of the mucous membrane of the rectum. From this period M——'s health became more and more disordered; he lost his habitual spirits together with his sexual appetite, and his sight as well as his memory and physical strength became weakened, so that in 1827 he was obliged to give up his occupation of *concierge*. During the years 1827 and 1828, the chronic diarrhœa decreased in severity, and in 1829, it had become much less frequent. At length, in 1830, it was replaced by a very obstinate constipation, which in its turn also became the cause of spermatorrhœa, and increased the swelling caused by the hæmorrhoids and the prolapsed mucous membrane of the rectum. This swelling was irreducible; it increased in hardness, was irritated by the friction of his clothes, and at last assumed a scirrhous consistency. Its presence alone formed a considerable obstacle to defecation. On the 28th of March, 1831, M—— applied at the Hospital St. Eloi, in the following condition: He was fifty-one years of age; extremely pale; his face pale yellow; skin woolly; hair black; weakness excessive; sensibility very great; profound melancholy; habitual hypochondriasis; digestion difficult, especially after the use of animal food; defecation rendered troublesome by a red, hard swelling, five or six lines in diameter across its base, projecting about an inch, and occupying about half the circumference of the anus; involuntary discharges of semen during the efforts necessary to procure a fecal evacuation; the emission of urine followed by a discharge of a glairy, limpid, and sticky matter; no erections during a long period; absence of all sexual impulse; frequent attacks of vertigo; dazzling of the eyes; buzzing in the ears; attacks of heat towards the head from the slightest cause. The tumor of which I have spoken resembled a large cock's comb; contracted hæmorrhoids were situated around it; and it seemed to have arisen from the prolapsus of internal hæmorrhoids, which had brought down with them a portion of the mucous membrane of the rectum. The contraction of the sphincter ani had prevented the return of this tumor, and had increased its swelling, and the friction of the patient's clothes had caused repeated inflammation and degeneration of its tissue. The base of the tumor occupied more than half the circumference of the anus, and extended above the sphincter ani. It was about six lines in thickness, and its feel was scirrhous; a sanious discharge exuded from its surface, some points of which had even begun to ulcerate. It was, therefore, evident that no time should be lost if it were intended to remove this tumor; the patient was anxious for the operation, and had previously asked several surgeons to perform it; but these gentlemen had refused on account of the depth to which the diseased tissue extended.

By gentle and gradual traction on the tumor I was able to bring it entirely through the sphincter, so as to bring the healthy mucous membrane

into view. On the 25th of March, therefore, I commenced its removal by an incision in the healthy mucous membrane, and to arrest the severe hemorrhage which ensued, I cauterized the bottom of the wound with a fine heated iron. The tumor was then dissected out, the parts being touched with the actual cautery as they were divided. After the entire removal of the tumor, the greater portion of the wound ascended within the sphincter.

Slight inflammatory symptoms supervened, which yielded to bleeding, &c., suppuration was established, and the cicatrization of the wound was completed by degrees. The first few days after the operation the patient was unable to void his urine without the use of a catheter, and for some time afterwards he micturated very frequently.

On the first of May cicatrization was nearly completed, the fæces had regained their normal consistence and were passed daily without difficulty, their passage no longer giving rise to involuntary spermatic discharge. The patient regained his strength and spirits; his appetite returned, and his digestion was performed easily; his strength and stoutness increased daily. About the middle of the month his erections reappeared during the night, and afterwards became more frequent and prolonged; his cerebral functions followed the same course in their re-establishment; the dazzling of sight and cerebral congestions disappeared; and M—— left the hospital on the 24th of May, perfectly restored to health.

Three years afterwards, when I was summoned to Clermont to preside over a medical inquiry, M—— called on me; I recognized him with difficulty, so much was his countenance changed. It is scarcely necessary for me to say, that he had resumed his conjugal duties, and his occupation of *concierge*. The cicatrix of the anus was thin and soft, and did not interfere with defecation.

The latter part of this case exactly resembles the preceding one, and the results of the operation prove that the involuntary spermatic discharges were only kept up by the mechanical obstacle to defecation.

But the diarrhœa which had caused the prolapse of the hæmorrhoids, and the formation of the scirrhous tumor, was also accompanied by frequent involuntary emissions. At this time, then, the seminal vesicles could not have been subjected to compression, as the fæces were liquid, and remained a very short time in the rectum; we must, therefore, admit that the seminal vesicles participated in the irritation of the rectum—that they were affected by the spasmodic contraction which took place in the gut—in a word, that they were influenced by the tenesmus.

This case, then, presents a remarkable instance of the double influence possessed by the rectum over the seminal vesicles; in the beginning of the disease this influence was essentially vital; at its termination it was simply mechanical. Both phenomena produced the same results, but they were quite sufficiently distinguished from one another not to be confounded together.

It was worthy of remark, also, that the patient, immediately after the operation, was unable to pass his urine without the assistance of a catheter, and that after a short time he experienced a frequent de-

sire to micturate. These two phenomena show the intimate connection that exists between the anus and the neck of the bladder.

This case, then, exemplifies the influence of the rectum over the urinary organs, in both its different forms.

CASE XVII.

Hæmorrhoids from the age of puberty—Difficulty in evacuating the rectum at the age of twenty-eight—Spermatorrhœa—Cure.

M. A——, of a sanguine temperament, at fifteen years of age was addicted to masturbation; soon after he had a discharge of blood from hæmorrhoids which he regarded as a consequence of his injurious habit, and consequently abandoned it sufficiently early for his health to remain uninjured; but the hæmorrhoids teased him much, especially when some time after he entered the army. They were relieved, however, after a campaign in Spain, where the patient suffered much from heat. By returning to his home and by leading a less active life, he hoped with care to rid himself of his troublesome affection; the reverse happened, however—his diet being more stimulating and his habits being sedentary, the hæmorrhoids increased in number and size. His stools were followed by a more or less abundant discharge of blood. The internal hæmorrhoids were protruded and formed a voluminous and painful mass, which could only be reduced by a long-continued pressure. After a time these hæmorrhoidal tumors becoming irritated and swollen, presented an obstacle to the discharge of fæces; a larger portion of intestine protruded, and was returned with great difficulty. The patient now perceived that in his efforts at stool he passed a large quantity of semen, his health broke up by degrees, he felt debilitated, his digestion became disordered, his sleep was broken and unrefreshing; his temper was soured, he often experienced sensations of stunning, vertigo, and sometimes even fainting fits.

Emollient injections, baths, and demulcents appeared to benefit him at first, but he soon perceived that they increased the relaxation of the parts, and favored both the prolapsus of the rectum and the spermatic discharges.

This state had lasted four months, when the patient first consulted me. He was twenty-eight years of age, and had the appearance of being forty; his muscles were well developed, but he was, notwithstanding, without strength or energy. I first relieved the irritation of the rectum by lavements of decoction of poppy-heads, and afterwards used slightly stimulating ointment containing balsamic applications, at the same time that quinine and preparations of iron were administered.

Under this treatment the mucous membrane of the rectum by degrees regained its tone; the hæmorrhoids became less sensitive and less voluminous, and many of them withered away. The prolapsus of the rectum disappeared gradually, and the seminal discharges diminished, at the same time removing the symptoms that depended on them.

Hæmorrhoids at the early age of fifteen are rare; I cannot, however, believe that masturbation alone caused their appearance in this patient, but I think it probable that he had considerable predis-

position to them. I do not suppose that the habit he practised for a short time in his youth had any influence in causing the spermatorrhœa, for it is very easy to account for spermatic discharges in such a case without referring to very remote causes. We must then regard this case as another example of the influence which obstruction to the passage of fæces exercises on the seminal vesicles.

CASE XVIII.

Blennorrhagia—Constipation—Fissure of the anus—Discharge of semen at stool—Profound hypochondriasis—Desire of committing suicide—Diarrhœa—Cure of the fissure of the anus—Disappearance of the other symptoms.

At the age of twenty-four F. B—— contracted blennorrhagia, which was accompanied with weight in the region of the prostate. By leeches and baths the pains were relieved, and the discharge reduced to a slight gleet. Soon afterwards the left testicle became swollen and very painful, and the discharge increased in consequence of energetic and long-continued erections. The patient used leeches and hip-baths, and the swelling of the testicle diminished, but the discharge continued. For three or four years this testicle continued very tender; it swelled on several occasions, and became painful in consequence of slight venereal excitement, the urethral discharge increasing at the same time. These phenomena returned every spring during four years.

In order to cure these symptoms F. B—— took the Rob de Laffecteur,[1] after the second bottle of which an obstinate constipation supervened.

Defecation now became very painful, and the fæces were covered with blood. The patient had recourse to enemata without benefit; during their administration he felt as if the "anus were torn by heated razors." This state had lasted several months when he experienced attacks of vertigo after going to stool, and sudden attacks of cerebral congestion, passing off rapidly, either while walking or engaged in any kind of employment: his moral condition became affected, he fell by degrees into a deep melancholy; depressing thoughts arose before him incessantly; he seemed compelled to seek solitude and darkness; he felt a horror of suicide, but nevertheless he seemed always to be driven towards it. Wrapped up in his melancholy thoughts he spoke to no one, and if his friends endeavored to attract his attention he responded to them rudely; he felt his venereal desires constantly diminish; but this did not affect him so much as his moral position; he held suicide in abhorrence, yet he felt impelled towards it in spite of his will; his reason wandered, until at length he believed himself possessed by the devil, and he spent hours together in praying to be delivered from his temptations. A constant feeling of hunger annoyed him, though he ate often and greedily; his digestion was painful and laborious. Notwithstanding the

[1] Rob de Laffecteur is composed of a strong decoction of the *Arundo Phragmitis*, or bulrush, with sarsaparilla and aniseeds, evaporated, and made into a Robor syrup, by the addition of sugar. To this a solution of the bichloride of mercury is afterwards added.

repeated use of leeches, demulcents, and baths, these symptoms increased to a frightful extent; his sufferings indeed were generally greatest on quitting the bath. One day whilst at stool he noticed the evacuation of a quantity of whitish and viscid matter which he fancied was semen; from that time, his attention being called to the fact, he observed that he seldom had an evacuation without more or less spermatic discharge; he noticed also that the matter in its passage produced a kind of tickling accompanied with heat in the urethra.

After having passed six months in this deplorable condition, the patient suffered from a serious attack of indigestion, followed by a very copious diarrhœa that lasted a fortnight, and reduced him to an extreme state of debility; but after its relief the fæces regained, by degrees, their normal consistence and were then passed without pain or streaks of blood; the spermatic discharges, which had been excited by efforts at stool, no longer took place, and all the moral and physical symptoms above mentioned were, by degrees, completely and spontaneously dissipated. Several years afterwards F. B—— enjoyed excellent health, all his functions, without exception, being perfectly performed.

In this case the blennorrhagia caused inflammation of one testicle and developed the susceptibility of the genital organs; consequently, therefore, it predisposed them to the occurrence of spermatorrhœa; but the constipation brought on by the use of Rob de Laffecteur evidently was its immediate cause. The symptoms which ordinarily accompany fissures of the anus appeared soon after; and afterwards those arising from spermatorrhœa. The course of events was probably as follows: after prolonged constipation, a hard copious motion distended the mucous membrane lining the anus, more than usual; it gave way; from that day defecation having become painful the patient put it off as long as possible; the hardened and accumulated fæces in their turn increased the fissure in the mucous membrane: thus it is that fissures of the anus are usually produced and kept up. The diarrhœa, which lasted fifteen days, allowed the cicatrix in the mucous coat of the gut to become firm. It is easy, therefore, to account for the appearance and cessation of the seminal discharges, together with the anomalous symptoms from which the patient suffered during six months.

I have already shown hypochondriasis, in many forms, as a consequence of spermatorrhœa, but in no case previously reported did it present characters like those in the case before us. This young man, naturally of a good disposition, was beset during the whole course of his disease, by the most frightful propensities; he was so revolted by them that the loss of his health seemed nothing when compared with the mental torture they entailed on him. His reason was so shaken that he considered the intervention of the devil to be the only mode of explaining his evil impulses! To what must we refer an aberration of intellect which might have produced such fatal results?

But to return to the consideration of fissures of the anus. This disease, without doubt, often excites spermatorrhœa. The silence of

authors on the subject proves nothing, for notwithstanding the activity with which during years I have sought the causes of spermatorrhœa, I rarely, until lately, profited by the opportunities I had of questioning patients on this point. When the violent efforts necessary to empty the rectum, the acute pain and spasmodic contractions of which it becomes the seat, and the disturbances which a very slight excoriation produces throughout the economy, are taken into account, I think it will be readily allowed that fissures of the anus may frequently induce abundant spermatic evacuations.

The patients fear to go to stool, on account of the pain the passage of the fæces produces; these, therefore, accumulate and harden in the rectum; when at length the irritable intestine contracts to expel its contents, their passage tears open the fissure; the sphincter, irritated by this increase of pain, contracts spasmodically, and a contest is thus established between the sphincter and the muscular walls of the intestine, aided by abdominal muscles. The efforts to evacuate the intestine are so violent and prolonged that respiration is suspended; the face becomes injected and purple, and blood appears ready to start through the skin. It is difficult to conceive how the seminal vesicles can, under such circumstances, escape compression.

We must, also, take into account the fixed pain at the verge of the anus, and the spasmodic state of contraction into which all the neighboring muscles are thrown; for these phenomena act more or less on the genito-urinary organs. Lastly, fissures of the anus are soon followed by changes in the physical and moral state of the patients, of too serious a nature to be attributed only to the pain they cause. I have seen young men arrive at the hospital in a condition of weakness and mental despondency, contrasting strongly with the size of their muscles, and the color of their complexions. It is especially after they have evacuated the bowels that such patients feel most worn out, broken-spirited, and depressed; they have generally lost all venereal desire; their erections are weak, rare, and incomplete. I regret that I have not recorded these cases, but I remember their circumstances perfectly, and all things conduce to make me attribute the symptoms to spermatorrhœa; however this may be, it is a subject for further research, to which I wish to call the attention of the profession.

CASE XIX.

Horse exercise—Constipation—Spermatorrhœa—Impotence—Frequent and violent attacks of cerebral congestion—Ascending douches—Cauterization—Sulphur baths—Hot and cold douches on the loins and perineum—Cure.

M. De B—— consulted me in the month of May, 1834, respecting a cerebral affection, on whose nature distinguished physicians could not agree, but which all regarded as very serious.

He was of a middle height, with a large chest, and a well developed muscular system; his hair brown and curly, his beard thick, his face full

and deeply colored. Notwithstanding these signs of apparent strength and health, I noticed that his knees were slightly bent, and that he was unable to remain longer standing without shifting the weight of his body from one leg to the other; his voice was weak and husky; the motions of his tongue seemed embarrassed, and he articulated his words in a confused manner; his attitude was timid, and his manner had something of incertitude and fear; he had been married fifteen days.

His mother-in-law and his young wife, who accompanied him, informed me that within this period he had several attacks of congestion of the brain, during which his face was highly injected. At the first of these attacks the surgeon, called in the night, had bled him to the extent of three pounds, *in order to prevent apoplexy;* repeated venesection, and the frequent application of leeches, had relieved such attacks of congestion, but had not prevented their recurrence. The patient had become subject to attacks of vertigo, and was unable to look upwards without feeling giddy; his legs had become so weak that he had fallen several times, even when walking on level ground; his ideas had lost their clearness, and his memory failed rapidly.

These symptoms had spread consternation through both the family of my patient and that of his wife, especially as several practitioners of reputation were agreed as to the existence of some serious disease of the brain, although they could not decide as to its nature. Most of them, however, were inclined to suspect *ramollissement.*

The countenance of the patient during this recital, the coincidence of the congestion with the period of his marriage, and the bad effects of bloodletting, made me suspect the nature of the disorder, and induced me to question the patient separately. When we were alone, he told me, stammering, that an unexpected occurrence, immediately after his marriage, had at first prevented any conjugal intimacy, and that afterwards he had found himself completely impotent. He attributed this misfortune to the attacks of cerebral congestion, and to the bleedings he had undergone. On further inquiry, however, I discovered that he was affected by diurnal pollutions.

The following is the history I obtained from this patient by dint of questioning: At the age of sixteen he possessed a very strong constitution, and an ardent and passionate character. At school he contracted the habit of masturbation, and at the end of three months he had frequent nocturnal pollutions, with pain in the chest, and troublesome palpitations, which warned him of the danger of the vice, and he renounced it forever. When he became free from the restraints of school, he subdued the ardor of his temperament by the most violent exercises—especially that of the chase—and he attached himself to agricultural pursuits with much energy.

This new mode of life so completely re-established his health, that he was tormented by energetic and continual erections, to subdue which he employed river baths, even in the coldest seasons. He never committed excesses of any kind, and had never suffered from any blennorrhagic or syphilitic affection.

In 1831, the erections were slightly mitigated, but he became very much constipated, which he attributed to the constant use of horse exercise.

In 1832, he experienced some numbness and creeping sensations in his feet and legs.

In 1833, frequent dazzling of sight occurred, with vertigo, difficulty of

vision, and flushes of heat, towards the head and face; the patient attributed all these symptoms to the effects of his still increasing constipation.

At the same time that these symptoms occurred, the patient's erections became rarer, less energetic, and after a time incomplete; his fitness for intellectual labor diminished; the cerebral congestions became more frequent, and more severe; his face became habitually very red; his head burning; an almost constant fixed pain came on in the orbits, and his character became fickle and contradictory.

His family physician, attributing all these disorders to a state of plethora, caused blood to be drawn several times without benefit.

In March, 1834, M. De B—— engaged himself to a young lady, who lived about two leagues from his estate; and in order to visit her without neglecting the care of his property, he was obliged to make long and frequent journeys on horseback; shortly before his marriage, these journeys became so frequent that he might be said to pass the greater part of his time on horseback. His constipation now increased to such a degree that he passed forty days without fæcal evacuation; during his efforts at stool he passed semen in large quantities, and in jets, although the penis remained flaccid. He had previously, several times, noticed the same occurrence, but as he attributed it to his long-continued continence, he paid little attention to the circumstance. His urine was constantly muddy; it was passed slowly, and with difficulty, and threw down large quantities of thick and flocculent deposit.

M. De B—— awaited the period of his marriage with a vague uneasiness, of which he could not imagine the cause; he was much attached to his betrothed, but, nevertheless, he experienced more embarrassment than pleasure in her society.

I have already stated what occurred after his marriage; I should add, that having examined the genital organs, I found them, contrary to my expectations, of unusual development; the testicles were large and firm, but the scrotum was slightly relaxed. The patient experienced a strange tingling in the organs, and at times felt as if they were compressed by a hand of iron. These sensations increased when near his wife, and the penis diminished in size, and became retracted towards the pubes, in proportion as he endeavored to excite erection.

The union of all these circumstances could not permit any doubt to remain on my mind as to the nature of his disease; it became evident that all idea of cerebral affection must be abandoned, and that the diurnal pollutions, with all the symptoms of which they were the cause, must be referred to the patient's constipation.

The first indication to be fulfilled, therefore, was to relieve the constipation; indeed I hoped this was all that would be necessary; the youth of the patient, the development of the genital organs, and the strength of his constitution induced me to suppose that his cure would be prompt and easy. Things did not, however, follow so simple a course.

The next day the patient began to use ascending douches, and was put on a vegetable diet, with iced milk.

The first douches caused the evacuation of an immense quantity of fæcal matter in lumps, as hard as bullets, and it was not until after the sixth douche that the fæces were of normal consistence; I then caused the temperature of the water to be lowered to 25° of Reaumur's[1] scale, and after-

[1] About 88° of Fahrenheit.

wards to 20° Reaumur.[1] The last douches were given at 16° Reaumur.[2] After the twelfth douche had been administered, they were omitted, the bowels having acted regularly every day, without the necessity for the slightest straining.

By this time the patient's countenance had lost its purple tint, and presented a more natural appearance; the stunning sensations of which he had complained diminished by degrees, and at length disappeared entirely; his legs regained their strength, and he was able to continue in a standing posture for a long time without fatigue, and to take long walks without inconvenience; his voice resumed its natural tone, his eye regained its expression, and all his motions acquired firmness.

At the expiration of a fortnight the spermatic discharges during defecation, had ceased entirely; but his urine still continued thick. His erections had already acquired sufficient energy to make him believe himself cured, but ejaculation took place almost instantaneously. The use of ice and cold lotions did not ameliorate his condition.

Such was M. De B——'s state at the end of a month; when, in order to act directly on the orifices of the ejaculatory ducts, I determined to cauterize the prostatic portion of the urethra. As soon as the inflammation had subsided, his erections became more perfect and energetic; yet ejaculation still took place too rapidly. The period for using the mineral waters having arrived, I sent M. De B—— to Aix, in Savoy, where I visited him shortly after. He had experienced very little benefit from the use of the waters, either externally or internally.

I now prescribed douches, alternately very warm and very cold, on the perineum and loins, the spout being changed when the sensation, either of cold or heat, became very intense. The bath was ended, after about twenty or twenty-five minutes, by the cold douche, and the patient's skin remained highly injected for some hours afterwards.

The effects of these douches were conclusive; after the first, the patient's erections acquired a degree of vigor and duration which reminded him of his early torments. He continued the use of the douches for some days after his re-establishment; and when he left Aix the functions of his genital organs were perfect. Ejaculation was a good deal protracted by the use of the douches.

I have entered into a somewhat lengthy detail of this case, because the subject affects gravely the most serious interests of society, as well as the happiness and peace of families. Besides I confess that I was much interested by the unhappy position of a young man whose misfortune was undeserved, and could not have been foreseen, as well as by that of his wife—a young woman scarcely of age, who was obliged to enter into the most unpleasant details.

It is evident that in the case of M. De B——, the constipation was the cause of the involuntary seminal discharges. The patient had practised masturbation it is true, and nocturnal emissions followed; but he had continued the vice only three months, and his health though disordered for a short time, was soon re-established

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[1] About 81° of Fahrenheit.

[2] About 68° of Fahrenheit

by the use of violent exercise. M. De B—— was even tormented during several years by erections which must have been very energetic, if we may judge by the means he took to subdue them. From this time he had never committed any kind of excess, and he had never suffered from either blennorrhagia or syphilis. There is then no circumstance in the history of his life, except his constipation, which would account for the involuntary discharges.

But to what is this constipation to be referred? After all I could learn from the patient concerning his mode of life, I could only refer it to his constant horse exercise. In fact, M. De B—— sometimes passed whole days on horseback, either for the purpose of hunting, or of superintending the management of his property. Shortly before his marriage his rides became more frequent and longer, and his bowels at this time did not act during forty days. The weakness of his legs, the stunning sensations, &c., increased in proportion as his costiveness became more confirmed.

This case recalls to my mind the well-known observation of Hippocrates on the impotence of the Scythians, and I have no doubt that his opinion was founded on analogous facts. I shall treat this subject more fully in another place; but since at present I am considering the causes of spermatorrhœa which act on the seminal vesicles through the influence of the rectum, I report this striking case, showing the effects of long-continued horse exercise.

M. De B—— was accustomed to nutritious food and of a well-marked sanguineous temperament; he had a large chest, powerful muscles, and a highly injected countenance; it is therefore by no means extraordinary that he should have been bled frequently for the relief of the cerebral congestions to which he was subject. On the night of his marriage the blood rushed to his head with greater force than ever, so that an attack of apoplexy was much feared; the weakness of the legs, the frequent falls, and the attacks of vertigo, were therefore afterwards attributed to an advanced stage of disease of the brain. This was a very natural opinion, but it was an incorrect one; I doubted it from the commencement, although the patient was brought to me in consequence of a supposed cerebral affection. I formed a different impression, because I had previously seen many analogous cases. There exists in all these patients something peculiar in the expression of the eyes, in the position, in the voice, and in the general appearance; something of timidity and bashfulness which I am unable to express, but which is instantly recognized by the experienced, although perhaps it is incapable of explanation. However this may be, the relation of the above case should draw attention to the subject.

I admit that venesections *seemed* to be clearly indicated in the case of M. De B——, but the loss of blood never produced good effects, either immediate or remote; and by analyzing the case carefully his attendants would have seen that under this treatment the attacks in-

creased in frequency. But pre-convictions throw a thick veil over the most acute perceptions.

The ascending douches put an end to the constipation; but freedom of fæcal evacuation did not suffice to cure the disease. The seminal discharges, during the passage of fæces, diminished, indeed, or, perhaps, entirely ceased, but the patient's urine remained thick and muddy, and his erections were incomplete. The application of ice and of the nitrate of silver, and the use of sulphurous waters were not sufficient to effect his cure; yet there could not have existed any organic change in his genital organs. We can therefore only attribute the continuance of the seminal discharge, during the emptying of the bladder, to relaxation of the ejaculatory canals, produced by their long habit of allowing the semen to escape in a passive manner—showing how necessary it is to put an end to the habit as early possible.

The alternate use of hot and cold douches on the loins and perineum produced a sudden and decisive change in this as in many analogous cases; I shall therefore return to their consideration by and by. At present I must only remark, that they should never be employed so long as any irritation of the genital organs exists, as under such circumstances they produce the most unfavorable effects.

CASE XX.

Lengthened exposure to severe cold—Incomplete paralysis of the rectum—Seminal discharges during defecation—Cure by the application of galvanism.

M. V——, aged twenty-nine, a captain in an infantry regiment, had suffered from five to six attacks of blennorrhagia, and afterwards from a chancre, for the cure of which he took a considerable quantity of the bichloride of mercury. At the end of the treatment, in 1822, he left Metz to go to Spain. During his journey he was detained three weeks at Lyons, in consequence of a disorder of which the most prominent symptom was obstinate costiveness accompanied by fever. During the remainder of his journey he was obliged, for the first time, to support his left testicle, the veins of which were varicose. During the whole campaign he did not suffer from any other disease except occasional hæmorrhoids.

After having endured the fatigues of war without disorder, M. V——, whilst returning to France, was exposed during an entire night to extreme cold, being at the same time very lightly clothed. The next day he felt acute and darting pains in his legs, and these were soon followed by a feeling of cold, referred chiefly to the under part of the left hip-joint, and to the hypogastrium.

From this period a new train of symptoms appeared. The patient felt his legs daily becoming weaker; he was subject to obstinate constipation. It seemed to him as if the powers intended for the expulsion of the fæces were paralyzed; and he experienced, moreover, in the distended intestine, a feeling of elastic reaction, rather than one of muscular contraction. Abundant seminal discharges attended his efforts at stool. Agitation gene-

rally followed the evacuation of any fæces. The venereal impulse was nearly lost, erections occurred seldom, and were incomplete, and coitus was impossible, except under very extraordinary circumstances, and very rarely. The patient's digestion became difficult; flatus accumulated in the intestines, distended his abdomen, and caused pain in his epigastric and hypochondriac regions; his skin became habitually dry and harsh. He wished to take exercise to favor cutaneous transpiration, and was in a continued state of agitation as soon as he remained still for a few minutes; he was easily affected by cold, and his temper became very irritable.

The suspensory bandage he wore inconvenienced him, and he left it off before taking a long walk. Shortly after his return, a considerable swelling came on in the left testicle, to disperse which leeches were applied five times unsuccessfully.

About this time bichloride of mercury was administered in solution for the treatment of some supposed venereal vegetations around the margin of the anus, but which, in reality were only contracted hæmorrhoids. The different means pursued increased, to a great degree, the patient's weakness of the legs and digestive disorder.

When Captain V—— came to the hospital of St. Eloi, I was struck by the pallidity of his countenance, and the flaccidity of all his tissues. His form was rounded, with the cellular tissue very abundant and slightly infiltrated with serum, especially in his legs; his skin was white, thin, transparent, and habitually cold; his pulse small and feeble. The tumor of the left testicle was evidently only a common hydrocele.

Taking into consideration the order of appearance, and the general character of the symptoms, I thought that the intense and lengthened action of cold had produced a deep and lasting effect on the inferior portion of the spinal cord, as I had before seen in a few cases. Weakness seemed to me to be the symptom predominating, no appearance of irritation being present, either in the rectum or the genito-urinary organs; and I consequently decided on submitting the affected parts to the action of galvanism.

The first sitting took place on the 11th of February. The current was established, during twenty minutes, between the sacrum and hypogastrium; and afterwards, for the same period, between the hips. The shocks were very weak, only sixteen drops of sulphuric acid having been added to the quart of water; yet, on the following day, the patient experienced less sensation of cold, less numbness in his left leg and in his genital organs, and less difficulty in emptying his bladder; besides which he had a stool.

On the 12th a second sitting took place. The shocks were directed through the same parts, and applied during the same length of time; eighty drops of sulphuric acid being used on this occasion.

On the 13th a third sitting was held, a hundred drops of acid being used. Stronger shocks were administered. Impressions were now more acutely felt, and the patient's improvement seemed progressively increasing.

On the 14th, galvanism was again applied, a hundred and forty drops of sulphuric acid being added to the quart of water. The current was established occasionally between the loins and the perineum, and the surface of the hydrocele. The following day the patient had a free evacuation without enema; he experienced a feeling of power in the rectum, with less numbness in the lower extremities, from the pelvis as far as the knees; the legs and feet were in the same state as before; there was a considerable diminution in the size of the hydrocele; the patient's erections had become

more energetic, and he was altogether more cheerful notwithstanding the fatigue caused him by the violent shocks to which he had been subjected. He spoke of the galvanism with pleasure, but requested two or three days' rest before being again subjected to its action.

From the 15th to the 19th galvanism was not employed. No improvement took place during these days.

From the 20th to the 24th five sittings similar to the preceding took place, the quantity of sulphuric acid being increased on each occasion. After these the bowels were opened freely every day, without straining or seminal discharge. His urine was discharged easily in a full stream. The liquid effused in the tunica vaginalis was completely absorbed. The patient's digestion became active; the intestinal flatulence disappeared, and the warmth and strength of the inferior extremities were restored.

Shortly afterwards M. V—— rejoined his regiment, and resumed his duties as before. Four or five years afterwards I met with M. V——, who had attained the rank of general. He told me that his health had not undergone the least alteration.

This patient had suffered from five or six attacks of urethritis, besides a chancre, and he had undergone many energetic courses of anti-venereals, of which one course only would have been useless, and even injurious. There are, therefore, many reasons why his case should have been placed among those of which I have treated in the third chapter. On the other hand, he had suffered for a long time from hæmorrhoids, which were on one occasion even mistaken for syphilitic vegetations, a mistake by no means uncommon. The seminal discharges were, however, due to the distension of the rectum (as in case fourteen), yet it seems probable that the other circumstances had some share in bringing on the disease, because Captain V—— had suffered from obstinate constipation when at Lyons. These circumstances must, therefore, be taken into account; but the determining cause was, evidently, the extreme cold to which he was exposed during the whole night. This gave the disease a peculiar character which is not otherwise met with.

The first time I saw this patient, I attributed the weakness of his lower extremities, his constipation, &c., to the seminal discharges; but on more mature reflection respecting the sudden effect of this lengthened exposure to cold, I recollected other cases of the same nature, in which cold had left a serious impression of debility in the parts which had chiefly suffered. I was struck by the general and truly characteristic state of the constitution, by the infiltration with serum of the affected parts, by the temperature of the skin, &c.; I concluded, therefore, that the pollutions arose from distension of the rectum, and that this was kept up by a kind of torpidity which the cold had produced in the nerves arising from the inferior portion of the spinal cord. This chain of reasoning led me to think of galvanism—a remedy from the use of which I had seen benefit arise in analogous cases.

The result proved this indication to be the right one, and the cure was even more rapid and decided than I had ventured to hope for.

The hydrocele which existed in this patient seemed to have been caused by the repeated attacks of urethritis; and the rapidity with which the effusion was absorbed under the use of galvanism, was very remarkable. This circumstance proves galvanism to have been the remedy best suited to the case. I shall relate here another case, illustrating the effects of cold, and which is also remarkable in other respects.

CASE XXI.

Intemperance—Lengthened exposure to cold—Chronic inflammation of the bladder—Involuntary seminal discharges, &c.—Cauterization—Cure—Relapse—Same treatment with the same result—Remarkable influence of the bladder on the rectum.

G——, a soldier in the 4th regiment of light infantry, much addicted to intemperance, enjoyed pretty good health, with the exception of two or three slight attacks of blennorrhagia, until the age of thirty. At this age, however, when intoxicated and in an excessive state of perspiration, G—— plunged into cold water as far as his middle, and afterwards allowed his clothes to dry on his person.

Shortly afterwards G—— felt acute pain in the lumbar region, with weight in the hypogastrium, and a frequent desire to make water, which he passed with some little difficulty. Camphorated frictions on the loins, with rest, and an antiphlogistic regimen, gave him momentary relief; but G—— soon perceived that he was more easily fatigued than before, and especially that his legs daily grew weaker. He continued to perform his military duties during eighteen months, though with great and increasing difficulty; and at length he became so weak that he was obliged to apply for his discharge.

Having returned to his native town, he commenced business as a tailor, and he had not long followed this employment when he perceived that he passed semen frequently without either erection or pleasure. These discharges grew more and more frequent, and were accompanied by an irresistible and frequent call to empty the rectum; his urine was passed with much difficulty, requiring efforts which were very fatiguing.

During the years 1830 and 1831, the weakness of his legs continued to increase. His digestion was difficult, and his genital organs were much relaxed.

In March, 1832, after a fit of intemperance, G—— was seized by a complete retention of urine, for which baths, fomentations, and emollient drinks were prescribed. This state gave place to one of strangury, soon followed by incontinence of urine.

In May, 1832, artificial sulphurretted baths were employed without benefit, and in September, the baths of Balaruc, with no better result.

On the 4th of October, G—— was admitted into the hospital of St. Eloi. Two moxas were applied to his loins, and shortly afterwards four issues lower down.

On the first of November, G—— took some soup and wine, and the following day acute irritation of the neck of the bladder came on, for which he was treated by leeches to the hypogastrium, baths and camphorated drinks. The pain diminished, but the passage of urine was preceded by a discharge of milky fluid.

At this time the patient first came under my care. I found him in the following state: He was thirty-five years of age, of moderate stature; his skin white, face pale, hair black and scanty, voice feeble and rather husky, digestion difficult, especially after the use of animal food; he was frequently compelled to go to stool, the presence of a little fæcal matter in the rectum inducing a painful feeling, which caused its involuntary expulsion. He passed urine every ten minutes or quarter of an hour, without being aware of its escape, and the fluid contained an abundant deposit of a greenish-white color, which appeared flocculent. The urine decomposed very rapidly. He had no venereal desires, and not the least appearance of erections. His lower extremities were so weak as scarcely to support the weight of his body. His legs were the constant seat of osseous pains, and his feet were habitually cold. He seemed indifferent to everything.

On the 14th of November I performed a slight cauterization of the neck of the bladder, and of the surface of the prostate. The patient experienced little pain during the operation; there was no discharge of blood, and but little burning afterwards.

On the 22d the urinary deposit had considerably decreased in quantity.

By the 26th the deposit had entirely disappeared.

On the 28th the urine appeared quite limpid, and the patient was able to retain it for half an hour, but it was still passed involuntarily. The fæces were not passed so often, and the lower extremities were a little stronger.

On the 29th I performed a second and more complete cauterization of the same parts. The pain was considerable, and followed by burning. Bloody urine was afterwards passed very frequently. On the 4th of December the patient was able to walk without the aid of crutches; his appetite and his spirits returned. On the following days the urine and fæces were held longer.

On the 11th of December a third cauterization was practised, beginning by the bladder, and ending at the bulb of the urethra.

On the 18th the patient was able to retain his urine, which was quite limpid, for an hour; animal food was well digested; his erections returned; his legs regained their normal strength; his face acquired color and animation, and his spirits had returned. *The fæces were retained as long as in health.*

On the 20th the patient felt so well that he left the hospital; his convalescence continued, and indeed, seemed to make more rapid progress in proportion to the amount of exercise he took.

In the month of February, 1833, G—— having occasion to take a long journey during very severe cold, drank a considerable quantity of wine. In the month of May he re-entered the hospital, in almost the same state as at first. I performed a fourth cauterization similar to the last, and with the same good effects.

I afterwards prescribed tar-water and the use of artificial sulphuretted baths, and at the end of two months all the symptoms had disappeared, and the patient left the hospital quite re-established.

A lengthened exposure to cold was followed in this, as in the previous case, by diurnal pollutions, and by almost complete paralysis of the lower extremities. But here all resemblance between the two cases ceases.

In Captain V—— the cold had acted especially on the nerves which are given off by the lower portion of the spinal cord; these had been affected with a loss of power, from which the rectum had chiefly suffered; hence, its distension by fæces, and the consequent compression of the seminal vesicles. There was not the slightest appearance of irritation in the parts, and, for this reason, the galvanism produced such beneficial effects. In the patient G——, the cold chiefly acted on the bladder, and the chronic cystitis resulting from it extended its influence successively to the seminal vesicles and the rectum. The extreme weakness of the lower limbs arose from the repeated seminal discharges, which wore the patient out. Hence cauterization was followed by the happiest results. I am convinced that in this case galvanism could not have been borne.

It is easy to explain why, in the latter case, cold acted so directly on the bladder,—the patient's intemperance predisposed that organ to disease. G—— was intoxicated when he went into the water; afterwards, when he experienced a rapid increase of his bad symptoms, he had taken wine with his soup; and still later, in the journey during the winter, which was the cause of his relapse, he had drunk a considerable quantity of wine. It is, therefore, by no means easy to separate the effects of cold, in this case, from those of intemperance, the action of which on the urinary organs is easily explained. When considering the effects of blennorrhagia, I reported a case in which cold exercised a considerable influence in the production of spermatorrhœa (case fifth), but this effect was shown by very different symptoms. Strangely enough, the treatment which cured these three patients was quite different in each case—showing the indispensable necessity of observing numerous cases, and of examining minutely all their peculiarities.

A phenomenon was present in the case of the patient G——, which shows that the influence of the rectum on the genito-urinary organs is quite equalled by that of the genito-urinary organs on the rectum. The mucous membrane of the intestine was in this case so irritable that the gut was unable to bear the presence of fæcal matter; immediately that the fæces reached the level of the bladder, convulsive contractions of the muscular coat of the rectum were excited, causing their immediate and involuntary expulsion. The stools were not liquid, or mixed with mucus, as in diarrhœa, though, in consequence of their short stay in the rectum, they were by no means solid.

No particular treatment was pursued for the removal of the irritation of the rectum; it diminished after each cauterization, and disappeared at the same time as the inflammation of the bladder. The longer the patient was able to hold his urine, the less frequent his stools became; and both bladder and rectum seemed to return under the influence of the will at the same time.

But if the inflammation of the bladder could produce such an effect on the rectum, it must have acted with still greater power on the seminal vesicles. What, then, was the cause of the patient's expe-

riencing constant discharges of semen, both by day and night, without erection, without pleasure, and in the midst of the most perfect repose as regarded venereal excitement? A certain quantity of the spermatic fluid having reached the seminal vesicles, produced in them, by its mere presence, involuntary and irresistible spasmodic contractions, similar to those of the bladder and rectum; the semen was expelled in the same manner as the urine and the fæces, and without the characters which it would have acquired after a longer detention in the reservoirs destined for its reception.

It is evident, then, that an intimate relationship exists between all these parts, and that it is necessary to connect their phenomena in order to obtain a correct and perfect idea of their influence.

It must by no means be thought that this effect of the genito-urinary organs on the rectum is of rare occurrence; it is, on the contrary, habitual; but it is seldom so strikingly shown as in the preceding case. I have not hitherto noticed it, because I wished to render the subject as simple as possible; but it is to this intimate connection that the sensation of uneasiness and weight at the margin of the anus, the habitual contraction of the sphincter, and the obstinate constipation, which are so often observed in patients affected by spermatorrhœa, must be attributed. All those on whom I have practised cauterization of the neck of the bladder, have experienced a sudden burning at the margin of the anus, and a sensation of heat in the rectum immediately after the operation; on the following day they have had greater tone in the rectum, and their stools have very soon become more free. I must not, however, at present enter into further details on this subject.

CASE XXII.

Unsuspected spermatorrhœa—Attacks of cerebral congestion—Disorder of the general health—Ascarides expelled from the rectum with immediate recovery.

M. C——, a captain of engineers, aged about thirty-two, nearly bald, very thin and pale, with sunken eyes surrounded by dark circles, a feeble, shrill voice, and a timid, embarrassed appearance, consulted me respecting his health on several occasions: I never attached much importance to his complaints, but always attributed them to the melancholy bias of his character. In 1824, however, his digestion became disordered in an alarming manner, and was always accompanied by the disengagement of much flatus; even the ingestion of soup into the stomach was followed by oppression in the epigastric region, and difficulty of respiration, which was especially felt in the situation of the œsophagus, and terminated in the pharynx. This sensation diminished considerably as soon as the patient was able to pass flatus. He felt himself overcome by a sense of general debility, and especially experienced a feeling of weakness in his legs, which contrasted strikingly with his continual desire for motion, and his custom of taking long walks. He suffered from frequent attacks of giddiness, with congestion in his head, especially

when he stooped, or read, even for a few minutes, and he constantly thought himself threatened by an attack of apoplexy. His usual spareness of habit had increased; his testicles had diminished sensibly in size, and his genital organs always felt cold. His pulse was weak and soft; his tongue pale and moist, and pressure on the epigastrium did not give him the least pain. I could not participate in this patient's fears respecting the probability of an attack of apoplexy or the existence of gastritis, for I attributed all his symptoms to excessive discharges of semen, although he would not admit the correctness of this opinion.

He had abstained from coitus during a long time, from the fear of injuring his health, and expressed a horror of masturbation; he was not subject to nocturnal emissions, and he had never noticed any discharge of semen when passing urine or at stool. I sent him for change of air during the heat of the summer, to Vigan in the Cevennes, requesting him at the same time to watch himself carefully while at stool, and to send me an account of the appearance of his urine.

A few days after his arrival at Vigan he sent me word that after each stool he had a discharge of thick, whitish, slightly unctuous matter, of a very weak spermatic odor, and which stained his linen a pale yellow. This discharge was especially abundant whenever his efforts at stool were very violent. It was not, however, during the actual passage of fæcal matter that the discharges of semen occurred, but shortly afterwards; and he experienced at the same time a sense of weight in the rectum, and a spasmodic contraction accompanied by itching and heat. The symptoms were then, as I suspected, really due to excessive spermatic discharges. Yet I did not attach sufficient importance to the singular circumstances which accompanied these discharges, and I was satisfied when prescribing cool injections, cold lotions, and vegetable and milk diet, with the intention of relieving the constipation, and of giving tone to the genital organs. These means produced no remarkable change in the seminal discharges; after a time I received another long letter, which was full of minute and uninteresting details; on the back, however, the patient had written a postscript, stating that in one of his stools he had passed a number of little worms, and that he frequently felt an itching in the rectum, which he attributed to a herpetic affection. A slight discharge occurred from the rectum, and the fæces were mixed with a good deal of purulent mucus. The parts surrounding the anus were gorged. This state had been present from 1818, and had first appeared after a violent intestinal inflammation accompanied with colic and tenesmus, which latter reappeared in 1822. The cause of the spermatorrhœa, now, was evident, and I also understood how it was that the seminal discharge did not take place exactly at the same time as the passage of the fæces, but a little after; these discharges were not produced by mechanical compression arising from such passage, but they were the result of a state of irritation produced by the presence of worms; the sensation of pressure, the spasmodic contraction, the itching, and the heat, which were felt in the rectum, proved this.

The patient took, fasting, on three successive mornings, four grains of calomel, and during the day three or four glasses of decoction of Corsican moss, and a tepid enema, followed by a cold one; he once took a small enema of warm milk, and soon after a second, composed of a strong decoction of garlic. At the end of three days, perceiving no more ascarides in his stools, he left off treatment for a week, after which he took, at bedtime,

four grains of calomel followed by six drachms of sulphate of magnesia the next morning. Four copious stools were obtained, which presented no appearance worthy of note. Soon after this, Captain C—— wrote to me stating that his strength had returned; that his stomach performed all its functions properly; that the spermatic discharges had ceased, together with the discharge from the anus, and the itching, &c., with which he had previously been tormented.

The ascarides reappeared every year, however, at a stated period, and sometimes even twice a year, but the patient was able to treat himself, and immediately that any symptoms announced their presence, he got rid of them in two or three days—his health never becoming disordered.

CASE XXIII.

Masturbation at nine years of age—Constant nocturnal emissions—Ascarides —Cure in eight days.

Henry B——, a sergeant of engineers, at the age of nine, was addicted to the vice of masturbation, which he continued to practise up to the age of fifteen, when he corrected himself. From this time he experienced frequent nocturnal pollutions. Loss of flesh followed, with pains in the chest and a fixed pain in the middle of the back. The whole nervous system was disordered, and the patient's eyes were injected and surrounded by dark circles. After the occurrence of a nocturnal emission, the patient often noticed that he had pricking sensations, as though he had been stung by ants, with acute pain in the lower part of his abdomen, and in his loins.

He was completely overcome by fatigue in the morning, and felt, when he rose from bed, as though his legs and arms had been bruised; he complained also of oppression at his chest, and a sense of suffocation. He felt buzzing in his ears in the evening; he lost his memory, was unable to attend to his affairs, and performed his military duty with much difficulty. This state had continued for several years, and became daily more serious. Various modes of treatment had been employed by different medical men whom the patient had consulted; among other remedies used may be named quinine, oxide of iron, ferruginous water mixed with wine of Bordeaux, lime-water in milk, and Hoffmann's anodyne at night. River-bathing and cold enemata had also been tried, and the patient had applied, during the coldest season, snow and ice over his kidneys and genital organs. No advantage whatever was derived from all these means, and sal-ammoniac dissolved in water, to form a cold lotion, only irritated the skin of the penis and scrotum.

Henry B—— was twenty years of age when he first consulted me; his face appeared colored and healthy, and his form announced health and vigor. It was therefore difficult to guess the cause of the deep melancholy which his features showed. After much questioning, I at length learned that he had been subject to worms from his childhood—that he passed them every time he went to stool, and that his fæces were sometimes quite covered with them. From the description he gave me, I was convinced that they consisted of *oxyures*, with perhaps a few *trichocephali*. I prescribed for him four grains of calomel night and morning, with half a drachm of mercurial ointment to be introduced into the rectum night and morning, and enemata composed of potentilla anserina in decoction. Eight days afterwards he told me that his pollutions had ceased, and that his health was quite restored.

CASE XXIV.

Hypochondriasis—Impotence—Attacks of cerebral congestion—Ascarides—Cure within eight days.

A——, a gardener, of large and well formed frame and dark complexion, two years married, perceived, seven or eight months after marriage, that he lost by degrees his virile power; that his appetite at the same time became capricious, and his digestion difficult and accompanied with pain in the epigastrium, the development of flatus, and frequent attacks of vomiting.

Pills containing cynoglossus, sedatives, and demulcents of all kinds, had been prescribed for this patient by a distinguished practitioner of Montpellier, in order to relieve the irritation of his digestive organs; but his general weakness, and that of the genital organs in particular, increased daily. A feeling of lassitude constantly came over him, he was habitually sleepy, and had frequent attacks of vertigo. These symptoms led other practitioners whom he consulted to fear the occurrence of apoplexy, and consequently venesection was prescribed; but the patient, notwithstanding his uneasiness, refused to be bled, saying that he was convinced he had no blood to lose. In 1833, A—— consulted one of my pupils, who, after long questioning, learned that he suffered from obstinate costiveness, with troublesome itching in the rectum, and that he frequently passed a number of oxyures with his fæces. Believing that these oxyures were the cause of seminal discharges which the patient had not discovered, an infusion of mentha viridis was ordered for him, with aromatic enemata, and afterwards enemata of cold salt water, sufficiently copious to distend the gut and to be expelled with some violence. These injections caused the expulsion of a large number of entozoa.

The patient's digestive disorder ceased almost immediately; his erections soon returned, and coitus took place a few days afterwards. He soon recovered his strength; his spirits resumed their wonted gayety, and he recommenced his work with pleasure. This change was the result of only eight days' treatment.

CASE XXV.

Nocturnal pollutions, resisting all modes of treatment during six years—Great physical and moral depression—Expulsion of ascarides with complete relief.

M. D——, the son of healthy parents, at the age of eleven, contracted, of his own accord, the habit of masturbation; but he soon discovered its pernicious effects, and corrected himself; his strength returned, and up to the age of fourteen he continued in perfect health. At this period, after reading an erotic book, he relapsed into his former habits. He also formed a connection with a female, who excited his passions without gratifying them. These sources of excitement so enervated him, that palpitation of the heart, and tremors in his limbs, supervened.

Up to this period M. D—— had never had an involuntary seminal emission, and he still retained sufficient power over himself, only to practise

masturbation once a week. The irritation he experienced in the genital organs was so great that he was often forced to plunge them into cold water for its relief. He was stout and tall, and his health was robust.

On the 25th of October, 1815, on waking in the morning, M. D—— found that he had experienced a copious seminal emission unconsciously while asleep. On every one of the eight following nights he had several involuntary emissions. These discharges produced a remarkable state of weakness, and he lost flesh visibly; still he hoped that the discharges would cease spontaneously, and false delicacy prevented him from mentioning his state. Absorbed in the consideration of his own condition, M. D—— now withdrew himself from his companions, and occupied himself in devising means for the relief of the discharges. He attempted numerous ingenious contrivances to prevent the penis from becoming erect during sleep, but none of them succeeded; the disorder of his health continued to increase, until the year 1820, when his condition was deplorable, and he came to Montpellier to place himself under my care. From his account of the sufferings he had endured, I at first thought that the involuntary emissions from which he had suffered, arose from a preternatural sensibility of the genital organs, increased by their premature use. Before commencing any plan of treatment, however, I caused M. D—— to draw up a history of his case, in order that I might have all the facts before me at one view. While reading his history, my attention was arrested by the mention of numerous small worms, which were passed with the fæces, and which were looked on by the unfortunate patient as a sign of speedy dissolution. I examined the anus, and was able to discover the eruption which he mentioned in his memoir, as giving rise to acute irritation in that neighborhood, besides which, this eruption would not have produced the itching of the nose of which he also complained. I suspected, therefore, that the involuntary emissions might be kept up by irritation from ascarides, and I drew the patient's attention to the circumstance. He told me, immediately, that he passed them habitually in his stools, and that frequently, from the violent nature of the itching, he had been compelled to scratch until blood flowed, and even to introduce his finger nail within the margin of the anus, when on withdrawing it, he had removed a living oxyuris. About ten o'clock in the evening the oxyuris especially tormented him by descending into the lower portion of the rectum, and even within the contracted sphincter. He had, besides, a constant acid taste in his mouth, and he passed a large quantity of saliva on his pillow, during the night.

Of all the means prescribed for this patient, the administration of cold enemeta, and the exhibition of calomel, were the most efficacious. The first injections were employed at a temperature of from 18° to 20° of Reaumur,[1] and they were afterwards used at 15° and even at 12° of the same scale.[2] Experience soon taught the patient that he had received most benefit from their administration about ten o'clock in the evening, at the time when the ascarides descended near the anus, of which he became aware, by the increased itching excited. He found also that in order to obtain the utmost benefit from the injections, it was necessary to throw a large quantity of water into the intestine, as high as possible, and afterwards to pass it suddenly so

[1] Between 70° and 80° of Fahrenheit.
[2] About 59° and 68° of Fahrenheit's scale.

as to expel the ascarides inhabiting the upper part of the intestine, at the moment when they are benumbed. By these means large quantities of the entozoa were passed on several successive days; after their expulsion the involuntary emissions diminished rapidly and permanently, and all the accidents arising from them disappeared; the patient's strength and embonpoint, especially, returned very quickly. The involuntary emissions, however, only ceased entirely under the influence of a natural exercise of the organs, with the use of cold bathing, and gymnastic exercise. The patient had previously been obliged, on two occasions, to give up the use of the cold bath—once during the heat of summer, because he was unable to obtain a proper reaction on quitting the water; yet immediately that his system had recovered a little strength, he found himself much benefited by cold bathing; indeed, after the expulsion of the ascarides, it produced more benefit than any other means employed, and he even commenced the use of the cold plunge during the winter, with considerable advantage.

Walking exercise was also very useful, and this perhaps it was that induced M. D——, after having completed his medical education at Montpellier, to turn his attention to the study of natural history. He has since undertaken long and dangerous travels in the service of science, and the works he has published bear the stamp of an observing mind and a high range of thought. His labors have always been favorably received by the academy of sciences. M. D——'s health has been completely re-established twenty-five years.

The history sent to me by M. D—— was full of interest; it showed a kind of fatality pursuing him, although he struggled with courage and perseverance against troubles which he had not deserved. It is necessary to have undergone such sufferings, and to write under their immediate influence, in order to relate all their circumstances with correctness. An uninterested observer would be unable to do justice to such a recital. How many such persons as M. D—— do we not meet with, constantly exposed to the relentless animadversions of society, when they ought to be regarded with pity, and to be relieved from their sufferings by the healing hand of the physician!

Two of the patients, whose cases I have just related (cases twenty-three and twenty-four), who suffered in infancy from ascarides, were addicted to masturbation, even before the age of puberty. They afterwards reproached themselves bitterly, and attributed all their misfortunes to this fatal habit. But it appears to me that in order to induce such a habit *spontaneously*, at so early an age, long before the full development of the genital organs, a degree of abnormal irritation must be present in them.

The irritation caused by stone in the bladder often excites, in male infants, premature erections, and pain referred to the fossa navicularis; this they relieve by elongating the penis, so that in such patients, as is well known, the prepuce is of unnatural length. These manœuvres naturally lead them to habits for which they ought not, under such circumstances, to be held morally responsible.

The irritation produced by ascarides in the rectum constantly excites the same phenomena, and I have frequently seen children two

or three years of age affected with priapism, which could be referred to no other cause. This circumstance is so common, that it has been frequently mentioned to me by nurses, who even employ a popular remedy to relieve it, showing, at least, that the influence of the ascarides is well known. Nurses introduce a suppository of lard into the rectum, under the impression that the ascarides come there in search of food, and that they will be able to remove them together with the lard, on withdrawing it. The cause of these premature erections cannot, therefore, be doubted.

Such children must, in consequence of the irritation of the parts, possess an irresistible tendency to handle them, just as they have, under the same circumstances, to scratch and rub the nose; and the sensation resulting from the friction of the genital organs being very acute, is likely enough to form the basis of a more mischievous habit. When, on reaching puberty, reason assumes its empire, the patients often acquire sufficient command over themselves to renounce these fatal practices, and they then suffer from involuntary emissions arising from the same cause that excited the masturbation; that is to say, from the irritation of the genital organs by the worms inhabiting the rectum.

Ascarides produce nearly the same effects in the female; I have seen many little girls of tender age, who were tormented by irresistible itching of the pudendum, and profuse leucorrhœa, often accompanied with redness and excoriation of the clitoris and labia minora, all arising from the same source of irritation.

The involuntary emissions of semen which accompany defecation in those patients who are affected with ascarides, cannot be attributed to mechanical compression of the seminal vesicles, for costiveness is not present, nor could constipation account for the nocturnal emissions; it appears to me that the titillation constantly exercised on the rectum and margin of the anus, by the ascarides, extends its influence to the genital organs, and excites spasmodic contractions of the seminal vesicles.

CASE XXVI.

The habit of masturbation contracted spontaneously at the age of fifteen, and continued until the age of twenty—Nocturnal and diurnal pollutions —Increasing disorder of the health until the age of twenty-nine—Frequent and prolonged erections—Pain at the margin of the anus, &c.—Cauterization performed without benefit—The expulsion of ascarides followed by rapid recovery.

M. R——, a student of medicine, enjoyed good health in his childhood, but about the age of fifteen was tormented by frequent and prolonged erections. One evening, for the relief of the itching, of which the extremity of the penis was the seat, he rubbed the organ violently between his hands. This led to the establishment of masturbation as a habit, or rather as a passion, the patient practising it sometimes as often as eight or ten times a day.

His health by degrees became so altered that one of his friends suspected his practices, and told him the danger of his situation. By degrees he corrected himself, though not entirely, before he had attained his twentieth year. On his renouncing masturbation, nocturnal emissions supervened and often occurred two or three times a night. They diminished after a time, but without ceasing entirely, and seminal emissions during defecation and the emission of urine were added to them. Thus his health became daily more and more disordered for nine years, notwithstanding absolute continence, a severe regimen, and the use of sedatives, tonics and antispasmodics. At length he grew incapable of any mental exertion. In 1837, he came to Montpellier, at the age of twenty-nine, in the following condition: Extreme emaciation; face pale; appearance stupid and confused; intellect dull; reasoning powers much affected, the patient being incapable of connecting two ideas on the most simple topic of conversation; loss of memory; constant headache referred to the forehead and temples, and increased by any mental excitement, being then accompanied by nervous tremors, and an almost idiotic state; sleep broken and unrefreshing; constant sighing; frequent attacks of congestion of the head, especially at night; violent noise in the ears resembling the sound of a waterfall; vertigo; stunning sensations giving rise to a constant fear of apoplexy; timidity carried to a ridiculous extent; panics of fear even during the day; character gloomy, taciturn, restless and irritable; horror of the least noise, and of all society; irresistible restlessness; great weakness; abundant sweats after very slight exertion; almost constant coryza; frequent dry and hard cough; pains in the base of the chest, the region of the heart, and along the spinal column; appetite voracious; dragging at the pit of the stomach; difficult digestion, accompanied with the development of flatus; grinding of the teeth during sleep; burning at the point of the tongue; darting pains in the bowels, especially in the rectum; obstinate constipation alternating with violent attacks of diarrhœa; stools containing much mucus, and sometimes streaked with blood; periodical pains at the margin of the anus, in the perineum, penis and testicles; urine passed in large quantities, and very frequently, always throwing down a whitish, thick and very abundant deposit; involuntary emissions during defecation, both when constipated and relaxed; frequent and prolonged erections by day as well as by night; with constant presence of erotic ideas.

On sounding this patient, I found the urethra very sensitive, especially towards the neck of the bladder, and I consequently thought that the nocturnal and diurnal pollutions were kept up by a state of irritation arising from masturbation. I therefore proposed cauterization. This was performed on the following day, and produced the usual *immediate* effects, but its *curative* effects did not take place as I had anticipated. I then directed the patient to notice his fæces, and a few days afterwards he told me that he had observed numerous little worms passed in his stools. I now ordered enemata of cold water, and salt and water, which, however, produced only a momentary effect—probably because the ascarides inhabited the upper part of the intestine. A few doses of calomel, however, caused them to disappear without returning; and from this moment the involuntary diurnal emissions ceased entirely, the nocturnal emissions became more and more rare, and the patient's re-establishment progressed very rapidly. M. R—— returned to his studies with ardor, and long afterwards all functions were perfectly well performed.

It appears evident that the irritation caused by the ascarides in the rectum first led this patient to practise masturbation, and afterwards kept up involuntary seminal discharges. I did not discover this at first, because the history of his case, sent me by the patient, was so long, and was characterized by such disorder and want of clearness, that I was unable to arrive at any satisfactory conclusions from such a chaos; his answers were still more vague and unconnected, so that my attention had been chiefly attracted to the state of his intellect, and the abuses he had committed. But after seeing the little success of cauterization, and again reading his notes, I paid more attention to the circumstances attending the commencement of his practising masturbation, and I noticed several symptoms to which I had not before attached importance, such as grinding of the teeth during sleep; burning pain in the point of the tongue; pain in the rectum, and at the margin of the anus; the stools always containing mucus, and sometimes being streaked with blood; and especially the frequency and duration of the erections, and the constant presence of erotic ideas.

When costiveness is present the stools rarely contain any quantity of mucus; its presence alone, therefore, in such a case, would indicate that the rectum is irritated by ascarides. But a still more characteristic point is, the long duration of the erections. When involuntary spermatic discharges are induced by any cause except this, the erections diminish in proportion as the disease advances, first becoming incomplete, and afterwards disappearing entirely. When, therefore, energetic and obstinate erections continue, in spite of the great wastings of the body produced by them, they must be kept up by some other stimulus to the organs than the natural one, and I believe irritation by ascarides to be the only cause capable of producing this effect. This, on the other hand, agrees perfectly with what I have already stated concerning their influence on the genital organs.

CASE XXVII.

Masturbation at the age of fifteen—Serious disorder—The application of a blister followed by involuntary nocturnal emissions—Cauterization, douches, &c., unsuccessful—Expulsion of ascarides, followed by a rapid recovery.

Simon G——, a vine-dresser, short, stoutly formed, and of a sanguineous temperament, reached the age of fifteen without suffering from any disease. At this period, while watching goats with other children, he was led by their example to practise masturbation. At first, no emission took place, but at the end of about a month, his manœuvres caused the discharge of a few drops of blood, with burning at the root of the penis, and pain in the testicles. Soon after, a general lassitude supervened, with a sense of fatigue in all his body, and cold sweats. No semen was discharged for a long time, and during the first five months that seminal emissions occurred, the discharge was very fluid, and produced very little sensation.

After Simon G—— had followed these mal-practices for a few weeks, he experienced darting pain in the stomach; flushes of heat in the face, and chilliness about the feet. At the age of sixteen, pain and creeping sensations along the spinal column were added to these symptoms; and still later, severe cramps in the limbs, and weakness of the lower extremities. At the age of seventeen, the patient was much troubled with palpitations of the heart, especially after masturbation. His stools were costive, passed with difficulty and pain, and often streaked with blood. These symptoms were followed by lassitude, pains in the shoulders, difficult digestion, accompanied with acidity and development of flatus, with increased palpitations; his sleep was no longer sound and refreshing.

At the age of eighteen, congestions of the head supervened, with burning and redness of the face, occurring as often as five or six times a day; the patient suffered from heartburn, and difficult respiration, with a sensation as though his throat were compressed.

At the age of nineteen, he carried masturbation so far as to produce sanguineous emissions. His debility now became so great, that he was unable to follow his occupation, or even to walk a short distance without frequently resting. The use of wine, even in small quantities, always increased his debility, and his other disorders. At this time leeches were applied to the anus; blisters to the epigastrium, nape of the neck and shoulders; and refrigerant drinks were ordered. Shortly after the application of the blisters, nocturnal emissions, preceded by erotic dreams, occurred for the first time, and were followed by cramps in the legs, and griping pain in the stomach. From this period the nocturnal emissions occurred nearly every night, and frequently several times a night.

At this time his disorder increased so much, that a medical man was consulted. G—— confessed the cause of his illness; promised to correct himself and kept his word. The treatment consisted of leeches to the back of the neck; syrup of quinine; about two hundred aromatic baths; friction with camphor over the back of the neck, the spine, and limbs; sleeping on a very hard bed, &c.

After having employed these various means during eighteen months, without receiving the least benefit, G—— left off all treatment, and at length came to Montpellier, and was admitted into the hospital St. Eloi, on the 14th of February.

G—— was then twenty-two years of age, and his external appearance announced strength and health; his embonpoint was considerable, and his face full and red; yet he was sad, weak, and without courage, in fact his state had not improved in the least during the two years that he had ceased to practise masturbation; and his nocturnal emissions had ceased for six days at a time, or longer without his becoming any better. This last circumstance made me suspect that he suffered, at the same time, from diurnal pollutions. His stools were often very constipated; and the hardened fæces, accumulating in the rectum, were discharged with difficulty and pain—semen always escaping, at the same time, in greater or less quantity. The desire of micturition was frequent and sudden, and it generally aroused the patient four or five times during the night; the last drops of urine were thick, viscid, and followed by a still more consistent matter, which remained at the orifice of the glans. The urine itself contained an abundant thick, whitish, and flocculent deposit, like that thrown down by a strong decoction of pearl barley. The mucous membrane of the urethra was very

sensitive, especially towards the prostate; and the passage of a catheter was arrested by spasmodic contraction of the neck of the bladder.

After observing these symptoms for seven or eight days, on the 22d of February I performed cauterization from the neck of the bladder to the membranous portion of the urethra. The following night two very painful nocturnal emissions occurred; two more took place on the third night, and they were renewed every second or third night, notwithstanding the use of baths, enemata, cold douches, camphorated emulsions, and morphia. The urine was little altered in appearance, and there was little, if any, improvement in the general symptoms. The sleep continued broken and unrefreshing. The patient was always disturbed by painful erections, and an uncomfortable itching at the orifice of the urethra. At length, one day, he informed me that he had observed in his fæces numerous little worms about six lines long, and pointed at both ends. It was plain, therefore, that ascarides were present in the rectum, and that before benefit could be derived from any other means, it would be necessary to expel them.[1]

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[1] The effects produced in the following remarkable case, which has recently come under my notice, appear to me to have been due, in a great measure, to the irritation excited by ascarides; and the circumstance so well illustrates the connection between the rectum and genito-urinary apparatus, that I am induced to break through my original intention, of not adding any of the results of my own experience to M. Lallemand's very full and complete treatise, and to publish the case as it is contained in my note-book. Mr. M——, aged about thirty, of florid complexion, two years married, called on me in a state of great mental excitement and distress, in the beginning of March, 1846. He told me that about a week before, while getting up one morning, he had observed a slight gluey discharge between the lips of the urethra, that he had taken no notice of the circumstance, but had employed himself about his affairs as usual. He was in perfectly good health, and in fact had forgotten the occurrence, until on the third morning it was recalled to his recollection by the appearance of a considerable discharge in the same situation, accompanied with pain during micturition. As he had a slight cold at the time, he attributed these symptoms to its effects, and contented himself, for that day, with remaining within doors, and restricting his diet to vegetables and slops. Still, the pain during micturition continued, the discharge increased in quantity, and became thicker and greenish. He now became a prey to the most harassing suspicions, though he still was unwilling to seek advice, in the hope that the discharge would cease spontaneously, as it had arisen. In this state the patient continued, until the morning of the 10th of March, by which time he was wrought to the highest pitch of mental excitement by the thoughts that constantly obtruded themselves on his mind.

He told me that he had suffered from three attacks of blennorrhagia: the first, a very severe one, about the age of nineteen; the last about twenty-five. He had never had any syphilitic affection. With the first attack of blennorrhagia, he had been confined to his bed nearly a week, from irritability of the bladder attended with strangury, &c., and that he had frequently, since that time, suffered from slight attacks of vesical irritation, after exposure to wet or cold, or after very slight excess at table. He could not account for the present symptoms in any way, unless by referring them to a very slight cold which had entirely passed off, or by giving credit to suspicions which would entirely overthrow his domestic happiness, and for which he had, otherwise, not the most remote cause.

From the state of my patient's feelings, I saw that something must be immediately done to remove suspense; I, therefore, assured him that cases of urethral discharge, from slight excitement, were not uncommon, especially in persons like himself, who had repeatedly suffered from blennorrhagia, and were predisposed to irritability of the organs. When he became a little more composed, on examining the genital organs, I found a viscid greenish discharge from the urethra, not exactly resembling the ordinary thick, dark discharge of blennorrhagia, but containing a considerable quantity of mucus, and of a glairy consistence. The orifice of the urethra was neither swollen nor red,

I accordingly ordered four, six, and eight-grain doses of calomel, to be followed by injections for this purpose. The patient's condition immediately began to improve rapidly; his nocturnal emissions ceased; his urine became transparent; the local and general symptoms disappeared; and he left the hospital on the 1st of April quite re-established in health.

Masturbation, excited by bad example, produced from the first a serious disorder in this patient's health. On two occasions the practice was carried so far as to induce emissions of blood. His testicles

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and on inquiry I found that, although the patient suffered from painful erections, they by no means resembled the chordee from which he had suffered on previous occasions, but that the pain was rather situated in the prostatic and membranous portions of the urethra. He suffered much from strangury, and his urine was highly acid. The chief pain that occurred during its emission was felt in the perineum, and the scalding near the orifice of the urethra, which usually attends blennorrhagia, was scarcely sufficient to attract his notice. Under these circumstances, believing the case to be simply irritation of the neck of the bladder from cold, I considered that I might at once relieve his anxiety as to the nature of the discharge, by positively assuring him that it was not venereal, and that with care he would probably be well in a few days.

I ordered for him a warm hip-bath, and some bicarbonate of potass in gum-water, with tincture of henbane, and requested him to abstain from all stimulants, and to be careful to avoid exposure to cold or damp. The following day he called on me, considerably relieved from his strangury, and with his urine in a much more healthy state; but the discharge continued as severe as before, and there was still considerable pain in making water. A continuance of the same remedies was prescribed, and patience enjoined. The two following days the patient did not call, and I had begun to suppose that he was quite recovered, when on the 15th he returned, almost as much excited as at first. He was convinced, he said, that his disease was more serious than I had led him to believe, and that there was only one way of accounting for it; he was a ruined man, &c. After he had become a little calm, he stated to me, that the irritation had returned, that the discharge was more abundant, and he was convinced, that had it been simple irritation of the neck of the bladder, all these symptoms would have ceased long before. He complained of a burning heat, and a sense of weight in the rectum, which induced me to request an examination of the prostate. When proceeding to do so, I observed the parts in the neighborhood of the anus red, hot, and excoriated, and, on questioning, he told me that he had long suffered severely from itching in the neighborhood, but that he had omitted to mention it to me, as he had not considered it of any importance, believing it to arise from little worms which he often passed in his stools. This fact threw a new light on the case, and I began to suspect that the irritation produced by ascarides was the cause of the vesical irritation and urethral discharge. On being questioned, he recollected that the strangury always increased towards night, when he generally suffered most from the itching of the rectum, and that he had felt itching and severe burning pain in the neighborhood of the rectum long before the occurrence of the present attack of irritation, and before the appearance of the urethral discharge. I now ordered, in addition to his former medicines, a dose of calomel at bedtime, to be followed by a smart purgative in the morning, and a copious injection of salt and water to be thrown into the rectum as rapidly as possible, whenever he found the irritation and itching very troublesome.

The following day the patient called to let me know that he was much improved. The purgative, and one injection which he had used, had brought away a perfect nest of ascarides. The injection was repeated on the second night, and a few entozoa were discharged. On the 22d of March, Mr. D—— called to say that the urethral discharge, scalding and vesical irritation, had entirely ceased, and that he no longer suffered from the intolerable itching that had previously almost constantly annoyed him; I advised him to use an enema occasionally, for a month or two, to prevent a return of his tormentors; this he has done, and the last time I saw him, some months after his recovery, he was in excellent health and spirits, and able to enjoy all the comfort of domestic felicity.

became painful; his urethra was exceedingly sensitive; and the application of blisters induced nocturnal emissions for the first time. It seemed, therefore, unnecessary to seek further for the cause of the seminal discharges which wore the patient out; yet the result proved that they were kept up by the presence of ascarides in the rectum, the expulsion of which was followed by a sudden change and rapid improvement, whilst no other treatment had produced the least amendment. This case shows how important it is to seek *all* the causes which may either excite or keep up involuntary seminal emissions.

I say *excite* or *keep up*, because in this case the ascarides do not appear to me to have at all contributed to produce the disorder at its commencement. It was by the influence of bad example that Simon G—— was led to practise masturbation, and not by the presence of priapism, as is the case when the habit is excited by irritation from ascarides. The first nocturnal emissions, too, followed the application of blisters; and I shall, in a future chapter, have occasion to relate other cases of the same nature: such occurrences are easily explained by absorption of the cantharides. It seems likely, then, that the ascarides were only developed at a later period, and perhaps as a consequence of the deranged state of the patient's digestive organs. As they were not present in any very great quantity, it appears likely that they would not have produced such serious effects, if the spermatic organs had not been previously in a state of irritation; but I believe that in the existing state of the parts, the presence of the worms was sufficient to *keep up* involuntary nocturnal and diurnal emissions. By reflecting on a few of the symptoms that attended the spermatorrhœa in this case, I might have earlier discovered the presence of ascarides; thus, the erections were frequent, prolonged, and importunate—circumstances the opposite of those observed in patients worn out by ordinary pollutions. The troublesome itching, also, which constantly existed at the root of the penis, should have aroused my suspicions.

CASE XXVIII.

Masturbation at the age of ten—Seminal emissions produced by horse exercise—Nocturnal, and afterwards diurnal, pollutions—Constant erections—Stools relaxed, and containing abundance of mucus—Burning in the anus. Cauterization with slight benefit—Expulsion of ascarides followed by rapid and complete recovery.

Alexander A——, of moderate stature, the son of robust peasants, enticed by the example of his companions, contracted, when about ten years old, the habit of masturbation, which he practised for a year before he obtained any seminal emission. From seventeen to eighteen he had sexual intercourse, but he afterwards returned to his former habits. He soon complained of general lassitude, weakness of the extremities, shortness of

breath, and a sense of suffocation after the least exertion; loss of appetite; difficulty of digestion. Very abundant seminal emissions were frequently excited by horse exercise, and occurred without erection, although not without slight sensation. At a later period he suffered from severe and prolonged palpitation from slight causes; frequent colds, and an almost habitual cough, attended with expectoration of mucus mixed with much blood. At this period, A—— mentioned his condition to a medical man, who explained the cause of his disorders, and A—— at once corrected himself; but nocturnal pollutions soon appeared. At first these were very fequent, but after a short time they only occurred three or four times a week, and at last only three or four times a month. Still the patient's palpitations, difficulty of breathing, and digestive disorder, continued to increase. Flushes of heat to the head were added to these symptoms, together with pain in the loins, which extended, with a creeping sensation, along the vertebral column, and was distributed to the shoulders and arms; frequent cramps and chilliness of the extremities; extreme weakness of the legs, and a frequent desire to micturate and defecate. The patient gave up music, in which he was a proficient, and took a dislike to society, especially that of women: timid, irritable, and unsettled, incessantly occupied by thinking of his disease, he was unfit for any occupation, became a prey to despair, and was several times on the point of yielding to the impulse to suicide, which constantly obtruded itself before him.

In this condition A—— came to consult me, in the month of October, 1836, being then twenty-one years of age. I at once perceived that the nocturnal emissions had given place to diurnal ones, and the minute details into which the patient entered, confirmed me fully in this opinion. Each time that he went to stool, he had an emission from the penis of a greater or less quantity of viscid matter, which presented the characteristics of badly formed semen. His stools were repeated two or three times a day; they were liquid, contained a large quantity of mucus, and left a severe burning pain in the rectum. His urine was habitually muddy, thick, and of a disagreeable smell, and after its emission a thick gummy matter, which left a mark on his linen, remained at the orifice of the glans. The patient was, besides, annoyed day and night, with incomplete but very constant erections.

Having observed, for several days, the presence of semen in the urine, I performed cauterization of the prostatic portion of the urethra. Fifteen days afterwards, a sensible improvement was evident in almost all the symptoms; yet no further progress was made, notwithstanding the use of Spa water, iced milk, &c. The stools still continued liquid and mixed with mucus, resembling a thick solution of soap in water. This really dispiriting condition continued during three months, when I learned that the patient had several times noticed ascarides in his stools.

In a few days after, he was freed from this source of irritation by means of injections, and from that moment his re-establishment progressed rapidly. His love of occupation soon returned, and he applied himself diligently to the study of pharmacy.

This, then, was a case in which the involuntary emissions were *kept up* by the irritation of ascarides in the rectum, although it would appear that masturbation was the cause of their origin. I have recently been consulted by one of my former pupils, for a similar case, in which the discharges were very serious, and had resisted the most

various modes of treatment. They were attributed to masturbation, and the patient's confessions justified this opinion; yet a passage in his letter convinced me that a mistake had arisen on, at least, one point. After speaking of supposed hæmorrhoids, which irritated the margin of the anus, the patient added that the pain and itching he felt there were such, that he often introduced his finger forcibly into the rectum, and had several times brought down ascarides on withdrawing it. This circumstance, previously neglected, caused me to think that the ascarides, if they had not caused the pollutions, at all events kept them up, and I prescribed accordingly, with success. We must remember, then, that the emissions may be kept up in persons who have practised masturbation, by the presence of ascarides, even in cases in which these entozoa have not excited the habit; and on this account it is necessary to consider their presence with much attention. On the other hand, we must be on our guard against attaching too much importance to the occasional presence of one or two of these worms in the fæces. In such cases, the want of success of vermifuge remedies shows that the ascarides are not of so much importance as they may have been considered. We must, therefore, be careful in all cases, not to draw conclusions too precipitately from first appearances. No disease, in fact, requires more patient research and greater tact in its diagnosis and treatment, than are necessary in complicated cases of spermatorrhœa.

To resume. The cases reported in this chapter show that affections of the rectum excite involuntary emissions. First, mechanically; by compressing the seminal vesicles during the passage of fæces. Secondly, vitally; by the extension of irritation from the rectum to the seminal vesicles.

All causes which oppose an obstacle to the exit of fæces act in the former manner. I have recorded cases in which the mechanical obstacle was placed at the margin of the anus (cases 15, 16, 17, and 18), because, in such cases, the cause is perfectly isolated, and its action is evident; but it is also evident that any physical action like that resulting from horse exercise (nineteenth case), from carriage exercise, or from remaining too long in a sitting posture, as well as all medicines which tend to produce constipation, may be followed by the same effects. In all cases of this kind, the influence of the rectum on the seminal vesicles arises from its distension by fæces, and is a perfectly *mechanical* action.

The other phenomenon is essentially *vital*. The diarrhœa (case sixteenth), the ascarides (cases 22, 23, 24, 25, 26, 27, 28), and the eruptions at the anus (case twelve), could only act in this manner. The same may be said concerning the action of injections, either too hot or too cold, and of certain drastic purgatives.

In many cases, too, the distension and the irritability of the intestine act simultaneously on the seminal vesicles. Hæmorrhoids and fissures of the anus, for instance, cause pain and irritation, and give rise to spasms of the sphincter, at the same time that they form an

obstacle to defecation. Obstinate and continued costiveness, too, is rarely exempt from heat and irritation in the rectum and its neighborhood; and eruptions about the anus are often accompanied by an irritability of the sphincters, opposing defecation.

We have seen (case twenty-one) that chronic inflammation of the urinary organs may excite, by its influence, so great a susceptibility of the rectum, that the fæces are no longer able to be retained; and here cauterization of the mucous membrane of the genito-urinary passage sufficed to dispel the irritation of the rectum, so that the patient got rid, at once, of his diarrhœa, his incontinence of urine, and his involuntary seminal discharges. The influence of the rectum on the genito-urinary organs is then reciprocal; and it plays a much more important part in causing spermatorrhœa, than if it acted only by mechanically compressing the seminal vesicles. Its due consideration is, therefore, of much importance in the treatment of these cases.

CHAPTER VI.

CAUSES OF SPERMATORRHŒA.

Abuse.

I UNDERSTAND by the term abuse, when applied to the organs of generation, any irregular or premature exercise of their functions; any application of them which cannot have, as its result, the propagation of the species. There are, undoubtedly, many points of resemblance between such abuses and venereal excesses, but the plan of this work requires that I should examine them separately.

I concluded the last chapter by relating some cases in which the presence of ascarides in the rectum, more or less connected with masturbation, induced or kept up involuntary spermatic discharges; I shall commence the present one by relating some cases in which the spermatorrhœa was due to masturbation alone.

CASE XXIX.

Masturbation—Nocturnal pollutions—Palpitation and dyspnœa, simulating cardiac disease—Repeated venesection, followed by increased disorder—Sulphuretted baths and rapid recovery.

M. D——, of nervous temperament, and energetic and restless character, contracted the practice of masturbation while at school. Shortly afterwards he suffered from a severe attack of fever, which occasioned his removal; this fever was followed by loss of voice, and afterwards by rheu-

matic pains, pain in the chest, sensation of suffocation, habitual shortness of breath, and violent palpitations, which were increased on the slightest exertion. At the age of nineteen he broke himself of his habits; but soon afterwards he experienced nocturnal pollutions, which became daily more and more frequent. About this time an issue was inserted in his left thigh. The following winter the palpitations and difficulty of breathing increased, and his legs became slightly œdematous; he was treated by repeated venesections, and the administration of diuretics, and at the approach of summer he became a little better, the improvement being of course attributed to the effects of the medical treatment.

The following winter the same symptoms reappeared, and were again combated by venesection, with a severe regimen. The patient now became exceedingly emaciated. His nocturnal emissions increased in frequency, and his dyspnœa and palpitations were aggravated. For these symptoms he was again *bled three times.*

At the age of twenty-three M. D—— came to Montpellier. A minute examination of his chest assured me that his lungs were perfectly healthy, and that the heart's action was neither more violent, nor heard over a greater extent than natural; still, notwithstanding his emaciation and extreme debility, and the œdematous state of his legs, he was constantly recurring to the supposed plethora, to which his attendants had attributed his symptoms. I found it difficult to prevent him from having recourse to further abstraction of blood.

The use of artificial sulphuretted baths gave tone to his genital organs, and diminished their excessive irritability. The nocturnal pollutions became less frequent; the patient's appetite returned, and his digestion was performed with greater energy. After a month's treatment, I sent him to the sulphuretted waters of the Pyrenees, where his cure was soon completed.

This is one of the most simple cases of nocturnal pollutions induced by masturbation. It is chiefly remarkable on account of the predominance of the palpitations and dyspnœa over the other symptoms, and the grave errors which have been committed in its diagnosis and treatment.

CASE XXX.

Masturbation at the age of eight years—At twelve very frequent emissions of urine—At sixteen, coitus impossible—Nocturnal, and afterwards diurnal pollutions—Cauterization at the age of twenty-eight, followed by rapid recovery.

M. D——, of Philadelphia, of a very robust constitution, contracted the habit of masturbation at school, when only eight years old. The first effect produced was a frequent desire to pass urine, and at twelve years of age this irritability had become so great, that he was sometimes unable to retain his urine a quarter of an hour. Before entering a house he always took care to micturate several times in rapid succession; and notwithstanding this precaution, he soon experienced renewed uneasiness. He felt as though his bladder was never entirely empty, and the smallest quantity of urine induced

spasmodic contractions. The irritability of the urinary organs diminished by degrees after the period of puberty, but never ceased entirely, notwithstanding the various means which were employed on different occasions.

At the age of sixteen, M. D—— endeavored to break off his injurious habits by sexual intercourse, but he found himself completely impotent, and shame induced him to return to masturbation. He afterwards made further attempts to correct himself, but he experienced nocturnal pollutions, which often made him lose courage. At length, after many relapses, he succeeded completely, without observing any further nocturnal emissions. Still his health, instead of improving, became more and more impaired. His erections were less frequent, less prolonged, incomplete, and at length gradually ceased, together with all venereal desire.

At the age of twenty-eight, the state of his urine, its frequent discharge, and the wandering pains in the perineum and testicles, induced a fear of calculus; sounding, however, only showed a morbid sensibility of the urethra, especially towards the neck of the bladder.

In the beginning of May, 1837, M. D—— came to Montpellier, in the following condition: much debilitated; unsteady in his walk; easily chilled, and taking cold very quickly; wandering pains all over his body; skin dry; memory impaired; digestion difficult; extremities cold; scrotum relaxed and testicles soft, very sensitive, and often causing a dull pain, as if they were forcibly compressed; the semen (from the account he gave of the last nocturnal pollutions he had experienced), clear, aqueous, and inodorous; seminal emissions with the last drops of urine, which were clammy, and passed with difficulty, and excited a sensation of tickling in the neighborhood of the anus, which extended to the orifice of the urethra; he often had diarrhœa, but at other times was very costive, and his stools were passed with difficulty and pain. He did not, however, often pass semen while at stool.

I discovered several days following, the presence of semen in M. D——'s urine, and catheterism showed an excessive irritability of the urethra, especially in the neighborhood of the prostate, which, on examination, was found slightly enlarged. Nearly a tablespoonful of blood followed the withdrawal of the catheter. These circumstances did not leave the least doubt on my mind as to the state of the mucous membrane in the vicinity of the ejaculatory ducts; and, consequently, I immediately performed cauterization, from the neck of the bladder, as far as the membranous portion of the urethra. Twenty days afterwards, M. D—— left Montpellier for Italy, and when he returned, three months afterwards, he was completely cured—no involuntary seminal emissions having afterwards appeared. His urine was transparent, and could be retained seven or eight hours without inconvenience; its discharge took place without effort, and was not accompanied by any remarkable sensation. Lastly, the patient's impotence, which had been present nearly twelve years, had given place to a virility previously unknown to him: I need hardly state that his physical and moral energy had shared in this regeneration.

I have often had occasion to notice the connection that exists between the spermatic and urinary organs; and I have shown that there is scarcely a cause of spermatorrhœa which does not act more or less on the bladder and kidneys. The cause I am now investigating

affords us numerous examples of this connection—of which the case I have just related is a remarkable instance—the irritation of the urinary organs having been developed very rapidly, having shown very marked symptoms, and having existed alone during several years. The patient was only eight years of age when he first became addicted to masturbation; at this early age the urinary organs alone possessed activity, and therefore they alone were able to suffer disturbance of their functions; on this account the symptoms were confined for a long time to the urinary organs. The character of the symptoms showed that they arose from a chronic state of inflammation, or from an acute irritation of the urinary organs, and this state must have extended also towards the spermatic organs. Thus the increased secretion of the kidneys, and the extreme irritability of the bladder, would give a very clear idea of what took place in the spermatic organs at the period of puberty. As soon as the testicles began to act, they fell under the same influence as the kidneys; the seminal vesicles were in the same condition as the bladder; in other words, the sémen was secreted in large quantities, and was retained a very short time in its reservoirs. Being, therefore, imperfectly formed, the usual effect on the erectile tissues produced by its presence, did not take place, and coitus was impossible at the age of sixteen. The occurrence of impotence at so early an age is sufficient to show that diurnal pollutions had already commenced, although the patient did not discover them for a long time afterwards. He was still, however, able to practise masturbation; and this is a circumstance which has great effect in preventing persons addicted to the vice from renouncing their fatal habits. At a later period, nocturnal pollutions, which occurred after a few days' care, shook the patient's resolution. This is a much less serious circumstance than the one just mentioned, but at the same time much more common. At length the patient left off his habits, and nocturnal pollutions disappeared; yet the disorder of his health continued to increase. His prudence, exercised too late, did not arise from the strength of his will, but from the weakness of his genital organs; the disappearance of his nocturnal emissions did not arise from the remedial measures used, but from the increase of his involuntary diurnal discharges, of which he only became aware long afterwards. These common errors are the more dangerous, because medical practitioners are apt to participate in them.

In the case of M. D—— the irritability of the canal was very great, and the effect of the cauterization was correspondingly prompt and decided.

CASE XXXI.

Masturbation at the age of seventeen, carried so far as to cause emissions of blood, but soon afterwards abandoned—Increasing debility during four years—Symptoms of phthisis laryngea and chronic gastritis—Extreme prostration—Cauterization, followed by rapid re-establishment.

I am indebted for the following remarkable case to the kindness of Dr. Daniel, of Cette. "On the 26th of May, 1836, I was called to F——, a baker, aged twenty-two. I found him in bed, in the following condition: Great moral prostration, carried even to a hatred of existence; prostration of strength; emesia; lips pale and shrivelled; remarkable pallidity; eyes sunken; expression of countenance dull; great emaciation; skin hot and dry; pulse small; voice hoarse, and so low that it was with difficulty a few words could be heard by approaching the ear; constant cough, scarcely permitting an instant's repose; general wandering pains, most severe in the loins and the sides of the chest; great irritability of the stomach—vomiting being excited after taking almost any kind of liquid or solid food.

"At first I thought that I recognized in this patient the symptoms of phthisis laryngea, complicated with chronic gastritis; but the examination of his chest and abdomen did not support this opinion. The epigastric region was not painful on pressure; the respiratory murmur was heard all over the chest, and percussion emitted a healthy sound, except under the left false ribs, where it was slightly dull, and the patient felt pain.

"His debility did not permit me to practise abstraction of blood; and, indeed, the pleuro-pneumonia of the left side did not seem either very extensive or very acute; I therefore ordered a large blister to be applied over the affected spot, and prescribed a solution of tartar emetic, and a strict diet. The pain in the side disappeared, and two days afterwards the stomach could retain milk and barley-water. Still nothing explained the patient's emaciation, his almost total loss of voice, hoarseness, and constant cough. His parents attributed these symptoms to hereditary phthisis, and mentioned that several members of the family had died of that disease. Minute and repeated examination of F——'s chest, however, assured me that this was not the case. On the other hand, the symptoms were very severe, and I could not discover any visceral lesion sufficient to account for them. In this state of uncertainty, your views on spermatorrhœa attracted my attention. I immediately questioned the patient respecting his past life, and learned that at the age of seventeen he had practised masturbation with such fury that he had frequently passed aqueous semen, mixed with blood; frightened by these accidents, he had corrected himself completely. But, after about a fortnight's abstinence, he noticed that his urine contained a deposit of thick, whitish, flocculent matter. He never attached any importance to this, although during four years he observed it constantly, and noticed that it was more abundant after he had been much fatigued in his business. He observed, also, that the last drops of urine were thick and viscid, and that a small quantity of viscid matter generally remained at the orifice of the urethra. His bad symptoms first commenced at this time; his erections and desires entirely disappeared; and, by the time he had attained the age of twenty-one, he was obliged to give up his

employment, and shortly afterwards, his symptoms becoming aggravated, he was unable to quit his bed.

"I examined his urine, and found it in the condition he had described; the deposit contained in it being about an ounce in quantity. I noticed that his testicles were soft, and his scrotum flaccid. He agreed to my proposition of cauterizing the prostatic portion of the urethra with eagerness, and I performed it on the following day. The effect of the cauterization was rapid; the second night afterwards, the patient slept soundly; the third day, a change was observed in his voice; and erections occurred during the night. On the fourth day, the patient was able to get up and take some light food, which was well digested; his wandering pains had disappeared; and by the ninth day after the cauterization, the patient's strength had returned. Tonic regimen, and the use of sea-bathing, confirmed his restoration."

Dr. Daniel added to the history of this case a detailed statement drawn up by this patient himself: as it contains no important facts, I have omitted it here. I have, however, several times myself examined this patient, and have assured myself of the exactitude of the report.

F—— had carried masturbation to such an extent, that he passed aqueous semen mixed with blood; the seminal vesicles were therefore in a morbid condition when he left off the habit. A fortnight afterwards, he noticed a deposit in his urine, which he had never before perceived, and which continued constantly afterwards. During four years, he never relapsed into his former habits, and he was not affected by nocturnal emissions; yet he continued to lose flesh. Immediately after the cauterization he became convalescent. Is it not evident, that the absence of venereal desires and of nocturnal emissions during so long a period, was owing to the occurrence of involuntary diurnal pollutions? Is there any other mode by which we can explain the continued disorder of the patient's health, and its sudden restoration? The answer is evident.

Whenever F—— fatigued himself more than usual, the urinary deposit became more abundant. This may appear to be an exception to the usual good effects which patients experience from pedestrian exercise. Everything depends on the strength of the system, and on the quantity of that strength expended. Fatigue is as hurtful in such cases, as exercise is beneficial.

CASE XXXII.

Masturbation from twelve to twenty-two years of age—Melancholy—Inclination to suicide—Serious alteration of the health—Monomania—Unperceived diurnal pollutions—Cauterization, followed by perfect recovery.

At the beginning of April, 1836, M. Emile G—— was sent to consult me, by Dr. Cauvière, of Marseilles. He was twenty-five years of age, and had attracted notice from the brilliancy of his intellect. At twenty-one

years of age, he had been admitted an advocate in a highly flattering manner.

He stooped much, and though his bony system seemed to announce a strong constitution, his limbs were small, and his muscles soft. His hair was black and thin, his skin was pale, and his face without expression. His eyes were dull, and constantly cast down; his voice weak and husky; and his general appearance announced great timidity. His legs were constantly in motion.

I learned that M. G—— had contracted the habit of masturbation at school, at twelve years of age; and that whilst studying law at Paris, at the age of nineteen he found a change in his character commencing: this I will describe in his own words: At first I felt a gradually increasing disgust of everything and a constant sense of *ennui*. From that period I only saw the dark side of life. Thoughts of suicide soon afterwards occurred to me, and this state of mind continued for twelve months, after which other ideas took the place of those respecting suicide. I considered myself a subject of ridicule, and fancied that the expression of my countenance, or my manner, excited an insulting gayety in the persons I met. This notion each day acquired new strength, and often when in the street, or even when at my own house, or in a room surrounded by my relations and friends, I fancied I heard insults which were aimed at me. *I think so still.* At length, as my state became worse, I thought that every one insulted me, and *I still think so.* If any one expectorates or blows his nose, coughs, laughs, or puts his hands or handkerchief before his face in my presence, I experience the most painful sensation. Sometimes, I feel enraged, but more frequently a depression of spirits, ending in involuntary tears. I look at no one, and my eyes are never fixed on any object. Wrapped up in my own thoughts, I am indifferent to all external impressions. These signs are evidently those of imbecility. I admit that I may have had, and that I may even now have, *hallucinations*, but I am fully persuaded that these ideas are not without foundation: I am convinced that the expression of my countenance has something strange in it, that people read in my looks the fears which agitate, and the ideas which torment me, and that they laugh at this unhappy weakness of intellect, which they ought rather to pity.

The patient experienced a sense of heaviness and oppression in his head, and although fatigued by slight exercise was constantly in motion. Two years before he consulted me he began to correct himself by degrees; and for nine months he had entirely renounced the practice of masturbation, yet notwithstanding this, his state daily grew worse. His digestion was disordered; he suffered from obstinate constipation; and his erections and venereal desires had left him for a long time. Yet he did not mention the last facts in the written statement of his case which he sent me; they were minor evils; one idea alone absorbed him—the conviction that he was an object of contempt and ridicule to all who approached him; this idea was aggravated by the knowledge of his impotence, and by shame for the cause which had produced it.

This patient's urine usually contained an abundant flocculent deposit, resembling a thick decoction of barley; it decomposed very rapidly, and emitted a disagreeable smell. After every stool the point of the glans penis was covered with a clammy viscid matter, resembling a thick solution of gum.

These circumstances confirmed me in the idea that the involuntary seminal

discharges alone opposed the patient's recovery. The frequent emission of his urine; the sensibility of the spermatic cord, of the testicles, and especially of the urethral mucous membrane, and the injected state of the orifice of the urethra, made me attribute these evacuations to irritation of the spermatic organs rather than to their relaxation.

As, however, the patient refused to submit to cauterization, I ordered him iced milk mixed with Spa water, cold lotions, &c; but he found himself much worse after the use of these means; all his symptoms were aggravated; his urine became thicker, and left a glairy deposit adhering to the bottom of the vessel.

At length, on the 23d of April, I persuaded M. G—— to submit to cauterization, and I performed it immediately, chiefly on the neck of the bladder and the prostatic portion of the urethra: nothing particular occurred, except that the inflammation of the urethra, which followed the application, was not entirely removed for three weeks. This, I believe, arose, in a great measure, from the severe weather which prevailed at the time. I ordered two or three warm baths to be taken in the week, and a few warm injections and demulcent drinks. At the expiration of a month, the patient took pleasure in going out, and occupied himself with gardening; he felt stronger, and took longer walks; he was able to employ himself longer without fatigue; he also experienced nocturnal emissions, preceded by erotic dreams and lively sensations. At this he was at first alarmed, but he gained courage when he saw that he was not injured by them. I had not seen him for more than a month, when one day he called on me quite dispirited, to say that he should never get well, as he was relapsing into his former habits. I blamed him, but at the same time I explained to him that the fact was a proof of his having gained his former virility, of which he should make more proper use. M. G——'s mother came to me soon after to speak of the propriety of marriage for her son, whom she saw exposed to various dangers. I easily persuaded her, that before deciding on marriage, it would be necessary for him to be firmly assured, during a considerable period, of his perfect and decided recovery. M. G—— had then regained his spirits, his boldness, and his position in society, and eighteen months afterwards, all his functions being performed with energy, he married. Six months after his marriage I heard that his health had not for a moment been disordered.

With this patient I received the following consultation from Dr. Esquirol: "The undersigned cannot mistake a case of *hypochondriasis* which has lasted three years. It is evident that the *nervous affection* was produced by the habit of masturbation, to which the patient was addicted from the age of puberty, and of which he only succeeded in breaking himself seven months since. The hypochondriasis continues very obstinately, as the cause which produced it acted for a long time, and very seriously weakened the nervous system. The undersigned attributes the little success attending medical treatment to the unfavorable weather, to the indocility of the patient, who lives in seclusion and in physical and moral torpor, and to the weakness of his mother, who allows herself to be led away by the sight of false or exaggerated sufferings. The means advised are those usually ordered in cases of hypochondriasis: tonics, antispasmodics, leeches to the

anus, purging, change of scene, travelling, sulphuretted baths, sea-bathing," &c. Dr. Esquirol sums up his opinion, in concluding, as follows: "I must repeat what I have said above: weakened innervation is the cause of the disease, and everything which can strengthen the nervous system will be useful." It was clear that masturbation had been the first cause of the physical and moral derangement, called hypochondriasis; but the patient had renounced this vice during nine months, and his state became worse daily, instead of improving. It was evident, therefore, that some other cause acted in keeping up the disorder; and it was just as evident that this cause was involuntary diurnal seminal discharges. It is not necessary for me to show that masturbation can, acting alone, induce involuntary discharges, or that the cure was due to cauterization only, although its effects were not manifest for a month after the application of the caustic; but I must insist on the pathological condition of the genital organs exciting these involuntary evacuations, since they have been too frequently ascribed to a state of debility or relaxation of the tissues. The tonics ordered by Esquirol had produced no benefit: I have described the symptoms which led me to suspect acute irritation of the prostatic portion of the urethra, and I have since shown the injurious effects of cold lotions, iced milk, Spa water, &c. It was, then, not by causing contraction of the orifices of the ejaculatory canals, that the cauterization produced its beneficial effects, but by dispersing the chronic engorgement of the mucous membrane. The advantage derived from warm baths during convalescence corroborates this opinion.

In M. G——'s case a predominating symptom attracted the attention of the practitioners; hence they looked on the disease as being hypochondriasis, monomania, or hallucination, continuing after the cessation of its exciting cause, and becoming, consequently, an idiopathic affection. I have, however, shown that all the functions had been altered more or less; I should add, that the digestion was the last to be re-established perfectly. Such mistakes are very common, and very serious, and I cannot too strongly impress their importance on the attention of the profession. Esquirol justly stated that the hypochondriasis took its origin from masturbation; that the nervous system was weak and excited; but he mistook the cause which kept up this condition of the brain. When masturbation has not induced involuntary seminal emissions, recovery soon follows, on leaving off the habit which has destroyed the health; within a week the patients begin to experience a notable improvement, and in a very short time they are hardly recognizable, whatever may have been the degree of weakness to which they were reduced. But when Dr. Esquirol wrote his opinion, seven months had elapsed, during which M. G——'s conduct had been irreproachable, and when I saw him two months later, his state was even worse, although he had never resumed his former habits. The symptoms were, however, kept up by involuntary diurnal discharges.

The effects of the cauterization were very conclusive, and as soon

as its curative action was felt, the patient, of his own accord, took various kinds of exercise, and sought out the different amusements, which had been, in vain, ordered for him previously; he entered into society, and did, without being pressed, all that he had before refused to do; his ideas and his necessities altered in proportion as his functions were re-established.

It is in vain that we say to the so-called hypochondriac—amuse yourself, employ your mind, go into society, seek agreeable conversation; so long as we have not removed the cause of his disorder, he is unable to profit by our counsels. How can we expect that when a man is fatigued by the least exercise, he shall occupy himself with walking or gardening? How can we desire him to go into society, when the simple presence of a woman intimidates him, and recalls all his former misfortunes? How can we expect him to enjoy conversation, when he loses its thread every moment? When his memory leaves him, and when he feels his nullity? We persuade him to seek amusements and pleasures, but are they such to him? Is not the happiness of others his greatest punishment? Because he is unable to follow our advice we accuse him of unwillingness, and we wish to compel him. Let us first remove the cause of our patient's disease, and we shall soon see that his character and conduct will change, and that he will return to his natural taste and habits.

It is not long, in such cases, before we are embarrassed by questions about the propriety of marriage being put to us: this is a matter which is serious in all its aspects, and on which the least scrupulous should not pronounce, without having had a sufficient assurance of their patient's return to health. The question of our patient's health is now not the only one, nor is even his future happiness alone implicated; the fate of the innocent being who is about to be associated with him, is the matter of chief importance, and justice to her demands that we do not counsel matrimony, until sufficiently long proof has been given that our patient's re-establishment is permanent.

CASE XXXIII.

Abuse caused by sleeping on the belly—Effects of reading erotic works—Power of habit—Alteration of the intellectual and moral faculties—Impotence—Chronic Irritation of the bladder—Nocturnal and diurnal pollutions—Cauterization followed by prompt recovery.

Eugene C——, at seven years of age, was strong and healthy, but about this period he contracted the habit of lying on his belly at night. In this position the genital organs were heated during sleep, and the penis became erect, although the boy did not present the least sign of puberty. Pressure against the bed produced titillation, and induced a habit of abuse, as injurious in its effects as masturbation. The child was perfectly free from any sexual feelings, and had never been exposed to the influence of bad

example; besides which, he was naturally modest and reserved. The first impression was, therefore, quite instinctive and accidental, but the habit was soon confirmed into an irresistible passion

Between the ages of nine and eleven the child's character changed; he became restless and quarrelsome, but his intellectual faculties were active, and he was able to keep up with his companions in their studies, and to make himself feared by them, on account of his quarrelsome disposition. Between the ages of eleven and thirteen, however, he yielded to the practice two or three times a night, and became idle, timid, and weak, he fell behind his fellow students in his studies; and though he was easily provoked to quarrel, he found himself always beaten. On this account he sought solitude. At the age of fourteen, the habit he had contracted was temporarily broken off by his brother's sleeping with him; but at the expiration of three months, when left to himself, he relapsed. At the age of fifteen a remonstrance received before his fellow students by one of his masters, caused him to abstain during eight months; he regained his strength, his character altered, and he made up for the time he had lost in his studies.

At the end of the year he even wrote so remarkable an essay at the competition for prizes, that he was supposed to have copied it. On this account, at another competition some time afterwards, he was separated from his companions, and carefully watched. In the meantime, however, some obscene books had fallen in his way, and excited his imagination. He resumed his habits with fury, and when the day of competition arrived, his condition had become worse than ever. He passed all the time allowed for the trial in a state of febrile excitement, without writing a word. Some time afterwards, he made a strong resolution to correct himself, but the habit had become so strong, that he often had recourse to it, unconsciously, during sleep. By degrees, however, he corrected himself, but very frequent nocturnal pollutions supervened, and destroyed all the benefit that arose from the change.

At the age of seventeen the patient came to Montpellier to obtain the degree of bachelor of letters: the state of his intellectual faculties prevented this; indeed, out of ten hours spent in his study, nine were passed in thinking of his condition, and of the different means by which he could commit suicide. He attempted sexual intercourse, but found himself quite impotent. Horse exercise, and the various tonics and stimulants which were prescribed for him, only increased his disorder.

I need not relate all the functional derangements which the patient underwent; but it is necessary that I should notice a chronic inflammation of the bladder, of which the cause was unknown, and diurnal pollutions, which he did not discover, although they were much more serious than the nocturnal emissions which had become more and more rare during the previous twelve months.

About the end of November, 1836, I cauterized the neck of the bladder, and the prostatic portion of the urethra. Fifteen days afterwards, the patient was better, and he immediately went into the country, where his cure was soon confirmed.

M. C—— has since studied medicine with much energy; and has passed the examinations of B. L and B. A. with credit. His character has become frank and kind, and it is evident that he is in good health and spirits.

This case shows the importance of the apparent trifles that occur in

childhood, and at the period of puberty; and the serious effects which a slight neglect of them may produce during the whole of after life.

CASE XXXIV.

Sexual ideas at the age of eight—Abuse at thirteen—Various diseases in consequence, until the age of thirty-two—Nocturnal and diurnal pollutions —Cauterization—Slow, but progressive improvement.

M. A——, when a child, was remarkable for precocity of intellect; but was troubled with worms during the early years of his life. Being allowed to sleep with his governess, when about eight years of age, he remarked differences of form, which he had never before seen. His active imagination dwelt on these incessantly, and at length he fell into a state of melancholy, of which the cause was far from being suspected. At the age of thirteen, a young female took advantage of him, but without permitting intromission. Shortly afterwards, when at school, these circumstances constantly recurred to his imagination, and during the night he took care to place himself as much as possible in the same position, in order to renew the same sensations. He thus contracted a habit quite as injurious as masturbation. His health became affected, even before any seminal emission had taken place; his growth was arrested; his sight, memory and intellect became weak. At the age of seventeen, emissions occurred during defecation, and were followed by a diminution of the patient's erections and venereal desires, as well as of his abuses. At nineteen years of age, he had a chronic gastritis, headache, pain in the hypochondriac regions, and nocturnal pollutions. For these symptoms, a milk diet was prescribed, and adhered to for a year, together with baths, enemata, and country exercise. At the age of twenty-two, chronic gastro-enteritis supervened, and was followed by inflammation of the bladder, which passed into a state of chronic vesical catarrh. After about two years, the patient's health was restored. By degrees, his old habits and nocturnal pollutions returned, and induced a new derangement of his health; at the age of twenty-five, chronic inflammation of the digestive organs and bladder again appeared, but was relieved by emollients and a severe regimen. About the age of twenty-eight, his health partially returned, but his sleep continued heavy and unrefreshing, and was often interrupted. At thirty, his digestion was much disordered; constipation and diarrhœa occurring alternately.

The patient's condition gradually became worse, until he came to Montpellier, in February, 1836. He was then thirty-two years of age, and presented the following symptoms: Appearance sad, restless and timid; legs weak; constant restlessness; feeling of icy coldness in the thighs, lower part of the belly, and genital organs; appetite capricious; digestion laborious, and accompanied with discharge of flatus; memory treacherous; dislike of society; irritability of temper; overruling egotism; constant presence of lascivious ideas, contrasting strongly with the weakness of the genital organs; mental debility; sleep broken, and unrefreshing; frightful dreams; frequent desire to micturate, especially during the night; urine thick and muddy, generally presenting an abundant flocculent precipitate, and giving off a disagreeable smell; genital organs very little developed; prepuce long; and testicles small.

After observing the patient for several days, I cauterized the bladder and

prostatic portion of the urethra; the operation was followed by a more intense inflammation than usual, probably due to the bad weather. As soon as he was able, the patient quitted Montpellier, to return home.

Not having heard from him, I augured that the cauterization had been unsuccessful, when one day, several months afterwards, as I was passing through Lyons, I was accosted by M. A——, who was so changed that I hardly recognized him. He stated that a slow, but progressive improvement had taken place after his leaving Montpellier; the pollutions he had before experienced during defecation disappeared; his urine became clear, and was passed less often and less suddenly; nocturnal pollutions occurred seldom, and his erections became energetic.

The abuses practised on the genital organs had the same character in this as in the preceding case; and in both, they produced the same effects as masturbation. We observe in the last case, that sexual ideas preceded for a long time the development of the sexual organs; and that the venereal desires had no relation whatever to the amount of development of the generative organs.

The influence of a premature *liaison* on these abuses is also worthy of notice. The remembrance of such irregular and premature enjoyments constantly presented itself before the patient's imagination, and caused his frequent relapses. The habit at length overcame the will, and even took its place, provoking the same acts during sleep. The power of habit was just the same as in the preceding case.

At the age of seventeen, M. A—— noticed that he passed semen while at stool; he had, therefore, thus early, diurnal pollutions. He did not pay attention to these, because he was not aware of their importance; but it is evidently to the occurrence of such discharges that we must attribute the feebleness of his erections, the impossibility of coitus, and the long series of sufferings he afterwards endured.

As to the other symptoms presented by M. A——, I need not enter into their consideration—I have already done so several times—such symptoms being common to all cases of spermatorrhœa.

Were the discharges in this case due to a state of atony? This would seem to be the case, if we only regarded the small development of the organs, and the habitual weakness of the erections; but the acute attack of cystitis, and the chronic catarrh of the bladder, showed clearly enough, that the seminal vesicles and ejaculatory canals must have been also in a state of irritation. The curative effects of cauterization were postponed for a considerable time, so that I almost despaired of benefit from the operation; yet, no other treatment having been employed, the improvement was evidently due to the cauterization alone. In case thirty-two, I have already noticed the same circumstance, and it is worthy of remark, that both these cases were operated on during a very wet and cold season. Whether this be the correct explanation or not, such cases are not rare, and I wish particularly to point them out, because I

have met with many patients affected with spermatorrhœa, who had been cauterized three, four, or five times, or even still more often, in the space of a month. This subject I shall treat fully, when speaking of the treatment of spermatorrhœa.

CASE XXXV.

Masturbation at sixteen years of age—At twenty-one, compression of the urethra during ejaculation, followed by a sensation of tearing, and acute pain—Urethral discharge recurring frequently—Discharges of semen during defecation and the emission of urine—Reciprocal influence of these discharges on the digestive organs—Chronic catarrh of the bladder—Cauterization— Recovery after several relapses.

M. G——, of sanguineous temperament, and robust constitution, contracted the habit of masturbation when about sixteen years old. The following year, he was troubled with disordered digestion, oppression, and difficulty of respiration. At the age of twenty-one, he determined to conquer his propensity, but after a few days' continuance, he relapsed, in consequence of the violent erections he experienced. During this contest between his will and his passion, he one day compressed the urethra forcibly, when on the point of ejaculation. On the instant, he experienced a sensation of tearing in the interior of the canal, followed by acute pain, which afterwards frequently returned; the following day, after an erection, he felt the glans wet, and found the orifice of the urethra filled with a viscid matter, resembling a very thick solution of gum. From that time, this kind of discharge always continued, varying only a little in appearance and quantity, according to circumstances; the patient's erections became less energetic, and the sensations produced by ejaculation grew progressively weaker: at the same time, the functions of his stomach were disordered and frequent attacks of indigestion took place. At the end of two years, the urethral discharge increased suddenly after coitus; at the same time assuming a blennorrhagic appearance. This was treated by emollients and copaiba, and at the end of three months, the former state returned; the discharge was easily increased however, by the least error of diet, as well as by very slight venereal excitement. The patient's erections now became less energetic and incomplete; and, on the other hand, his digestion was more and more disordered and accompanied with colic, flatulence, and constipation—the efforts at stool giving rise to seminal discharge. Various remedial means were adopted but without success. At the age of twenty-eight, the patient, after a slight error of diet, experienced an exacerbation of all his symptoms, and in addition, his urine became thick, muddy, and fetid, and its discharge very frequent, and accompanied by an acute pain at the root of the penis, and in the bladder. In this state the patient came to Montpellier, on the 19th of April, 1826, being then about thirty. After observing him for several days, I noticed that his urine was constantly muddy and fetid, and contained a red sediment, which adhered to the sides of the vessel, and a thick and flocculent deposit, which fell to the bottom; a slightly opaque cloud occupying the upper part, while on the surface a thin iridescent pellicle floated. The urethral mucous membrane was also very irritable, especially towards

the neck of the bladder. On the 2d of May, I slightly cauterized the bladder near its neck, and more severely the prostatic portion of the urethra, closing the instrument before it reached the bulb. The operation produced its usual effects. Five days afterwards, the urine no longer contained blood, and within fifteen days it was passed without pain or inconvenience. A month after the operation the urine was quite clear, the digestive organs had regained their energy, and the patient was able to eat heartily without being inconvenienced. His stools became regular, and were passed easily; the seminal discharges diminished; his strength returned and allowed him to take long walks, and his sleep became sound and refreshing. In this state of convalescence M. G—— left Montpellier, about six weeks after the cauterization.

Five months afterwards, I received a letter from M. G—— in which he stated that his recovery had proceeded by degrees, and that his health had been excellent during three months, when he had eaten a large quantity of grapes, some of which were not ripe; a severe attack of indigestion resulted, after which his old symptoms returned, and strangely enough, he felt, during the emission of urine, a sensation in the prostatic portion of the urethra resembling that produced by the application of caustic. He had scarcely recovered from his relapse, when he a second time committed an error in diet, which brought on a more serious indigestion than the first, and was followed by an aggravation of all his former symptoms. In this condition M. G—— wrote for advice. Four months afterwards, I received another letter from him, stating, that before he had received my previous answer he had entirely recovered; but that, forgetful of the past, he had suffered from another indigestion, with another slight attack of his former symptoms. I insisted on the necessity of strict diet, and further recommended a trial of the sulphureous waters of the Pyrenees. As I have not since heard from this patient, I am warranted in supposing that his health is at length permanently established.

This case shows us the dangers which may arise from an imprudent compression of the urethral canal during the ejaculatory orgasm. Such attempts have been made for various reasons—sometimes in the hope of preventing a nocturnal pollution—and they are generally followed by the same result.

At the moment of emission a kind of tearing of the canal takes place; this is attended with acute pain, and, in the case before us, was followed by a mucous discharge, which continued nearly ten years.

The patient, as well as the different surgeons who attended him, regarded his discharge as spermatic, because it was increased by venereal excitement, and because the patient's virility constantly diminished at the same time that the general symptoms of spermatorrhœa were present. But the circumstances which preceded the discharge were sufficient to show that it arose from the mucous follicles, inflamed or irritated by a laceration at some point of the passage. Was it astonishing, then, that every excitement of the organs should have increased this discharge? The blennorrhagic character which it presented for some time proves, even still more certainly, that the discharge was not spermatic. The changes that took place in the

patient's health, and in his generative functions, are explained by the occurrence of diurnal pollutions, both during defecation and the emission of urine; and the occurrence of these diurnal pollutions after chronic inflammation of the urethra is easily explained, by referring to the tendency of irritation to extend from the prostatic mucous membrane to the adjacent tissues.

In consequence of this disposition, the urinary organs presented well-marked symptoms of chronic inflammation, and the state of these gives a good idea of what was going on in the spermatic organs.

We must conclude, then, that the constant discharge from the canal was only an ordinary blennorrhœa, and that the patient's impotence, and the derangement of his health, are to be attributed solely to the spermatic discharges which took place during defecation and the emission of urine.

I have attached considerable importance to the right understanding this fact, because attacks of blennorrhagia are often complicated with diurnal pollutions, and this frequent coincidence has caused the utmost confusion in the opinions given on the subject, since Aretæus first spoke of a constant seminal discharge. It is at once evident, that the semen being contained in distinct reservoirs cannot constantly run off like the secretion of the open mucous follicles. I shall examine this simple question more fully in a future chapter, but, as I proceed, I shall show, as opportunities occur, that the symptoms attributed to these constant discharges arise really from unsuspected pollutions happening during defecation and the emission of the urine.

Another result of this easy extension of irritation from the prostate to the adjacent mucous membrane in the case under consideration, was the chronic affection of the bladder, and probably also of the kidneys. I mention this circumstance here, to show how difficult all these complications render the diagnosis of diurnal pollutions. The urine contained an abundant lithic acid deposit, and was covered by an iridescent pellicle; it was also muddy from the presence of a large quanty of mucus, a thicker deposit occupying the lower portion of the fluid. The abundance of salts contained in the secretion arose from the irritation of the kidneys; the bladder and the prostate furnished the greater part of the other matters; but did the urine contain semen? I believe that neither chemical analysis, nor microscopical research, would have been able to decide this point.

The last drops of urine emitted were of the viscid consistence of a solution of gum or starch, and this matter could only be semen.

It is unfortunate that these complicated cases should be the most common, as well as the most serious. But of what importance to the practitioner is the existence of blennorrhagia, or the mixture of vesical mucus, of prostatic fluid, or of different salts, with the urine? It is not from one symptom only, that he should judge of the disease,

but from the whole. The most important point in these embarrassing cases, is to understand fully the cause and connection of such complications, in order to ascertain a means of cure. Happily, the same treatment is suited to all the symptoms, because they all depend on the same cause. In this case, for example, the cauterization put a stop at the same time to the blennorrhœa, the chronic affection of the bladder, and the diurnal pollutions—diseases that had existed nine or ten years.

I may remark, in passing, that the *curative* effects of cauterization did not show themselves, in this case, until a month had elapsed; and that from this time they progressed slowly, but steadily, so that the recovery was complete at the end of three months. This shows the impropriety of repeating the use of caustic without waiting to see the effects of the operation.

Two remarkable features in the case were, the influence exercised by the spermatorrhœa over the digestive organs, and the effect which disordered digestion produced on the genital organs. The stomach was the organ which first suffered from the masturbation; and which, afterwards, was chiefly affected by the spermatorrhœa; whilst, on the other hand, a violent indigestion much increased the severity of the symptoms; and at a later period, when the cure seemed perfectly established, four attacks of indigestion were followed by an equal number of more or less serious relapses, and by diurnal pollutions, and irritation of the bladder, with pain in the urethra, resembling that caused by cauterization. But I shall resume the consideration of this sympathy between the generative and digestive organs when speaking of the symptoms and treatment of spermatorrhœa.

The cases which I have related—few in number, but circumstantial and varied—are sufficient to give an idea of the principal abuses of which the generative organs are the seat, and of the manner in which such abuses bring about more or less serious and resisting spermatorrhœa. Of all the causes capable of producing this unfortunate result, none is, at present, more common. I ought, perhaps, only to consider here the mode by which abuses act in producing spermatorrhœa, such being the object of this chapter; but the complicated chain of circumstances attaching to the subject, forbids this; and I must ascend by degrees to the causes of the abuses, in order that they may be avoided, or, at least, that their danger may be diminished. Of such an occurrence it is especially of importance to *prevent* the evil, inasmuch as, when once established, it is occasionally without remedy, and generally leaves its traces during the rest of the patient's life. There is, perhaps, no single question of more importance to the happiness of families, or to the welfare of society, than this. In order, then, to examine the numerous facts I have collected in their proper order, I shall first speak briefly of the causes of abuse.

CAUSES OF ABUSE.—These may be divided into two classes:

First, causes inherent in man, or those acting from within; these may be considered as predisposing causes; secondly, external causes, or those arising from accidental circumstances; and these may be considered as exciting causes.

Internal or Predisposing Causes.—Of the first class of causes, the most important is undoubtedly due to the human organization. In the lower animals the male and female live together, as if there were no difference of sex, except during the short rutting season. This period passed, perfect calm is restored. In the human species, the secretion of semen constantly goes on, from the time of maturity until extreme old age; the secretion may indeed be increased or diminished by excitement or repose of the organs, but, during this period, it is never entirely suspended as long as the secreting tissues are healthy. Still, this universal and important fact has been much neglected: its application is evident.

The form of the superior extremities in the human race also possesses considerable influence in predisposing to abuse. Many animals are always fit for fecundation—spermatozoa being found in them at all seasons. They are, however, unable to excite seminal emissions without the aid of the female. Other animals, again, which, during the rutting season, show an almost incredible amount of erotic fury, are still unable, by their own actions, to cause spermatic discharge; their form alone prevents this, for they often attempt it, and a few even succeed. It is well known with what fury apes are addicted to masturbation; the ape being, of all the lower animals, the nearest to man in form.

To this original disposition, more perfect in man than in any other animal, must be added the influence of pathological causes. I have already spoken of the irritation caused by ascarides in the rectum, of the erections they excite, and of the abuses induced by them. We shall see, by and by, that herpetic eruptions on the penis and prepuce may produce the same effects, and I shall show, also, that an accumulation of sebaceous matter between the prepuce and glans may have a similar influence. I must also mention irritation of the cerebellum, as inducing serious abuses, of which I shall give cases in their proper place.

There is even some connection between the organs of generation and distant diseases; for Dr. Desportes has mentioned a kind of angina, which is frequently preceded by a considerable increase in the venereal desires, and consequently by a disposition to all kinds of abuses.

Pulmonary phthisis, also, is often attended by considerable venereal excitement. It may as well, then, be at once admitted, that causes predisposing to masturbation exist in the human organization itself.

External or Exciting Causes.—Of these, I shall lay particular stress on such as act before puberty, because they have hitherto attracted very little attention. The most anxious parents believe that there is

no occasion to watch over the actions of their children with regard to their genital organs, previously to the epoch of puberty; and few, even of our own profession, are led to suspect bad habits before that period. This is a fatal error, against which it is necessary to be on our guard: numerous causes may give rise to abuses, at a much earlier period—infancy being hardly exempt from them. I saw one unfortunate child, which, while still at the breast, nearly fell a victim to the stupidity of its nurse. She had remarked, that handling the genital organs appeased its cries, and induced sleep more easily than any other means, and she repeated these manœuvres, without noticing that the sleep was preceded by spasmodic movements. These increased, and took on a convulsive character, and the child was losing flesh rapidly, and becoming daily more irritable, when I was consulted. At first I attributed the disorder to worms, teething, &c., but my attention being attracted by certain signs, I examined the genital organs, and found the penis erect. I was soon told all, for the nurse had no idea she was doing wrong. It was necessary to dismiss her, for her presence alone sufficed to recall to the child's memory sensations which had already become a habit. Time and strict watching were required before these early impressions were entirely effaced. Dr. Deslandes relates two similar cases, and Professor Hallè, in his lectures on hygiene, used to mention many such; Chaussier, too, has told me of several that came under his notice; and both these observers believed such cases to be less rare than they are usually considered. These manœuvres quiet the children very readily, and nurses always endeavor to obtain quiet at any sacrifice; they have no idea of the consequences of their conduct. At a later period, children are exposed to the same dangers, on the part of the servants having charge of them; and in these cases, it is not of ignorance that the attendants are to be accused. Many patients have consulted me, who owed their disorders to this cause; and in case 61, I have shown the influence which such early abuse exerts on after life. In some children there is a kind of precocity of sexual instinct, which leads to very serious results. In these, it often happens that the sexual instinct arises long before puberty; such children manifest an instinctive attraction towards the female sex, which they show by constantly spying after their nurses, chambermaids, &c. These freaks of children are usually laughed at; but if they were regarded with more attention, it would become evident that the sexual impulse has been already awakened. Rousseau, in his Confessions, has well described the influence which early sexual impulse exercised on his whole life, and I have received numerous confidences of the same nature, which, however, it would be of no service to relate here. One case, however, is so remarkable, that an abstract of it may be instructive. M. D——, the son of a distinguished physician, between five and six years of age, was one day in summer in the room of a dressmaker who lived in his family; this girl, thinking that she might safely put herself at her ease before such a child, threw herself on her

bed, almost without clothing. The little D—— had followed all her motions, and regarded her figure with a greedy eye. He approached her on the bed, as if to sleep, but he soon became so bold in his behavior, that after having laughed at him for some time, the girl was obliged to put him out of the room. This girl's simple imprudence produced such an impression on the child, that when he consulted me, forty years afterwards, he had not forgotten a single circumstance connected with it.

The continual occupation of his mind by lascivious ideas did not produce any immediate effect, but about the age of eight, the most insignificant occurrence served to turn his recollections to his destruction. Having mounted one day on one of the movable frames which are used for brushing coats, he slid down the stem which supports the transverse bar, and the friction occasioned caused him to experience an agreeable sensation in his genital organs. He hastened to remount, and to slide down in the same manner, until the repetition of these frictions produced effects which he had been far from anticipating. This discovery, added to the ideas constantly before him, gave rise to the most extraordinary abuses, and after a time, to excessive masturbation.

I need not mention all the miseries which followed this fatal passion; it will be sufficient for me to relate the means to which he had recourse for its correction. He slept on a very hard bed without a shirt, in order to avoid all friction, and covered by a single coverlet sustained by a cradle; his arms were raised, and crossed over his head; a servant remained by his side during the night, with orders to awake him if he changed his position. When he got up, he put on, next his skin, a shirt of mail weighing twenty-two pounds, resembling those worn by the knights of old, except that it had no sleeves, and that it was attached, at its lower extremity, to a basin, fitted to receive the genital organs, and provided with openings for the thighs. This shirt of mail was open in front, in order to be easily put on and taken off; and when on, it was laced up with a steel chain, a padlock being attached to the end, the key of which was kept by the servant, who had orders not to give it up on any pretence whatsoever. Guarded by the silver basin, the genital organs were completely removed from the touch, a little opening only being left for the discharge of the urine. As a still greater precaution, the patient had caused four sharp points to be fixed in front of this case, in order directly to oppose any erection. This apparatus he continued to wear for nine or ten years, although it frequently caused inflammation of the testicles and spermatic cord, by its pressure. Notwithstanding all these precautions, the patient's moral and physical condition were deplorable, which led me to suspect the presence of diurnal pollutions.

I should observe, that in all the cases of which I have just spoken, the children were five or six years of age—at most eight—that they did not show signs of puberty for several years afterwards, and that

they were not exposed to the influence of bad example. Their sexual ideas were, therefore, spontaneously developed, several years before the development of the genital organs. The same precocity is often observed in children of the other sex. Of this I shall treat more fully hereafter; at present, I shall merely call attention to the case related by Parent du Chatelet,[1] of a little girl, who, from the age of four years, gave herself up to the most unbridled abuses.

From these facts an important scientific conclusion may be deduced, viz., that in many children the genital instinct shows itself with much energy many years before the age of puberty.

A no less important practical precaution presents itself, viz., that the age of puberty should not be waited for, in order to surround children with prudent circumspection, and to prevent their curiosity from being gratified.

Many parents are remarkably careless on the latter point; they permit children of both sexes to play together, promiscuously, for hours, without any surveillance, provided that they are removed from all danger of accident, and that their noise is not annoying. The confidence of many parents, also in the ignorance of their children, makes them careless of the marks of familiarity which are given to each other in their presence; children's sleep is not always so real or so sound as it seems.

It is sufficient to point out these facts; every person can deduce the conclusions; and now I hasten to consider a question, the gravity of which has been allowed by all who have written respecting masturbation—I mean the influence of example in educational establishments.

If I may judge from my own observations, out of ten persons whose health has been deranged immediately or remotely from the effects of masturbation, nine has contracted the habit at school. All that I have read on the subject has led me to conclude that this proportion is not exaggerated. A child brought up in the bosom of his family is, it is true, surrounded by many causes sufficient to arouse his curiosity and excite his imagination; but such causes act accidentally, and in an isolated manner; they only produce a serious effect on a few ardent imaginations; a thousand circumstances may remove the attention from them. At school it is admitted that such causes do not exist, but there are others, less numerous and less varied, but which operate in a much more active and continuous manner; the effects of these are direct, and almost inevitable. The child finds, on his first arrival, a focus of contagion, which soon spreads itself around him; the vice is established endemically, and is transmitted from the old pupils to those newly arriving. If a few privileged individuals escape being initiated, they are only such as do not experience any gratification. But their time will come at a later period;

[1] Annales d'Hygiène Publique et de Médecine Légale, tom. vii. Ire Partie, 1832, page 173.

when the passions make themselves felt, the same circumstances will be presented to the mind, under a less disgusting aspect. I shall not enter into details on this subject; but from all that has come to my knowledge, from various and direct sources of information, I do not hesitate to affirm, that nowhere are obscene books circulated more freely and boldly, than in educational establishments; that the origin of the vice is not solely in the scholars, but also in the ushers and servants; that the abuses are not always confined to masturbation; and that they are not always propagated by example or persuasion, but are sometimes enforced by threats and violence. Let it not be thought that I am now speaking of rare and exceptional cases, or that I exaggerate;[1] I possess multiplied and convincing proofs of my assertions. I would not, either, that I should be misunderstood. I am far from denying the advantages of education in a public school; and I am ready to admit that the competition among a number of children produces emulation, forms the future character, early shows each his own value, and lays the foundation of friendships which endure through life.[2]

A too sedentary life is injurious at all ages, especially in childhood, when there exists such constant desire for exercise and change. Gymnastics, therefore, should on this account alone occupy an important position in the system of education; but they must be viewed under a much more serious aspect. Nothing can prevent the genital organs, at the time of their development, from reacting on the economy and giving rise to new sensations and ideas. It is impossible to prevent the attention from being attracted by the impressions caused by these organs; impossible to restrain the imagination and to prevent it from frequently dwelling on such impressions. The slightest circumstance may, in such a case, lead to a fatal discovery, even if the information be not transmitted directly, and enforced by example. How are such discoveries to be prevented; or rather, how are their results to be guarded against? Study gives us no aid here; indeed, the continually sitting necessarily heats the organs already too excited. The eyes may be fixed on the book, the ears may appear to listen to the master, but who can guard against the wandering of the imagination? At night it is still worse; no surveillance can prevent this. There exists only one means capable of counteracting it, and

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[1] M. Lallemand, of course, speaks of the colleges and private schools in France. I regret to say that his statements apply with nearly the whole of their force to the schools of England. Vice is common in them; neglect of physical education and the contracted nature of the studies to which pupils are confined in our classical seminaries —the understanding being unappealed to, and the reasoning faculties unexercised—the natural sciences neglected, and the whole of the pupil's life until the age of seventeen employed in the study of the dead languages—are matters of vital importance to which society has only recently begun to direct its attention.—[H. J. McD.]

[2] M. Lallemand enters very fully on the subject of education as conducted in France, and well exposes the errors of the system. Most of his remarks apply to our own educational system; yet, as the subject is not strictly medical, and as, moreover, M. Lallemand has treated it at considerable length, I think it best to refer those of my readers who may wish information on it to the original work, vol. i, page 425.—[H. J. McD.]

that is, *muscular exercise carried so far as to induce fatigue.* This alone is able to deaden the susceptibility of the newly acting organs which excite the economy; exercise alone, by requiring matter for the repair of the muscular waste it causes, withdraws a stimulus from the genital organs, and induces sound and refreshing sleep.

Varieties of Abuse.—I think it will be useful for me to give a few details, respecting the different kinds of abuse which have come under my notice, and of which I have seen the hurtful influence on the genital organs. I shall omit all such remarks as have not a strictly practical bearing.

We have already seen the dangers to which compression of the urethra, to prevent the discharge of semen during ejaculation, may give rise (case thirty-five). In the case I have related, it seems likely that a rupture took place in the mucous membrane, because the patient felt, at the instant, an acute pain, and the following day a discharge commenced, which continued until the application of the nitrate of silver. Soon after the commencement of the discharge, involuntary seminal emissions occurred, attended with serious symptoms. It was immediately behind the glans that this patient compressed the urethra, and it is quite conceivable that the sudden and violent distension of the canal might cause a tear in the mucous membrane. But this is not always the case; one of my patients writes as follows: "At the age of fourteen I practised masturbation three or four times a week, and sometimes frequently during the day. In order to prevent the discharge of semen, I compressed the root of the penis firmly. Nothing escaped at the time, but I soon observed that the semen was discharged with my urine, the first time I passed it. I followed this practice for about two years."

Diurnal pollutions soon appeared, and grew more and more serious. The remainder of the case presents nothing which is not met with in all cases of spermatorrhœa. What I wish to call attention to here is, that the compression was made close to the orifice of the ejaculatory ducts, and that the patient thought at first that his manœuvres were not followed by any loss of semen, although he at length discovered the contrary. Fournier and Bègin report a similar case.[1] It was that of a young man who, at the moment of ejaculation, compressed the most remote parts of the urethra, so that not a single drop of semen could escape. Yet the result was the same as in ordinary cases. Notwithstanding his precautions, his strength diminished, and his disorder made just as rapid progress as if the seminal emission had been perfect.

The following is even a more remarkable case. I shall allow the patient to speak for himself: "I am thirty-two years of age, and I have had nocturnal pollutions from the age of fourteen; I have also suffered from discharges while at stool, for ten years. The cause of these pollutions cannot be referred to masturbation, for I have not

[1] Dictionnaire des Sciences Médicales, art. Masturbation, page 125.

practised it twenty times during my whole life. The pollutions are rather owing to reading obscene books, for they commenced soon after. At first, ejaculation was preceded by dreams, and accompanied by active erections and acute sensations, the semen being ejaculated with force. I tried various means to prevent these discharges. I have slept, during whole nights, with my penis dipped in cold water, or compressed between two pieces of wood formed on purpose. I have tried to keep myself awake in order to prevent an emission, because when I succeeded, the following day I felt stronger, but after two or three nights, sleep always overpowered me; I often awoke, however, in sufficient time to prevent the catastrophe of my dreams, but frequently it was too late; on such occasions, to delay the discharge or render it less copious, I compressed the base of the penis firmly; but it seems that these compressions greatly injured the parts, without preventing or diminishing the discharge, which took place inwardly, as I have often been convinced by inspecting my urine. From that period the pollutions have no longer been preceded by dreams; and the sensations have left me, so that I am not now aroused from sleep. My erections diminished, and have even, latterly, ceased entirely. For three years erections have rarely accompanied the emissions; when they do occur I am always less fatigued.

"There is one thing which I have not been able to understand, and which will, without doubt, appear absurd to you; it is, that I experience pollutions without erection, sensation, or the escape of semen by the urethra. I believe that the discharge passes in a retrograde direction, and becomes mixed with urine, because, the next morning, I find little globules, a cloud and filaments, in that fluid, just as when I formerly prevented ejaculation by compressing the root of the penis; whilst my urine contains nothing during the day, or the next morning when I have not experienced these pollutions. On waking, I am perfectly aware of what has occurred, by the sweat that covers my face, the fatigue I feel in all my limbs, the headache and dazzling that affect me, the dark circles that surround my eyes, &c. I have tried cold and iced applications, with slight benefit. For some time the pollutions were rarer, and were accompanied with erection and sensation; but soon they became as before, and emission did not take place outwardly. These internal pollutions have always been the most weakening Whenever I succeed in passing the night without sleep, my urine is transparent in the morning, and I feel strong. After several nights without sleep, I generally have an energetic emission, which fatigues me little: but soon those without erection and without external discharge return, and then I always feel worn out on waking."

This patient's medical attendant would not believe in the possibility of pollution without external discharge; but it seems clear that the patient really had internal emission, without perceptible discharge; that is to say, that the semen passed into the bladder, and

was discharged with the urine, as had occurred before when ejaculation was prevented by pressure on the perineum. This compression was made in front of the ejaculatory canals, and was very often repeated. It seems, therefore, likely that it was the frequent repetition of these manœuvres that, at length, caused the spontaneous passage of the semen into the bladder. But this is a question to which I shall have occasion to return.

Yet all these manœuvres scarcely differ from the various means recommended by some surgeons for preventing nocturnal pollutions; and we may thus perceive how little confidence is to be placed in the instruments invented for that purpose, and the inconveniences to which they may give rise. It seems likely that the dangers would be nearly the same, in whatever part of the penis the compression is made; except that if there be sufficient space in the urethra, between the point compressed and the ejaculatory ducts, to contain all the semen, it would be discharged directly the compression is removed. When on the other hand, the compression is made immediately in front of the orifice of the ejaculatory ducts, the semen flows back, at least, in great measure, so as to induce the patient to believe that the discharge has been stopped, or at all events, in great measure diminished, and to induce a degree of security which leads to further abuses.

But to return to the description of the abuses which have been admitted to me by so many other patients.

One of these informed me, that about the period of puberty, while hanging one day by his arms, he experienced an energetic erection accompanied with pleasure, and that by his efforts to raise his body, he caused an abundant seminal emission. This was the first. The next day he repeated the same motions, and noticed the same phenomena, and from that time he knew no other pleasure. From the principles which had been early instilled into him, he would have thought himself degraded by connection with a female, or by the least mutual contact with his genital organs; but his conscience was quiet with regard to these practices, because they had not been forbidden him. He continued, therefore, to hang by the hands, from the furniture, doors, &c., without being suspected by any one, and fell, by degrees, into a state of debility and wasting equal to those caused by the most unbridled masturbation. After a time, from weakness, the patient lost the power of hanging, and his voluntary emissions ceased; but they were soon replaced by nocturnal emissions, which were very difficult of cure.

The following are a few passages from a letter I have recently received. "Being of an ardent temperament, I abused myself, from the age of eight years, by practising masturbation, or rather, by still more hurtful manœuvres. By compressing the penis between my legs, or against the seat on which I was sitting, I produced excitement, which was commonly followed by the discharge of a few drops of a viscid and transparent fluid. This practice I repeated several

times a day, up to the age of sixteen, when I ceased entirely, having been frightened by the discharge of nearly pure blood, which occurred several times. From this time I only sought natural enjoyments, but I found it impossible to obtain a complete erection. This state was attributed to weakness, and was combated by tonics, stimulants, and even irritants of all kinds, which have done me much injury. I used, also, cold bathing and cold lotions."

I have seen an officer of high rank who had fallen into the same condition from the practice of similar manœuvres. He experienced his first sensation against the leg of a table, at the early age of ten years, and continued for several years to employ the same means. I have already related the case of another child, who allowed himself to slide down a wooden pole, and the deplorable influence which this circumstance exercised on the remainder of his life.

In a few of my patients, horse exercise caused the first seminal emissions. I shall relate, by and by, the case of one of these who knew scarcely any other pleasure, and who became quite impotent at the age when virility is generally greatest. The extreme susceptibility which the genital organs manifest at the period of puberty should prevent horse exercise from being commenced about this period, as is usually done. It should be begun a few years earlier, or a few years later.

I have already spoken of the danger of allowing children to sleep on the abdomen (see case thirty-three); I should add, that many of my patients thus contracted habits which ruined their health. Independently of the inconveniences to respiration, digestion, &c., which arise in this position, erections are favored. The least friction awakens new sensations, and, once on the track, progress is soon made. Sometimes recollections have caused the choice of this position; of this I have related a remarkable example (see case thirty-four); at other times, scruples early instilled by a sage foresight, but which the violence of the impulse has at length succeeded in eluding, have induced it. Thus, I have been told respecting one of my patients, that he would suffer death rather than defile himself by touching the genital organs, yet, for five or six years, he seldom passed a night without working his own destruction while lying on his abdomen. It is not necessary for me to enter into a description of the other means by which patients have sought to satisfy their genital impulses, without transgressing the religious and moral principles which had been taught them from infancy. Suffice it to say, that if they have succeeded in satisfying their consciences, they have not succeeded in preserving their health.

But to abstain from all direct action on the genital organs is not always sufficient to preserve the patient from serious disorders. A purely nervous excitement, awakened by the other senses, or directly produced by erotic ideas, may bring the same results as the worst abuses if prolonged or repeated erections are caused by it. The following are a few such examples:

A student, aged twenty-two, born in Switzerland, of sanguine temperament, and great muscular power, fell into the most complete state of impotence, after having been for some time exposed to ungratified excitement. He had never practised any solitary vice; but violent and prolonged erections came on, and were produced during the day by the influence of the memory. These erections caused abundant and frequent nocturnal pollutions. Absence put an end to the excitement. The nocturnal pollutions diminished by degrees, and at length ceased entirely. Yet this patient fell into the same state of impotence as if he had committed the greatest excesses in masturbation, and at the same time preserved the appearances of health and strength. The cause of his impotence was evident on examining his urine, and causing him to watch for diurnal pollutions while at stool, but the cure of these pollutions was only perfect after two years' treatment.

I have seen another case of the same kind in a young man who passed from a state of habitual priapism to one of absolute impotence, without any other cause than violent excitement of the genital organs by an ardent attachment; he had never given way to excess of any kind. I shall record by and by another case of the same kind. I also had under my care an English officer, who left Calcutta in perfect health and arrived in London completely impotent, after having suffered during two months from almost constant erections, excited by the presence of a female on board ship. This state, so opposed to that which had preceded it, continued for two years, the whole of this time not being marked by the least sign of virility. It is scarcely necessary to add, that this state was produced by diurnal pollutions.

I related a case, a few pages back (page 132), in which nocturnal pollutions were caused by reading an obscene book: I have seen a multitude of cases of this nature. From these I conclude, that in certain very excitable individuals, reading such works, the sight of voluptuous images, lascivious conversation, in a word, all things that can excite or keep up irritation in the spermatic organs, are capable of producing the same effects as actual abuse, even when the will is sufficiently powerful to prevent the thoughts from leading to the acts. On the other hand an abundant secretion of semen with importunate erections, irritation of the urethra and prostate, always results under such circumstances; and these favor the occurrence of nocturnal and diurnal pollutions as serious, and perhaps more difficult of cure than those produced by masturbation, because it is impossible to act directly on the memory or the imagination.

It is not sufficient then to prevent all material action on the genital organs; it is necessary also to prevent all erotic excitement of the senses and all concentration of the ideas on lascivious objects. Fortune's favors are so distributed that numbers live in absolute indolence without being blamed by the world, because they demand nothing of any one. This inaction produces results, the only remedy

for which that I am aware of is daily fatigue of the body by various kinds of exercise.

Effects of Abuses.—The effects produced by the different kinds of abuse of which I have been treating, vary according to the age of the patient, his idiosyncrasy and the different organs chiefly affected. I have laid particular stress on the causes which may lead to bad habits some time before puberty; I must now consider their effects during this period.

The symptoms arising from masturbation in the child have been always hitherto confounded with those produced in the adult; they present certain distinctive characters, however, which require our consideration. However young they may be, children lose flesh, and become pale, irritable, morose, and passionate; their sleep is short, disturbed, and broken. They fall into a state of marasm, and at length die, if not prevented from pursuing their courses. Examples of such a termination are so well known that I forbear to quote them.

Analogous symptoms are shown in the adult—follow nearly the same course—and may lead to the same termination; but in infancy more or less severe nervous symptoms are superadded, which are not found in those who have commenced the practice after puberty, or which at least are not in the latter case manifested to the same extent. Such are spasms and partial or general convulsions, eclampsia, epilepsy, and paralysis, accompanied with contraction of the limbs: these phenomena were present in all the children whose cases I have noticed, and numerous similar facts have been published by different authors.

Contractions of the limbs have been well investigated by Dr. Guersent,[1] and he notices that they especially affect such children as are lank, unhealthy-looking, nervous, and worn out by bad habits.

The following case is sufficiently remarkable. In 1824 a woman brought her son, aged eight, to the hospital St. Eloi; he had lost the use of his lower extremities for some months. The limbs were fixed, and drawn together, and all the muscles contracted. The child was extremely thin, and his intellect was much disturbed. Masturbation, the cause of all these disorders, had only been discovered by his mother a few weeks before she placed him under my care, but she had used every means she could devise to prevent it, without effect. After two or three trials I found it was of no use trusting to the strait-waistcoats and other means usally employed, and accordingly I determined to pass a gum-elastic catheter into the bladder, and to fix it so that the patient should be unable to withdraw it. The presence of the foreign body excited inflammation of the urethra, as I expected: when this occurred, I withdrew the instrument, but replaced it as soon as the inflammation had subsided. I kept up, in this manner, a constant state of inflammation for a fort-

[1] Gazette Médicale de Paris, Février, 1842.

night, which rendered the parts so painful that the child was unable to touch them. This treatment produced more decisive success than I had ventured to hope; within eight days the lower extremities had regained sufficient strength and mobility to allow the child to get up, and in another fortnight he was able to run about the wards. I then sent him away, threatening him with a return of the same treatment if he relapsed. The pain caused by the catheter seemed to have removed all the other impressions, for his health continued good, and growth followed its ordinary course.

I have since employed the same means in many cases, with just as much success, and I think it more sure than any other, because it is impossible to rely on the patient's will, or on the assiduity of those who are appointed to watch over him. In children, too, it leaves an impression on the memory, which is often sufficient to destroy the empire of habit, and to prevent a return to the former manœuvres.

But to resume the consideration of the symptoms observed in children. In childhood, seminal emissions are never experienced, but nevertheless the patients fall into a state of marasm, to which some even succumb. These effects, like those observed under the same circumstances in the female, have induced some authors to leave out of their consideration the seminal discharges which are produced by the same acts at a later period. They have attributed the debility which follows all abundant discharges of semen to the nervous excitement and convulsive motions, which usually accompany the discharge. The accidents observed before puberty are evidently only due to the effects on the nervous system; and, the same sensation accompanying *voluntary* emissions after puberty, it is natural to suppose that the nervous system plays as active a part then, as in childhood. I willingly admit the importance of this nervous exhaustion, in whatever manner it may be supposed to operate; and supposing, even, that its action on the economy is just as important as during childhood (which is not the case, as I shall presently show), this is no reason why the actual discharges should not be taken into account, seeing that they greatly modify the character and consequences of the nervous disturbance.

I have already noticed that the symptoms produced by abuses during childhood present a spasmodic character; this character, without doubt, is derived from the predominance of the nervous system at that period, rendering children so alive to external impressions. This excessive sensibility also explains the great disorder of the economy which children suffer from such manœuvres. Deslandes[1] relates a case, showing that any action of the same kind may produce the same effects at this early age. He says: "An observer worthy of credit, Dr. Nurambeau, has communicated to me the case of a child who procured himself similar sensations by drawing out the navel. His health became much disordered from the effects of this strange

[1] De l'Onanisme et des autres abus vénériens, page 462.

habit, which had such a power over him, that coercive measures were required for its correction. It is worthy of remark that this patient showed neither erection, nor any other phenomenon of the generative organs, which at all referred to sexual intercourse." The organs of generation, therefore, had no influence in producing the sensations experienced by this child; but the repeated titillation of a very sensitive part produced the same disorder as masturbation.

It was proved in the debates on a recent criminal trial that death may be caused by prolonged tickling the sole of the foot. Nervous disorder, arising from such proceedings, may then be carried so far as to cause death, and from this may be imagined the effects of the multiplied convulsive shocks which irritable children produce, by acting on the most sensitive organs in the economy.

Every excessive loss of semen also, even when unaccompanied by sensation, is followed by debility, and this may be carried so far as to cause death; I have related several such cases in the beginning of this work.

There exist, then, two distinct causes: nervous disturbance and debilitating discharges, and both these act at once, when seminal emissions are produced by the influence of the will. It is not to be wondered at, that both these causes should produce nearly the same symptoms, because they both weaken the economy. The action of the first on the nervous system is direct and immediate, and the symptoms that result from it are of a more spasmodic character. It is very easy to confound these two causes when they act simultaneously; but I have just shown that they can be considered separately. The following reason shows the importance of so doing.

Whenever we succeed in entirely putting a stop to the habits of abuse in children, we may make sure of obtaining their return to health, and that very quickly. This I have remarked in all the cases of children that have come under my care. I do not mean to infer that the disorder done to nutrition during the progress of development is easily repaired, but that the acute symptoms rapidly disappear, and that all the functions are quickly re-established. If the effects produced are active and serious they cease very rapidly, as soon as the cause is removed, and return to health becomes certain. Unfortunately, matters do not follow so simple a course after puberty.

What I have just said respecting children, applies equally to females: this is easily shown by examining the cases in which excision of the clitoris has been performed for the cure of nymphomania. The state of these unfortunates must have been deplorable indeed, to justify the resort to such means; yet they recovered very rapidly.

Why in these two classes of cases, is the cure certain and the return to health rapid, as soon as the vice has been mastered? It is that the cause of the weakness immediately ceases to act on the economy. Why is it that so many men continue to waste away after they have entirely left off their habits of abuse? It is because

diurnal pollutions have commenced, which are even more debilitating than the abuses which gave rise to them.

Dr. Deslandes and many others have discovered that there is a great difference in the conditions of persons who have practised masturbation for some time, and then renounced it; but they have not sought the explanation of this fact. It is, however, very important to know why some are cured rapidly and completely, while others continued to suffer and languish during the remainder of their lives. The symptoms experienced by the latter are those produced by diurnal pollutions.

But if we inquire why some should be affected by diurnal pollutions while others are exempt, we discover that we have been comparing two very different classes of patients. The one class conquered their bad habits by the force of their will; the other class were compelled to renounce them by impotence. The former resisted their desires while they were yet active; they required much perseverance and moral energy in order to succeed; the latter only left off as they were less tempted—the progressive decrease in their erections being due to the presence of undiscovered diurnal pollutions.

Such patients deceive themselves as to the cause of their changing their habits, and are astonished at not finding any benefit arise from such change. Some of them even remark to their medical attendants that it is after they have left off their malpractices that their health has become altered.

All these circumstances, embarrassing at first sight, are easily explained on a little reflection. At first the genital organs are healthy; the constitution is uninjured; no seminal emissions occur except those that are induced voluntarily; and the activity of the digestive organs permits a rapid repair of the losses. But as soon as irritation is set up in the spermatic organs, a large quantity of semen is secreted and escapes every day, and several times a day, without the patient's knowledge; the digestion is disordered; the erections and voluptuous sensations diminish, because the semen is less perfectly formed; the provocatives are therefore weakened by degrees, and the patient renounces, without difficulty, habits which only inspire him with disgust. He wonders that his health still continues to grow worse, for he has not discovered that he passes daily, by often repeated evacuations, more semen than he formerly passed in a perceptible manner, and he does not take into account the difficulty felt by his economy of repairing these frequent discharges.

We must not, then, confound those whose virility leaves them, with those whom the power of their will causes to recover, and we must not be surprised at seeing the alteration in the habits of each followed by very different consequences.

In order to make the distinctive characters of these two positions clear, I have laid stress on their most striking points, but there are numerous slight shades of distinction, which I have not mentioned. For instance, in some cases, the two classes of phenomena occur

successively in a very distinct manner, at very near periods. Many patients having corrected themselves once, find their health promptly re-established. But when, after recovering their strength, they have relapsed into their former habits, on renouncing them a second time they obtain no benefit. These different results under apparently similar circumstances can only be explained by the occurrence of diurnal pollutions in consequence of the return to the habits of abuse.

Case thirty-one is a clear and perfect proof of the correctness of this explanation; the patient recovered twice after having twice conquered his passion, but the third time he only gave it up through disgust, and his health continued to deteriorate until cauterization arrested the diurnal pollutions from which he suffered.

There are many circumstances which interfere with the good resolutions of those addicted to masturbation. After a few days of absolute continence, attained with much difficulty, they frequently suffer from nocturnal pollutions, the more frequent and the more abundant in proportion as the spermatic organs have been much irritated: the patients always feel more debilitated by these involuntary discharges, than by those which they previously excited. Instead of combating these pollutions by suitable means, or after having employed one or two plans unsuccessfully, they think they will be able to diminish the evil by recurring to their former habits at distant intervals, and they thus relapse, increasing still more the irritation of the parts. Soon after diurnal pollutions commence, and rapidly produce their effects, but as these are not discovered, the patients rejoice to find the nocturnal discharges gradually disappearing. But their health daily grows worse: this they cannot comprehend, and are frequently led to imagine that they have mistaken the cause of their disorder.

Sexual intercourse has been generally recommended in such cases, and sometimes with advantage; but this means is like all others, the patient must be able to employ it, and even then it is necessary to distinguish the circumstances in which it is hurtful, from those in which it is advantageous. Very often the patients find intercourse impossible; while, on the other hand, many of those who have been able to accomplish the act, have had an exacerbation of their symptoms as the result.

Whence arises this difference of result, in individuals placed in apparently similar circumstances? Some have diurnal pollutions kept up by the irritation of the organs, while others are exempt from them.

All authors consider masturbation to be one of the most frequent causes of hypochondriasis, but the reason why this affection continues so long after the patients have left off the habit, has not been hitherto explained. If it only arose, as has been supposed, from weakness of the system, or disorder of the nervous functions, how is it that the various modes of treatment employed—the travelling, exercise, and amusements of every kind, should produce no effects?

In every case of this nature that I have met with, I have found the hypochondriasis kept up by diurnal pollutions, which were unsuspected by most of the patients; the intellectual and moral faculties, together with the digestion, sleep, &c., improved in such patients in proportion as the pollutions diminished, and the return to health was complete as soon as they had entirely disappeared. The thirty-second case is a remarkable instance of this kind, and shows the strange monomania which accompanied hypochondriasis, as well as the rapidly beneficial effects derived from cauterization of the urethra. Many authors have noticed the indifference which persons addicted to masturbation show towards the opposite sex. This sentiment is, indeed, very common in those who have carried their abuses to a great extent; but I do not think it arises, as has been stated, from the long habit of solitary vice: at all events, I can assign a more direct cause for this indifference, viz., the *relative* impotence of the patients; I say *relative* impotence, because they possess sufficient power of erection to permit the practice of masturbation, but not enough to admit of sexual intercourse; and such patients seldom manifest any dislike to the opposite sex until they have experienced several disappointments, the remembrance of which constantly haunts them. Their views change immediately that the diurnal pollutions which kept up this impotence are arrested.

Effects of Temperament, Idiosyncrasy, &c.—The effects of abuses vary much in their characters and intensity according to the individuals attacked. Some persons are uninjured by the most unbridled abuses, even when long continued, whilst others are very quickly disordered by slight abuse. In this respect I have witnessed very opposite cases with every variety of intermediate degree.

Temperament seems to have little influence in producing this inequality of resistance. Strength or feebleness of constitution is not of so much importance as might be supposed. The very unequal power of the genital organs affords the only satisfactory explanation. I shall refer to this point more fully when treating of venereal excesses.

Idiosyncrasy: in the same individual all the organs are not equally affected by abuse; this is shown by the frequent predominance of certain symptoms which give to the case a particular appearance, and are apt to lead to grave errors of diagnosis and treatment. I have related many cases in which this occurred. The presence of special symptoms, whenever a general debilitating cause acts on the economy, arises from inequality of development, or of activity, existing in certain organs. I shall, at present, only consider the direct and immediate action of abuses on the genital organs, so as to show the mode in which they produce nocturnal and diurnal pollutions.

Urethral discharges.—Attacks of blennorrhagia are more frequent in persons addicted to masturbation, than is generally supposed. Cases of this kind have frequently fallen under my notice; in the

greater number of these patients the discharge was small in quantity, viscid, and nearly transparent, or very slightly colored. It scarcely differed in appearance from the prostatic secretion. But in many patients the discharge was abundant, more or less colored, and attended with pain in the urethra, especially during the passage of urine. Several suffered from all the symptoms of a contagious blennorrhagia; in others the same symptoms recurred two or three times, and in one patient the discharge reappeared as many as five times, always from the same cause. It is worthy of notice, that there existed a kind of intermittence in the habits of the last-mentioned patients; after having been moderate or even quite continent for some time, they recommenced masturbation with fury, and the urethral discharges supervened on these relapses. Two of my other patients suffered from stricture of the urethra after one of these attacks of blennorrhagia, just as occurs after contagious blennorrhagia, and in one of these cases, the stricture was very tight and very difficult of cure.

I should remark, that I am now speaking of patients who had never had sexual intercourse, and that I leave out of the question such as had suffered from cutaneous affections, in which the urethral mucous membrane might have participated. I must add that thirteen of such patients had not reached the age of puberty when the discharges occurred.

These discharges not having been excited by any virus or by any constitutional disposition, must be referred to the effects of masturbation. Many of them having occurred before the age of puberty, it is evident that they could not consist of semen.

Prostatitis.—Several of my patients suffered from retention of urine after the most frightful abuses; and it was necessary to relieve some of them with the catheter. In one patient an abscess formed in the prostate, and discharged through the perineum.

Cystitis.—I have related many cases of acute and chronic cystitis of which masturbation was the sole cause.

Emissions of Blood.—Some of my patients had carried their passion so far as to provoke emissions of pure blood, or of semen mixed with blood. Authors contain many such cases, which show that the pathological condition of the urethra has extended itself to the lining of the seminal vesicles. Other patients suffered from more or less severe attacks of hæmaturia; many experienced irritation of the bladder and kidneys, attended with an abundant secretion of bloody urine and constant desire to pass water; sometimes even micturition was involuntary. Thus the inflammation or irritation caused by masturbation, may, like that accompanying blennorrhagia, extend by degrees, until it reaches the kidney. It will be easily believed that the irritation does not extend in this direction only.

Orchitis.—I have seen several cases in which the patients suffered from acute attacks of orchitis, after furious masturbation; and frequently such orchitis has required very active treatment for its relief.

In one case the patient had not reached puberty when this occurred. In many such cases no doubt accessory circumstances existed, although the patients attributed the development of the orchitis only to masturbation. Others more slightly affected experienced pain in the testicles and spermatic cord, accompanied with swelling of the epididymis. Others, again, suffered a painful sense of tension. They felt as if the testicles were held in a vice or squeezed by a hand of iron. In many, the least contact of the parts with the clothes was insupportable, and the weight of the testicles caused very severe dragging pain. In all such cases the patients were obliged to wear suspensory bandages, and often to guard the testicles from friction, with cotton, wool, or swansdown.

These symptoms, which I have considered separately, generally occur together, and often form varying groups, which present special appearances, depending on the predominance of one of the symptoms. Sometimes the patients mention one circumstance only, because that one alone has attracted their attention; but when questioned, they recollect many others which appeared trifling by the side of the more serious one. It is also important to remark, that diurnal pollutions generally follow very soon after the appearance of these symptoms, and that the patients are a long time without discovering them, and sometimes only detect them when taught what to expect.

The more we reflect on these morbid phenomena, and the course of their appearance, the more striking is the resemblance between the effects of excessive masturbation and those of blennorrhagia. I admit that the symptoms do not always present the characters of well-marked inflammation, but they at least show those of active irritation of the parts. It is easy enough to give a clear explanation of what passes in all cases of this kind, with perhaps some slight shades of difference. The testicles secrete more semen, which is imperfectly formed; the seminal vesicles, participating in the state of irritation of the neighboring organs, do not easily bear its presence; they contract more readily, as they are more easily affected by external impressions. Hence, it becomes more and more difficult to avoid nocturnal pollutions; after a little time diurnal pollutions occur, and become more and more frequent and abundant; that is to say, there is a constant disposition in the seminal vesicles to contract spasmodically and expel their contents.

On the other hand, the semen, ill-secreted by the testicles, and remaining a shorter time in its reservoirs, becomes thinner and more watery; and by degrees, as it loses its physiological characters, it also loses its normal properties; it becomes, therefore, unfit to produce its effects on the seminal vesicles. The erections are consequently less energetic and less lasting, and after a time incomplete and fleeting; whilst in the end, in severe cases, they disappear altogether. Hence the embarrassment and timidity of such patients in the company of females, and the fear they experience of finding

themselves in a position to expose their impotence; and hence their indifference and even aversion for the sex, and the constantly increasing difficulty they experience in changing their habits. Such abuses, then, because their effects remain long after the habits have been altered, bring on symptoms, of which the cause is unsuspected. This is the reason why the health of some continues to deteriorate, whilst that of others is re-established as soon as they have renounced their malpractices: this is why tonics, aphrodisiacs, cold bathing, and iced drinks, produce effects so different from those expected.

There are undoubtedly cases in which the spermatic organs are weakened and relaxed; I shall relate several instances of this in a future chapter; but we shall then see that such a state arises from primary relaxation of habit and rather from want of use of the organs than from their abuse.

In concluding my remarks on the subject of masturbation, I may observe, that it is the most dangerous of all vices of this nature, because it is the most difficult to discover and to prevent, and because it does not require any assistance for its consummation. From the cases I have seen, I conclude that the irritation excited by such manœuvres very easily induces involuntary discharges; that the appearance of nocturnal pollutions in those who attempt to abandon the vice often causes them to return to their former habits, and that the diminution of virility which follows, far from favoring the patient's amendment, frequently hinders it by proving an obstacle to their having sexual intercourse, while it does not prevent them from continuing their bad practices. This circumstance is a powerful cause of the disorders which attend such as are reduced by vicious habits.

CHAPTER VII.

CAUSES OF SPERMATORRHŒA.

Venereal Excesses.

I CONSIDER venereal excesses to consist of all sexual intercourse carried beyond the actual wants of the system.

CASE XXXVI.

Nervous temperament—Excessive intercourse at the age of twenty-one, continued during eighteen months—Increasing derangement of health—Symptoms of gastritis, and of disease of the heart—Repeated abstraction of blood—Nocturnal and afterwards diurnal pollutions; Milk diet, &c.—Acupuncture followed by perfect recovery.

Whilst in Paris, in 1822, I was called in consultation with MM. Dupuytren, Broussais, and Recamier, to consider the case of a young man who was

supposed to be affected with cardiac disease, accompanied with chronic gastro-enteritis. We could not quite agree on the importance of the two orders of symptoms, but the indications appearing the same in each, a course of treatment and regimen was determined on, which I undertook to put into execution. Before proceeding, however, to repeat the abstraction of blood, which had already been practised several times, and from which the patient had never experienced relief, I questioned him further. My opinion respecting his disorder changed from the information I then received. The following are the facts:

M. E. B—— was short, thin, and very dark; of a nervous temperament, and an ardent and bold character. His parents were healthy: he had been early inured to exposure to the weather, and to the rudest exercise; and by an active life had avoided all bad habits, as well as all commerce with women.

At the age of twenty-one he married, and during eighteen months, carried sexual intercourse to excess. At first, all his functions became more active; he felt gayer, and more energetic; and his appetite was much increased. But after a time, this excitement began to diminish, and by degrees gave place to the opposite state. His sleep was broken and unrefreshing; he felt heavy during the day, and his thoughts constantly wandered; his digestion became disordered, and he lost flesh as well as intellectual activity and muscular power.

Intercourse being for a time prevented by the occurrence of pregnancy, these first symptoms disappeared, but they returned some months after delivery, and from that time rapidly increased. The use of nutritive and abundant food, in place of repairing the patient's strength, increased his digestive disorder; stimulant drinks, taken with the intention of assisting digestion, only excited irritation; severe attacks of indigestion occurred, and brought on gastritis, which was combated by leeches to the epigastrium and anus. Obstinate constipation came on, and after a time was succeeded by diarrhœa. Feelings of suffocation next came on, with palpitations, which seemed to threaten disease of the heart. These symptoms were treated by further abstraction of blood. At the same time the patient's venereal desires grew weaker; his erections diminished; ejaculation took place more and more rapidly, and scarcely excited any sensation. The acts of coitus were several days apart, and sometimes did not take place for a week or fortnight.

A second pregnancy afforded several months of absolute cessation from intercourse; but this time the patient did not regain his health. Nocturnal pollutions had commenced; these he regarded as the results of continence; but coitus, however rarely practised, always increased his weakness; the nocturnal pollutions diminished, and then disappeared entirely, but still the palpitation and digestive disorder continued to increase. The coincidence of these circumstances led the patient's suspicions from the true cause of his disorder. He attributed the inactivity of his genital organs to the extreme weakness of his system, which he thought arose from the leeching and diet he had been subjected to, and, consequently, omitted to speak of his impotence to his medical attendants, who, on the other hand, knowing that conjugal intimacy had ceased, did not inquire further. These symptoms increased, until, at the age of twenty-five, the patient came to Paris. He had then suffered during three years. The following were the symptoms:

Excessive emaciation and pallidity; considerable tenderness of the epigastrium; the abdomen constantly distended by flatus; tongue red at its borders, and towards the point; anorexia; digestion of animal food almost impossible, and that of vegetable difficult, and accompanied by flatulence and flushing of the face; obstinate constipation alternately with diarrhœa; flatulent colic, often sufficiently alarming, returning at variable times, and without apparent cause. These colics commenced by rapid distension of the stomach with flatus, accompanied with spasm in its cardiac extremity, and in the large intestines, with oppression at the diaphragm threatening suffocation. The palpitations, together with the precordial anxiety, then became doubly severe, sudden congestion in the head took place, the shivering which had been present before gave place to a burning heat, followed by abundant perspiration; after a longer or shorter time a sudden discharge of flatus occurred, both by the mouth and by the anus, which was followed by softening of the abdomen and immediate relief. The general prostration which followed these attacks was proportioned to their intensity and duration. At the same time the patient suffered from constant palpitation of the heart, increased by any exertion, by any excitement, physical or moral, and especially by the process of digestion. The heart's action was rapid and irregular, but not stronger nor heard over a greater extent of the thorax than natural; and there was neither friction sound, nor bruit de souffle. The pulse was small and weak.

Besides these symptoms, the patient complained of general weakness, especially in the loins and legs, of a sense of lassitude, loss of memory, frequent sighing, irritability on slight contradiction, light, broken, unrefreshing sleep, and great sensibility to cold or damp.

These symptoms had been noticed by all the practitioners previously consulted. The following they had not discovered: During the passage of the fæces, the emission by the urethra of a thick, viscid, unctuous, slightly opaque matter; frequent desire of micturition, the urine being passed in small quantities, and with little force, the last drops thick and viscid; and, after cooling, the urine being muddy and fetid, and depositing a flocculent, thick, whitish sediment; a feeling of uneasiness in the perineum, with pains in the spermatic cord and testicles, and spasmodic contraction between the sphincter and the neck of the bladder.

After reflection on these symptoms, I did not hesitate to attribute them to involuntary seminal discharges; and I accordingly prescribed iced milk mixed with lime water or Spa water; vegetable diet; cold lotions on the perineum night and morning, and before and after defecation; an active country life, with often repeated exercise of short duration.

On seeing the patient the following year, I found that these means had produced slight improvement, but that the progress towards recovery had been arrested for some time. I now, therefore, determined to try acupuncture. This I performed with two long needles, introduced about the middle of the perineum, so as to traverse the prostate in the direction of the ejaculatory ducts.

From this time the diurnal pollutions ceased almost suddenly; a few nocturnal emissions then occurred, attended by dreams, energetic erections, and acute sensations; the sexual appetite returned, the patient's desires became imperious, and his re-establishment progressed rapidly. During sixteen years, M. B—— has since enjoyed the full activity of all his functions —the gastric and cardiac symptoms have disappeared, together with the diurnal pollutions.

The lively interest which I took in this patient, made me discover, by dint of patient questioning, what had escaped the other practitioners he had consulted. At that time my attention had not been attracted to the effects of diurnal pollutions, which I had no idea were so common or capable of assuming so serious an aspect. This case struck me forcibly: indeed, I may say, that it in great measure enlightened me as to the cause of a crowd of symptoms of the same nature, which I met with in other patients, and that it led me to make the researches which I now publish.

In this case there was not the slightest complication. The first intercourse took place at twenty-one years of age; the constitution was remarkably robust, and the genital organs had been preserved from all abuse: thus, the orgasm which seized them carried their activity to the highest degree, and all the economy was for some time in a state of active excitement; all the functions were performed with more energy; the losses caused by the discharges were rapidly repaired; and health continued in all its vigor. How then should danger be feared? The excesses were continued until the patient's health became disordered; and now, pregnancy having occurred, he had a period of rest, which caused these first accidents to disappear —showing they were only due to the venereal excesses. A second pregnancy, however, did not produce the same results—diurnal pollutions having already appeared. The local and general effects of these, with the errors of treatment that followed them, I need not comment on.

Milk diet and exercise produced slight, but very slow improvement, which had entirely ceased when I saw the patient a year afterwards. The same results did not take place after acupuncture; its action was rapid, and its results lasting. The spasmodic contractions experienced in the perineum, or rather between the bladder and rectum, that is to say, in the seminal vesicles, induced me to try this remedy. It struck me that these symptoms were purely nervous, and that habit had a good deal to do with their persistence. Success attended their trial, and the prompt action of the remedy can only be explained by the nervous disorder which it caused in the parts. Such a result made me hope much from the effects of acupuncture, in cases of spermatorrhœa, but it has succeeded in only a few; and by comparing the symptoms, the reason of this apparent anomaly is evident, seeing that, in most cases, diurnal pollutions are kept up by chronic inflammation, or acute irritation of the parts, and to remove this the operation has no power. Acupuncture, too, does little good in cases of atony of the ejaculatory canals; so that there only remain such cases as are due to a purely nervous state, or a habit of spasm, and these are by far the least frequent. To these may be added cases in which the nervous disorder persists after the removal of the irritation, but these are still more rare.

I have, at present, before me, the memoir of a master of a school, who married very young, after having resisted all temptation to bad

habits, but who yielded, as in the preceding case, to immoderate intercourse, of which he soon felt the effects on his health. This patient took nutritive food to keep up his strength, and stimulant drinks to assist his digestion. An attack of gastritis resulted, which was treated by leeches, baths, and vegetable diet. Two months passed in an excursion to the mountains, re-established his health, but on his return he relapsed into the same state; constipation supervened, and his intellect was weakened. Three times, however, he obtained considerable benefit during the vacations, which he passed away from his wife, but at last, nocturnal pollutions commenced, and he was obliged to resign his occupation. This case resembles the one just related, except that the head and stomach were the organs chiefly affected.

Simple cases like these are very common: they were even described by Hippocrates; but, however common they may be, they are very serious, and of much importance to society generally.

CASE XXXVII.

Robust constitution—Venereal excesses continued till the age of twenty-four—Chronic inflammation of the bladder—Nocturnal and diurnal pollutions—Cauterization followed by perfect recovery.

Dr. D——, short, dark, and robust, of a lively disposition, and much addicted to sexual intercourse, practised great excesses, which he sometimes carried so far as to cause emission of blood. His health became disordered, his desires diminished, and at length ceased entirely. Notwithstanding absolute continence, his condition daily grew worse, and when he came to consult me, in 1832, at the age of twenty-five, he presented the following symptoms: great emaciation; face pale and sad; eyes sunken; urine passed from twenty to thirty times a day, and its discharge attended by scalding and lancinating pains in the neck of the bladder, the stream small, weak, and crooked, and the last drops passed with difficulty, inducing spasmodic contractions of the neck of the bladder, and the expulsion of a thick viscid matter, which stopped at the orifice of the canal; the urine abundant in quantity, muddy, and sometimes containing blood, always decomposing rapidly, exhaling a disagreeable smell, and throwing down an abundant deposit of thick flocculent matter; a feeling of weight in the rectum, and at the margin of the anus; spasmodic contraction of the sphincters; habitual and obstinate constipation, notwithstanding the repeated use of lavements; defecation difficult and painful, and causing the expulsion, by the urethra, of more or less viscid matter resembling semen (this was easily observed by emptying the bladder before going to stool); the passage of flatus sometimes produced a similar evacuation, but less abundant; the nocturnal pollutions, frequent at first, had been rare during several months; pain in the testicles and spermatic cord, diminishing by the use of a suspensory bandage; digestion difficult, and accompanied with the development of flatus, griping pains, and flushing of the face; loss of memory; intellectual excitement producing headache, dizziness, and noise in the ears; restlessness, contrasting strongly with the weakness of the lower extremities;

sleep unsound, and often broken by calls to micturate; lassitude greater in the morning than in the evening; catheterism very painful from excessive sensibility and spasmodic contraction in the neck of the bladder.

From these symptoms I proposed cauterization, which was performed rapidly over the neck of the bladder, and more slowly over the mucous surface of the prostate; the pain was very severe, but diminished very quickly. The immediate effects of the operation presented nothing unusual; long-continued baths, abundant drinks, and repeated injections, sufficed to relieve the inflammation produced. From that time I lost sight of Dr. D——, until one day I met him accidentally; he was so changed that I talked to him some time without recognition. His face was red and healthy-looking, his voice loud and sonorous, and he had grown stout to a degree uncommon at the age of twenty-seven; his return to health had been slow, but progressive, and was perfected without the use of any other treatment than the cauterization. He bore cold and damp with impunity, although, previously, he had always been very sensitive to them, and all his functions, without exception, were performed as well as before his illness.

In this case, an affection of the urinary organs accompanied that of the spermatic, and the seminal vesicles were probably in a condition similar to that of the bladder; indeed, the excesses had been several times carried so far as to cause emission of blood; abnormal irritability existed in the prostatic portion of the urethra; the spermatic cords and the testicles were the frequent seat of pain. The irritation, therefore, passed through the ejaculatory ducts and seminal vesicles, to the spermatic cords and testicles.

To this irritation the nocturnal and afterwards the diurnal pollutions must be attributed. The constipation, too, undoubtedly favored the occurrence of pollutions during defecation; but the constipation itself arose from the irritation in the prostatic region, as was indicated by the spasmodic contraction of the sphincters, and the sensation of weight in the neighborhood of the rectum, and at the margin of the anus. All the symptoms disappeared after cauterization—another proof that they all arose from the same cause.

In these two cases, venereal excesses acted alone in the production of spermatorrhœa. In the cases I am about to relate, such excesses were complicated with other causes.

CASE XXXVIII.

Three attacks of blennorrhagia—Hypochondriasis—Danger of suicide—Recovery—Marriage a few months after—Change in the moral faculties—Disordered digestion—Constipation—Agitation—Insomnia—Fits of passion—Symptoms of mental derangement—Impotence—Nocturnal and diurnal pollutions—Cauterization followed by rapid recovery—Excesses repeated—Relapse.

M. N——, of strong constitution and sanguineous temperament, passed his childhood without suffering from any disease, and attained a tall stature

and an unusual amount of strength. He rarely practised masturbation, and seldom had intercourse with women: at the age of twenty, he contracted blennorrhagia, which was cured in a month by the use of copaiba. At the age of twenty-three, he had a second attack, which was treated like the first, and cured in six weeks. At the age of thirty, a third attack occurred; this was treated by the same means, and cured in about the same time.

From this period, M. N—— experienced frequent desire to make water, and only passed a small quantity at a time; his digestion became disordered; constipation supervened; his venereal desires diminished; his sleep was disturbed and unquiet; and his character, previously very gay, completely changed. By degrees, he entirely separated himself from his friends; he sought solitude, and read only the most serious books. At length, he seemed pursued by an almost irresistible desire to commit suicide. His father having perceived this, took him to Paris, Switzerland, &c., in the hope that he would be benefited by change of scene; but whenever he passed over a bridge or near a lake, or any precipitous place, he felt a desire to throw himself down. But these symptoms passed off by degrees, and at the end of six months, M. N—— resumed his duties as a notary, although he showed a somewhat dreamy air occasionally. Eighteen months afterwards he married, at the age of thirty-two. Sexual intercourse took place twice a day for some time, but always very rapidly. At the end of three months, M. N—— experienced a great desire for motion and change, and considerable agitation. He sometimes showed an extraordinary degree of gayety, but the least contradiction threw him into a terrible passion. His actions and his conversation had something strange about them. He even felt this himself, and frequently exclaimed, "Absurd! I am losing my senses; I am becoming a fool." His wife became pregnant, and afterwards suffered from peritonitis; hence a long suspension of intercourse took place, with remarkable improvement in M. N——'s health. But after a few returns of intimacy, his digestion again became deranged, and his constipation returned and became more and more obstinate. A second pregnancy, by preventing intercourse, produced the same results as the first. But on again resuming intimacy, an indefinable sense of uneasiness came on in the patient's abdomen, which was habitually distended with flatus; he frequently complained of cramps; of pressure in the chest; of difficulty of breathing, and palpitation. He felt suffocating; his head was hot; his face red and injected; his mind disordered—he constantly repeated "that he was lost." At times he rolled about and tore his clothes, and when in these paroxysms, there was considerable difficulty in preventing him from doing himself injury, and from breaking everything within his reach. Friction on the limbs and abdomen, and warmth, appeared to relieve the fits. When they were over, the patient shed tears in abundance, and shut himself up for a long time, without seeing any one. Such attacks became daily more frequent, and were sometimes repeated several times a day.

A remarkable change also occurred in M. N——'s intellect; his memory and power of composition diminished, and he was obliged to give up his profession. His writing even became changed, and was almost illegible. He neglected music, previously his favorite amusement, and his voice lost its brilliancy and correctness of tone. He was generally taciturn, though sometimes he showed extraordinary loquaciouness, and his conversation was unconnected. Being unable to sleep, he rose often in the night, and walked about the room nearly naked, and if kept in bed by force, he tossed about, complained of suffocation, and demanded every minute what time it was.

These symptoms seemed to point out a case of insanity. The patient was bled several times, and leeches were applied to the epigastrium and anus; but abstraction of blood only aggravated his condition. Injections did not relieve his constipation; five or six were sometimes necessary to procure an evacuation.

The patient's linen being constantly stained by semen, sometimes mixed with blood, his attention was attracted to the genital organs; and he soon discovered that he had frequent nocturnal pollutions, without erection or sensation. He immediately informed his medical attendant of this fact, and that gentleman further discovered the presence of diurnal pollutions, both while at stool and during the emission of urine. He accordingly sent M. N—— to consult me.

I found the patient's urine thick and muddy, and containing a considerable deposit of semi-transparent granules, resembling grains of rice. I was unable to ascertain, certainly, the presence of seminal discharge during defecation, but nocturnal pollutions occurred almost every night; the discharge was very abundant, and often mixed with blood. On the 30th of December, therefore, I performed cauterization from the neck of the bladder as far as the membranous portion of the urethra.

During five days, the urine was bloody; and the patient's agitation was increased, and other accidents occurred, but from the sixth to the fifteenth day these symptoms rapidly diminished. The stools became more regular; the urine transparent, and the patient's sleep sound and refreshing. Enemata were, from this time, no longer necessary; the patient's bowels acted freely every day; his appetite increased; digestion was rapid; and his sleep became daily longer and more deep; the patient hastened to bed at night, and rose late; he seemed to be in a state of narcotism from six at night till nine or ten in the morning. By degrees, however, this desire to sleep diminished; the patient rose early in the morning, walked all the day, and went into society in the evening; he wrote well-expressed and sensible letters; his character resumed its gayety; and he was tormented by venereal desires.

Six weeks after the cauterization, all his functions were re-established; no discharge appeared in his urine; the nocturnal pollutions no longer took place, and no pollutions occurred during defecation. On the 12th of February, the patient returned to his family.

When M. N—— quitted Montpellier his health was quite re-established: I dreaded his return to his wife, but I was obliged to yield to the impatience of his relatives, after having explained to them the origin of my fears. M. N—— himself promised the utmost reserve, and for a short time he kept his word; but he soon committed further excesses, which the irritable state of his organs would not bear, and at the expiration of two months, a change again commenced in his character. The nocturnal pollutions reappeared, together with most of his former symptoms. Three months later, the patient again visited Montpellier.

From the time of the cauterization, his stools had continued free and regular; his sleep had been sound; his appetite large; and his digestion regular. He daily took long walks. His condition, therefore, was by no means so bad as at first; yet the nocturnal pollutions were repeated four or five times a week, and were very abundant; his

intellect was much disordered; and his speech was rendered difficult by a very decided stammering.

I performed cauterization a second time, but its effects were neither so marked nor so lasting. The period for the mineral waters having arrived, I recommended the use of those at Aix in Savoy, both in baths and douches. I learned afterwards, that these means were employed without success; and that the disorder of the patient's intellect continued gradually to increase.

This case much resembles that of M. De S——, which I have related in my second chapter, page 33.

I have before me the histories of many cases like the preceding. I shall not report them in detail, because they are less characteristic and less serious than that of M. N——, and because I have, in a former chapter, spoken of the influence exercised by blennorrhagia in producing irritation of the spermatic organs. The following is a summary of the chief symptoms presented by such patients as have come under my care:

After having had one or more attacks of blennorrhagia, more or less easily cured, the patients continued in good health so long as they contracted no permanent *liaisons*. In some of my patients, disordered health caused such *liaisons* to be broken off, the health becoming re-established by a prolonged continence; after which, slight intercourse again caused an obstinate urethral discharge. After having led a regular life for some time, such patients believed themselves sufficiently well to marry; but after a longer or shorter time, their health became deranged, although they did not think themselves committing excesses. By degrees, the intercourse became less frequent, the act very rapid, and after a time, quite impossible.

In all these patients, the impotence was the result of diurnal pollutions which had been sometimes preceded by nocturnal pollutions. The diminution of virility is attributed, by such patients, to their disordered health, to the regimen, or treatment employed to cure an attack of gastritis, of irritation in the chest, of palpitation, cerebral congestion, or of commencing disease of the medulla spinalis, according as such or such symptoms have predominated. Not only are the patients ignorant that their state arises from diurnal pollutions, but I have even found it difficult, in many cases, to make them believe that such is the case, because they have always thought themselves very moderate in their sexual intercourse.

If these observations be compared with those related in my second chapter, and if the pain and swelling which these patients felt in the spermatic cord and testicles when they have not had severe attacks of orchitis following blennorrhagia, be taken into consideration, it will be evident that such inflammations may leave a particular susceptibility in the mucous membrane of the genital organs, which only awaits an exciting cause for its development: that slight excitement from sexual intercourse, rather frequently repeated, may set up an irritation in the tissues which the same act would not have

produced before the organs were thus affected; and lastly, that these tissues not being in the same condition, the individual must not reason from what he was able to do previously, to know whether he is committing excesses, or whether he is still within the limits of his powers.

It thus becomes evident, why the most serious and obstinate symptoms are developed after marriage.

I have already shown that masturbation may produce the same immediate effects on the spermatic organs as the most violent blennorrhagia; I now proceed to show, that under similar circumstances, it may predispose to exactly similar remote results.

CASE XXXIX.

Strong constitution—Masturbation at the age of seventeen—Serious disorder of the health, until twenty-six—Marriage—Rapid improvement—Gradual relapse after three years, notwithstanding the cessation of coitus—Seminal discharges during defecation and the emission of urine—Hypochondriasis—Inflammation of the genito-urinary organs—Cauterization—Rapid and complete cure.

M. C——, a land surveyor, of sanguineous temperament and large frame, practised masturbation with such fury that he brought on vomiting of blood, and became exceedingly weak, pale, sallow, and much emaciated. At the age of twenty his extreme weakness, notwithstanding his height and the size of his frame, made him reform after three unsuccessful attempts. He relapsed, however, and the same cause continuing, during six years his health was much disordered. At the age of twenty-six he married.

During two years, intercourse took place daily, and frequently several times a day, yet the patient's health improved rapidly, and his vigorous constitution reached all the development of which it was capable.

In the course of the third year he perceived that his health became gradually disordered, and shortly after he noticed that he passed small quantities of semen while at stool. Soon the semen passed in larger quantities and his health became more and more disordered. At length, obstinate constipation supervened, which rendered the seminal discharges still more abundant. They were accompanied with a slight, not unpleasant sensation.

The patient experienced a constant itching in the scrotum and perineum, although there was no appearance of eruption, and felt a sort of creeping which extended toward the bladder and the root of the penis. His digestion was difficult, and attended by the development of flatus, and his stomach could only retain very light food, in very small quantities; his sleep was short, and disturbed by frightful dreams, and on waking he felt lassitude, soreness of his limbs and depression of spirits; during the day his thoughts were sad—he presented, in fact, all the symptoms of confirmed hypochondriasis.

He felt a constant desire to walk, but was soon tired; he bungled in his professional operations, lost his memory, and performed the most trifling calculations with difficulty.

When M. C—— came to consult me in the beginning of August, 1824, he had relapsed into nearly the same condition as before his marriage. He

had, however, totally abstained from sexual intercourse for more than a year, because his venereal desires and erections had almost ceased. The orifice of the urethra was injected and irritable; the scrotum flaccid, and the testicles large but soft. The urine was passed often and with difficulty; the first jet requiring considerable efforts for its expulsion; the last drops caused spasmodic contractions in the bladder and neighboring parts, and were thick and viscid, appearing like a thick solution of gum. The patient felt as if something always remained in his bladder. The urine was usually red and fetid; it deposited a thick flocculent cloud, which was sometimes accompanied with glairy matter, like white of egg.

These deposits I believed to contain semen, vesical mucus, and prostatic fluid, and their presence in the urine seemed due to chronic inflammation of the mucous membrane lining the prostate of the neck of the bladder. The seminal discharges during defecation were more abundant than ever. These alone would have been quite sufficient to account for the patient's state.

I proposed cauterization as the best means of altering the condition of the affected tissues; and the patient consented. On introducing the catheter I found the canal extremely sensitive; the spasms were so severe, especially on approaching the neck of the bladder, that the whole of M. C——'s body was covered with a profuse sweat, and I found it necessary to delay the cauterization. Three days afterwards the same catheter was introduced with much less pain, and the urine having been completely evacuated I cauterized the bladder near its neck, and the prostatic and membranous portions of the urethra. The operation was performed rapidly, and scarcely gave more pain than the introduction of the catheter; but it caused a kind of very acute pinching pain at the margin of the anus and in the rectum.

Soon after the operation the patient experienced a feeling of strength in the genito-urinary organs, which increased as the pain passed off. The constipation ceased spontaneously; the urine, by degrees, regained its color and transparency, and at the end of thirteen days the patient was compelled to return home. The journey (about sixty miles) did not produce any of the inconveniences I had feared; and two months afterwards I received a letter from M. C——, stating that he was perfectly well, and had recovered his strength, and the perfect use of all his functions.

This patient was not more moderate in sexual intercourse than he had previously been in his bad habits; yet marriage benefited his health. This change, which lasted three years, shows the great difference that exists between the effects of sexual intercourse and masturbation.

Why did not this improvement continue? Simply because the frequency of the acts exceeded the real wants of the patient; and because the organs had previously been weakened by serious and long-continued abuse. This circumstance is enough to show how complicated the important question of marriage becomes in such cases. I shall by and by relate some others which will perhaps make those pause and reflect, who thoughtlessly recommend so serious an engagement as a remedy for masturbation.

Was there any semen in the urine in this case? The quantity of vesical mucus and of the prostatic secretion did not permit of a

certain decision on this point. The last drops passed from the urethra were viscid, like solution of gum, and abundant seminal discharges took place during defecation. In cases of this nature it is evident that chronic inflammation extends from the mucous surface of the prostate to the neighboring tissues; cauterization is a certain means of getting rid of this with all the symptoms depending on it. Whether there be or be not semen in the urine, the indication is always the same.

I have more than once referred to the connection that exists between the neck of the bladder and the anus; this patient showed it in a high degree. At the moment of the cauterization he complained of a severe pinching pain in the rectum and at the margin of the anus; and, in proportion as the inflammation was dispersed, the sphincters became relaxed and the constipation ceased spontaneously.

CASE XL.

Sanguineous temperament—Masturbation from fourteen to eighteen years of age—Marriage at nineteen—Immediate improvement in the health—Afterwards, disorder of the system—Hypochondriasis—Inclination to suicide—Symptoms of chronic gastritis, treated for six years with leeches, blisters, &c.—Nocturnal and diurnal pollutions—Frequent discharge of urine—Cauterization followed by rapid and complete cure.

M. C——, of sanguineous temperament and robust constitution, at the age of fourteen was five feet six inches in height, and of great muscular strength: at this time he contracted the habit of masturbation at school, and continued it till the age of eighteen. At nineteen he married, although he was very thin, and weakened by his previous abuses; but he regained his strength by degrees, and applied himself to agricultural pursuits with energy and success. He had two healthy children, the first years after his marriage.

Nevertheless, although he had no cause for trouble, the patient's character changed by degrees. His gayety and activity diminished, together with his strength and appetite. Sexual intercourse became less frequent. He suffered from nocturnal pollutions—rare at first, but afterwards more frequent. His stomach became disordered. He was constipated; his fæces were frequently streaked with blood, and during the straining necessary for their expulsion, he passed a considerable quantity of matter by the urethra, which he recognized as badly formed semen. He became careless, indolent, and timid; he neglected his affairs, and even the management of his farm. His affection for his wife and children diminished, and at length he fell into a profound state of hypochondriasis, and thought of nothing but his health.

For six years he was treated for a supposed gastritis by the application of leeches, blisters, and issues; he was sent to the mineral waters, &c. He spoke of his seminal discharges to all the practitioners he consulted, but they were attributed to the gastritis, or his continence, even although he asserted that they were the cause of what he suffered. At length, at the age of thirty-five, he was sent to me by a young surgeon—one of his friends. He was then in a deplorable state of mind; his constipation was

obstinate, notwithstanding the habitual and immoderate use of enemata; spermatic discharges occurred during defecation; micturition was repeated as often as fifteen or twenty times a day; the stream was feeble and broken, and the excretion abundant and pale, generally containing a flocculent deposit. Nocturnal pollutions were frequent, and always occurred when the patient lay on his back, on which account he contrived a piece of wood to be fixed along the spine, to prevent him from assuming that posture. Catheterism was exceedingly painful.

I cauterized the urethra from the neck of the bladder as far as the bulb. The ordinary immediate effects took place; at the end of eight days, the inflammation had nearly subsided, and the erections were violent and prolonged without pollutions; the patient's appetite returned; his digestion improved; his constipation diminished; his sleep became sound and healthy; his strength increased; and the emission of urine became less frequent. Within a fortnight, his erections had become importunate during the day, and almost constant at night, attended with erotic dreams, but no pollutions occurred after the cauterization. Recovery of strength was rapid; and the desire of occupation and business returned. The patient went home on the twenty-second day.

Four months afterwards, M. C—— wrote to ask me if he need go to the mineral waters as I had recommended him; he did not think it necessary, his health and strength being completely re-established.

This case scarcely differs from the preceding; I shall, therefore, only call attention to the obstinacy with which the supposed gastritis was treated. It is difficult to form an idea of the tortures with which this patient suffered during six years, or of the variety of means which were put in practice to combat his disease. Of these, abstraction of blood, by increasing his debility, and the application of blisters, by the action of the cantharides on the genito-urinary organs, did the patient most injury.

CASE XLI.

Nervous temperament—Delicate health—Masturbation before puberty—Urethral discharge after sexual intercourse—Orchitis—Nocturnal pollutions—Absolute impotence—Injections with solution of nitrate of silver unsuccessful—Cauterization followed by rapid cure.

M. S——, a doctor of medicine, short and thin, and of a nervous temperament, was subject, from infancy, to various nervous diseases. He was addicted to masturbation long before puberty, which occurred at twelve years of age, and he continued the practice until the age of sixteen. At this period he had sexual intercourse, and after several weeks of daily connection, an abundant discharge came on, which he neglected for a long time. On returning to school, he felt pain in the right testicle, followed by acute inflammation, with considerable swelling of the spermatic cord. This was relieved by the usual means. The following year he experienced acute pain in the same situation, with a dragging sensation in the spermatic cord. These symptoms diminished by the use of a suspensory bandage, but the epididymis permanently acquired nearly double its normal size;

the vas deferens continued very sensitive, and the urethra was irritable. From that date, darting pains, accompanied by spasms, were felt in the prostatic region during micturition, especially whilst discharging the last drops. Sexual intercourse always left a sense of weight and heat in the organs.

Before the occurrence of the urethral discharge, nocturnal pollutions had happened several times; these afterwards became more frequent, and after a time they took place without erection, motion, or sensation. During two years, the patient's erections grew less frequent and daily more imperfect, and at length ceased altogether.

M. S—— for a long time treated the pollutions by hygienic means alone; contrary to his expectations, he found that a very hard bed invariably produced them, and that they were increased by any fatigue, especially by pedestrian exercise. He also found himself much worse after cold bathing. These circumstances made him suspect that the pollutions arose from a state of irritation.

All his organs were almost equally debilitated; and all his functions were badly performed, and with difficulty; his sleep was broken and unrefreshing; his temper dull and irritable. The least serious occupation gave him headache, and a desire for change; slight exercise induced fatigue; his eyes were very weak and injected.

On the 22d of February, 1836, the patient injected a solution of nitrate of silver (a quarter of a grain to the ounce) into the urethra. About half the injection entered the bladder, and remained there for two hours. He passed a bad night, with acute pain, and had a pollution. On the 25th, he used another injection, stronger than the first; the same phenomena followed. On the 2d of March, he had another pollution. On the 6th, his urine was thick, fetid, sanguinolent, throwing down an abundant deposit and giving acute pain during its discharge. Thirty leeches were ordered to the hypogastrium, to be followed by a hot bath and emollient cataplasms. The symptoms diminished under this treatment. On the 24th of March, another pollution occurred, and from this date, they took place as often as before; complete impotence was established. In this condition, the patient came to consult me at the age of twenty-three. His urine contained a white deposit, which led me to suspect that he had diurnal pollutions. In the beginning of July, 1836, I applied the nitrate of silver from the neck of the bladder as far as the bulb of the urethra. The usual phenomena occurred. A fortnight afterwards, all the inflammation had disappeared, and re-establishment had commenced. Six months afterwards, I received the following note from M. S——. "For five months my nocturnal pollutions have ceased—at least, I have only had one every ten days or fortnight, which appears inevitable, from my continued continence. My urine is perfectly transparent; my temper is improved, and I study with pleasure, and without fatigue. My erections have become frequent and long continued, which I fancy is the best proof of an absolute and permanent cure." By the use of sexual intercourse the patient's health continued to improve for two years, during which time I saw him frequently.

This patient told me that he had not practised masturbation more frequently than his companions, but he had commenced long before puberty, and his constitution was naturally weak. He also asserted that he had been moderate in his first intercourse with the other sex,

but his organs had been previously weakened by premature abuse. These circumstances account for the disastrous effects produced by so few connections, so soon left off.

A hard bed, cold bathing, and prolonged exercise, produced bad effects on this patient, which he explained correctly by referring the symptoms he experienced to a state of irritation of the organs instead of one of atony.

The mode in which the inflammation extended from the mucous membrane of the urethra to the spermatic organs is very evident in this case; the painful spasm which was present in the neighborhood of the prostate, the habitual irritability of the urethra and vas deferens, and the swelling of the epididymis, show clearly that the pollutions were maintained by a state of irritation. It is remarkable, that injections with solution of nitrate of silver should have caused so much pain, and produced cystitis without any permanent benefit, whilst the nitrate, applied in substance to the disordered tissues, completely changed their action, without producing any untoward results.

The cases I have related show at once how far masturbation may weaken the most active genital organs, at the period of their greatest energy, and the necessity of taking into consideration the actual condition of the parts, in order to appreciate the effects of sexual intercourse.

I have so far shown that blennorrhagia and masturbation may leave a degree of irritation in the spermatic organs, or, perhaps, a peculiar susceptibility easily increased by coitus. Hence it happens, that the virile power differs much, not only in different individuals, but in the same individuals at different periods.

Independently of the changes which may occur before the act, the organs may be temporarily exposed to others just as hurtful. And I now proceed to point out, by two or three cases, the chief circumstances which may thus render coitus injurious.

CASE XLII.

Masturbation—Venereal excesses—Prolonged horse exercise—Blennorrhagia—Nocturnal and diurnal pollutions—Two cauterizations—Recovery—Premature excesses—Relapse—Cure by another cauterization.

M. T——, of robust constitution, and bilio-sanguine temperament, contracted the habit of masturbation at school. At the age of fifteen, he corrected himself, but committed venereal excesses. Still his health did not undergo any notable change until some time after, when he was obliged to pass the greater part of the day, and often part of the night, on horseback. After several months of this kind of life, he felt weight and heat in the perineum, with pulsation and darting pain at the margin of the anus. Hæmorrhoids appeared, and his sexual feelings diminished by degrees, and at length entirely left him. He detested the sex, and became morose, taciturn, and irritable; all his functions were disordered; he felt cast down,

careless, physically as well as morally depressed, and sought solitude. At length he commenced the study of medicine.

A professor, whom he at first consulted, believed him afflicted with gastritis, afterwards, with chronic enteritis; still later, he thought him hypochondriacal. In this condition, at the age of twenty-five, he consulted me. His symptoms were much the same as those I have related in so many other cases; but he had, in addition, a constant urethral discharge.

I performed two cauterizations for this patient, six months intervening between them. The urethral discharge and diurnal pollutions disappeared completely; and his nocturnal pollutions became much rarer; he regained his embonpoint, and his former strength and activity.

Unfortunately, M. T—— yielded with little discretion to the venereal desires, which resumed their empire over him. A relapse resulted, requiring another cauterization, which produced the same effects as the former ones; although more slowly. His health was afterwards undisturbed by any similar accidents.

The masturbation and venereal excesses which, in this case, preceded the long-continued horse exercise, must be taken into account; they certainly predisposed to the occurrence of blennorrhagia and nocturnal and diurnal pollutions.

The mode of action of horse exercise on the genital organs is so evident, as not to require explanation. The fact is worthy of notice, because it explains the advantages or inconveniences of this exercise in cases of spermatorrhœa, according as they arise from atony or phlogosis of the spermatic organs.

The excitement produced by horse exercise must also be noticed as a circumstance which may deceive the patient. The signs of virility which it excites are too often taken for natural desires. Even when these natural desires exist at the same time, they should not be satisfied while the organs are in a state of irritation and fatigue from riding, because the act itself tends to produce the same effects. Thus, the union of the two circumstances may produce more or less severe urethritis and its usual results. In the foregoing case, as in many others, I have seen irritation of the urethra accompanying the same state in the spermatic organs; this is a very common coincidence, and one very easily explained.

The relapse this patient suffered is worthy of notice on account of the difficulties which a convalescence from spermatorrhœa presents. Scarcely has the cure begun to progress, than the semen is retained longer in its reservoirs; it is consequently better formed, the more fluid part being absorbed; hence frequent, energetic, and prolonged erections are excited. A time may arrive when these will become weakening and hurtful; the testicles continue to secrete, and the seminal vesicles have only a certain capacity; evacuations must, therefore, take place; if normal ones be prevented, they will occur abnormally, and the pollutions we are endeavoring to cure will reappear. Hence, moderate exercise of the organs is the best tonic in this stage of the case. A return to the exercise of their functions

is, therefore, beneficial—indeed, indispensable. It is difficult for the practitioner to point out the exact moment when such return should take place, and for the patient to prevent himself from overstepping the bounds of the most importunate necessity. Unfortunately the same thing occurs in these cases, that we see daily after other diseases—gastritis for instance; when a little food is allowed, an excess would recall all the irritation of the stomach; but the patient often consults his appetite more than his power of digestion, and hence disorder sometimes arises more severe than the first. In such cases, however, the meals may be watched, the food chosen, and the portions doled out. In the cases under consideration such watching is impossible.

CASE XLIII.

Lymphatic temperament—Early and long-continued masturbation—Horse exercise—Infrequent coitus—Urethritis—Repeated attacks of inflammation in the testicles—Frequent discharge of urine—Pollutions during defecation—Imperfect ejaculation—Two cauterizations followed by perfect recovery.

Berthelot, æt. twenty-three, of lymphatic temperament, the son of robust peasants, enjoyed perfect health during his infancy. Between the ages of ten and fourteen he practised masturbation frequently with the other children of the neighborhood, although he experienced little sensation, and did not pass any semen. At a later period, he addicted himself to the vice as often as two or three times a day. Still his health underwent no alteration. At the age of twenty-one, he entered a cavalry regiment, and soon afterwards had cholera, on recovering from which he was sent to his native village for change. He hunted much at this time, and was constantly on horseback. About three months afterwards, he had sexual intercourse once or twice a day, and on the fifth day he experienced very acute pain in the urethra during the passage of urine, but no discharge occurred. He resumed his habitual horse exercise, but abstained from the use of alcoholic drinks. About two months later, B—— observed that he passed a considerable quantity of semen while at stool, even although his bowels were not constipated; and at the same time his calls to urinate became more frequent and more sudden, so that he passed water eight or ten times a day, and four or five times in the night. Soon afterwards, after a long ride, he felt pain in the course of the left spermatic cord, which soon extended to the epididymis and testicle of the corresponding side. Orchitis was established, but yielded to the usual treatment, leaving, however, a chronic enlargement of the epididymis. Afterwards the patient wore a suspensory bandage, rode on horseback again, and again practised masturbation. He now, for the first time, experienced an extraordinary change in ejaculation. Very little semen was passed by the urethra, although he felt internally a sensation which announced abundant discharge. The greater part of the emission remained in the urethra, and was discharged after the subsidence of the erection; even then the patient was obliged to assist its escape, by making pressure on the urethra. This occurred even during nocturnal pollu-

tions. The diurnal discharges during defecation, and the frequent desire to micturate continued; the patient's health became again disordered, and when he returned to his regiment, he was just as weak and thin as when recovering from the effects of the cholera.

After a few days' active service, swelling again attacked the left testicle: this was relieved by rest and emollients, but frequently returned again, after slight horse exercise. Acute inflammation also attacked the right spermatic cord, epididymis, and testicle. The inflammation was dispersed by leeches, but enlargement of the cord and epididymis remained. Some time after, the patient complained of pain in his chest, sense of suffocation, and frequent attacks of digestive disorder, and on the 6th of August, 1836, he was admitted into the hospital St. Eloi, under the care of Professor Serre, in much the same condition that we have so frequently described.

M. Serre cauterized the prostatic portion of the urethra, after which, the patient's efforts during defecation, together with the quantity of semen passed at stool, diminished. Micturition became less frequent, and his digestion and moral condition improved. In this state I saw him a month after the cauterization: hoping that the amendment would continue to progress, I merely prescribed cold ascending douches every second day. Some time after, I found a slight difficulty in passing a catheter into the bladder. The instrument was caught near the neck of the bladder by a band, which caused a kind of starting upwards of its point.

In any other part of the canal I should not have considered this obstacle worthy of notice, but its seat being near the orifice of the ejaculatory ducts, I questioned the patient further. From what I then learned, I was induced to leave an instrument in the urethra for an hour, and to repeat this once a week. The ascending douches seemed to give tone to the rectum, and the introduction of the catheter freedom to the urethra. The seminal discharges diminished, and remarkable improvement in all the functions took place. On the 15th of October, however, a pollution occurred during defecation, and was repeated on the 19th. At the same time, the desire of micturition became more frequent. On the 21st of October, therefore, I determined on again performing cauterization of the prostate, applying the caustic especially to the membranous portion of the urethra in front of the orifice of the ejaculatory ducts. This second cauterization perfected the benefit begun by the first. Defecation was performed easily, and the pollutions accompanying it ceased, the urine became quite transparent, and was passed at normal intervals in a full stream, and without pain. A few abundant nocturnal emissions occurred at intervals of ten and fifteen days, but they were always preceded by erotic dreams, and accompanied with lively sensations, the seminal emissions taking place very freely and entirely. And on the 6th of December, B—— left the hospital, having been quite well for more than a month. I advised him, however, to exchange from a cavalry to an infantry regiment.

Berthelot was of a very lymphatic temperament, and he had contracted habits of abuse four years before puberty. These circumstances must have had their influence in determining the effects produced on the spermatic organs. But the immediate cause of the disease is very evident. Coitus was only repeated a few times, but whole days were passed on horseback. Riding exercise aggravated the disorder, and produced relapses. To its effects on the perineum,

the urethritis and the repeated attacks of orchitis must be attributed.

It was not by exposing the testicles to friction, as may at first sight be supposed, that the horse exercise induced orchitis; the inflammation commenced in the vas deferens, extended to the epididymis, and thence to the testicle. The action of the saddle on the perineum, therefore, increased the urethral inflammation, and favored its extension to the neighboring mucous membrane. The irritation extended, not only to the testicles, but towards the kidneys. The seminal vesicles were then in the same condition as the bladder, and presented the same phenomena—their situation between the ejaculatory ducts and the testicles being the same as that of the bladder between the urethra and the kidneys. What passed in the bladder was only the exaggeration of what took place in the seminal vesicles. The influence of this phlogosis even extended to the sphincters of the anus, since the expulsion of relaxed motions required considerable efforts.

I have already related (page 144) a case of nocturnal pollutions, in which no external evacuation took place, all the semen passing into the bladder, and being afterwards expelled with the urine. This occurred in consequence of compression having been made on the perineum to prevent ejaculation. I have seen another case, in which the same thing happened after blennorrhagia, and Berthelot presented something similar, but in him all the circumstances were still more marked. There could be no doubt as to the observations he made during masturbation. He always experienced the same voluptuous sensations, which were accompanied by a kind of internal perturbation, and he observed the discharge at the time of only two or three drops of semen. After nocturnal pollutions he constantly found on waking a considerable quantity of semen in the urethral canal. These phenomena were easily observed, and he did so many times.

I have frequently seen the same effects take place in very long and tight strictures of the urethra; but in Berthelot, a No. 12 catheter passed easily into the bladder. The office of the ejaculatory ducts must, therefore, have been altered by some cicatrix, in the neighborhood of the verumontanum. The presence of this was made evident by the slight deviation of the point of the catheter before entering the bladder. The presence of such a cicatrix, in this situation, indicates clearly enough that inflammation has been active near the orifice of the ejaculatory ducts; hence, it may be supposed that the effects of horse exercise on the perineum must have contributed to its development, and to the extension of the inflammation so frequently to the testicles.

I have shown in another place (page 96) that horse exercise may contribute to produce diurnal pollutions by its action on the margin of the anus causing obstinate constipation; and I have also pointed out that it may have very injurious effects about the period of puberty (page 147) by inducing accidental emissions, or leading to bad habits.

These cases, with those I have just related, show that horse exercise may cause hurtful excitement of the genital organs; first, by inducing obstinate constipation; secondly, by producing abnormal excitement, which may lead to abuse; thirdly, by rendering coitus irritating; fourthly, by increasing irritation previously set up by recent excesses.

I do not pretend to assert that horse exercise often produces such unfortunate results, but it is important to know how and under what circumstances they may be produced—in a word, what influence horse exercise may have in causing spermatorrhœa. All that I have now said of course applies to the other exercises which act on the genital organs, and whose action, though less energetic, may be more prolonged.

Every one knows the effect produced by long journeys, even in the easiest carriages. The increase of temperature which all the parts that bear the weight of the body experience, and the continual shaking to which they are submitted, excite importunate erections, which are commonly followed by fatigue and irritation. The increased flow of blood often suffices to reproduce urethral discharges which had ceased for some time. I have been consulted many times in cases of this nature—indeed, there are some persons who cannot pass a few days in travelling without having a slight gleet. These effects are not equally severe in all, but all experience an increased excitement, which it is necessary to be guarded against, because it excites desires which may be easily mistaken for real necessities. There is more importance in these apparently trivial circumstances than is generally supposed. Hence I have called attention to them *en passant*.

I have already shown, that the action of alcoholic liquors on the genital organs may induce spermatorrhœa (see case twenty-one). I now proceed to show the influence they exert on the venereal act.

CASE XLIV.

Lymphatico-sanguineous temperament—Coitus when nearly intoxicated, at the age of twenty-two—Blennorrhagia—Pollutions during defecation—Disturbance during ejaculation—Band in the membranous portion of the urethra—Cauterization—Cure.

Gros, a soldier in the 57th regiment, æt. twenty-five, of lymphatico-sanguineous temperament, always enjoyed perfect health, until, in 1833, after a debauch, he had sexual intercourse. He only remembers that the coitus was very long and slightly painful. Immediately afterwards, he felt pain in the pelvis, which soon extended to the testicles, and never entirely left him afterwards. The following day a clear urethral discharge came on, which soon, however, became greenish. This varied much in its after appearances, and sometimes passed off entirely for a day or two. This blennorrhagia drew the patient's attention to a discharge from the urethra during defecation. At first, a few drops of a viscid fluid like white of egg were discharged, and

these were followed by an abundant evacuation of semen. This evacuation always took place, varying in quantity according to the efforts required during defecation.

From this time the patient practised masturbation, and at the moment of ejaculation, he felt a kind of commotion in the urethra, and observed that nothing was passed externally. After the erection had subsided, the semen escaped gradually. This he always noticed, though sometimes the semen remained in the canal for half an hour. When nocturnal pollutions occurred, the greater part of the emission remained in the urethra until the patient awoke.

During eighteen months, Gros underwent no medical treatment; afterwards he took emollients, preparations of iron, mercurial pills, large doses of copaiba and cubebs, and of Chopart's mixture; injections of all kinds were also employed without benefit. About the end of August, 1836, he came to consult me. He had frequently had sexual intercourse without communicating any disease to the female. The urethral discharge, and the pollutions during defecation, continued to the same degree; the urine was passed very frequently, and was generally rendered opaque by a thick cloud. Still, however, the patient's functions were performed pretty regularly, and he had not lost flesh; but his muscles were soft and flabby, his thoughts gloomy, and his voice weak and husky. Constant pain had annoyed him for two years in the joints, groins, and along the spermatic cords to the testicles. His eyes were intolerant of light, and constantly affected by a prickling pain.

The introduction of a catheter gave acute pain; the instrument was arrested for a moment in front of the neck of the bladder, by a little band, which tilted up its points.

On the 7th of October, I cauterized the membranous portion of the canal; acute and long-continued pain followed, and the urine was bloody and abundant. This inflammation had entirely disappeared at the expiration of three weeks, when the discharge rapidly diminished and soon disappeared. The efforts at stool, and the seminal discharges which accompanied them, had ceased much earlier, and the pains in the groins, spermatic cords, and testicles, as well as the sensations the patient experienced in his eyes, were relieved.

When Gros left the hospital, he was free from all the appreciable symptoms which he had on entering; as regarded ejaculation, of course he was unable to give any information, but he promised to let me know if he found the discharge arrested in the canal as before, and from that time I have heard nothing from him.

This patient was in the hospital at the same time as the subject of the preceding case, and I placed them in adjoining beds, in order the better to contrast their symptoms. Both were of the same age, and both experienced the same pollutions, and the same difficulty of ejaculation, after an attack of non-contagious urethritis. The point of the catheter communicated the same sensation of obstruction in both, and the same treatment cured them both.

I need not at present refer to what I have stated respecting a cicatrix situated in front of the orifice of the ejaculatory ducts. The most simple and direct means by which to obviate its effects is an

active cauterization in front of the verumontanum. On this account, in these two patients I more particularly cauterized the membranous portion of the urethra.

In the case of Gros, a single connection gave rise to all the accidents; therefore, it can scarcely be said that he committed excesses; but the act was not brought about by a natural necessity; it was accomplished in a laborious manner; under circumstances very likely to prolong its duration, and whilst the mucous membrane of the genito-urinary organs was exposed to considerable over-excitement. The act was therefore inopportune, and as such, it produced the effects of an excess. The urethritis following it seems to have been produced by the excessive duration of the act, and by the excitement of the organs by alcoholic stimuli before they were submitted to this fatigue. The color of the discharge showed that it was not spermatic. It seemed to be an ordinary gleet, arising from the same cause as the chronic vesical catarrh and the involuntary seminal discharges.

CASE XLV.

Coitus in a state approaching inebriety—Gleet increased by a journey—Diurnal pollutions—Cauterization, with rapid improvement—Relapse from premature fatigue of the organs—Cure by means of antiphlogistics and rest.

M. R——, a student of medicine, a native of the tropics, and of a very nervous temperament, addicted himself to masturbation about the period of puberty, and later to venereal excesses and the use of alcoholic liquors. His health became disordered, but by a regular life and exercise he strengthened his constitution, and for several years his health was excellent.

In 1836, after a debauch, when nearly intoxicated, he repeated coitus twice during the night, each time with unusual difficulty. On the fourth day he experienced pain in the canal, and scalding during the passage of urine. A slight mucous discharge soon appeared, and became more abundant by degrees. Baths and emollients diminished the irritation; but it increased afresh during a long journey, which the patient was obliged to take. After his return, he often applied leeches, and took copaiba, without being able to lessen the discharge. Every morning and evening and during the day, the point of the glans was moistened by a drop of viscid fluid. This circumstance would not have attracted his attention if he had not at the same time noticed a remarkable diminution in his virile powers. Ejaculation became very rapid; the erections remained incomplete; and several times the act was impossible. The patient had pain in the spermatic cords and testicles; a sense of weight in the perineum, and at the margin of the anus; both his limbs and his intellect grew weak. Absorbed, in spite of himself, in consideration of his condition, he was unable to pay attention to anything else. He lost his memory, was constantly abstracted, and incapable of applying himself in any intellectual employment, or bodily exercise. This mental and physical weakness, together with the disorder of all his functions, had increased

rapidly, when the patient came under my care. It was not difficult to discover the origin of his disorder. Each stool was accompanied by more or less abundant seminal discharges, and the patient's urine constantly contained a considerable quantity of well-formed semen, full of granules like boiled rice.

In the beginning of June, 1837, I cauterized the prostatic portion of the urethra. The operation produced its ordinary immediate effects. As soon as the inflammation had passed off, the diurnal pollutions disappeared, and energetic erections returned. The premature use of coitus, however, added to over fatigue during very hot weather, reproduced the irritation in the urethra, together with the diurnal pollutions, and the general symptoms that accompanied them. This relapse I treated with leeches, baths, enemata, and strict repose, which simple means soon brought about a perfect cure, and rendered a second cauterization unnecessary, although the patient pressingly demanded it.

Under other circumstances M. R—— had committed considerable excesses without experiencing any ill effects. To what, then, can we attribute the occurrence of the urethritis and the diurnal pollutions following it, but to the effects of the alcoholic stimuli?

The last part of this case shows how necessary it is not to disturb the effects of cauterization by any circumstances which may re-excite the irritation. It would be dangerous to recur to the same treatment, when irritation is again set up a few days after cauterization by the influence of exciting causes. When on the other hand, under such circumstances, antiphlogistics are employed, and rest is enjoined, the symptoms disappear rapidly; the cure is, therefore, only retarded: a second cauterization in such a case might be expected to produce much disorder.

These effects from the excessive use of stimuli are by no means rare, judging from the number of cases I have met with; the two related are, however, sufficient to give an idea of the general circumstances attending such cases; I shall, therefore, only extract the most important features of the others of which I have notes.

None of my patients were completely intoxicated at the moment of coitus, but all were more or less approaching that state. Few repeated the act; and some even were unable to terminate it. In all it was long, laborious, and attended with little pleasure; and the inflammation or irritation of the urethra came on very quickly. Urethral discharge did not invariably arise; when it did occur, it appeared very quickly. The pain produced, as well as the color of the discharge, differed much in different individuals. In two cases retention of urine occurred on the day following, and in another, prostatitis was set up. Several patients passed dark-colored and even sanguinolent urine for several days.

All fermented drinks are not equally hurtful, and according to my experience, beer produces the worst effects, especially when new.

To resume: a state approaching intoxication may be hurtful in two ways: first, by diminishing the sensibility of the nervous system; secondly, by favoring the occurrence of irritation in the

genito-urinary mucous membrane. As this double action may appear contradictory, I will explain it.

During complete intoxication coitus is impossible, because the functions of the cerebro-spinal system are suspended. But when fermented liquors have produced effects short of stupefaction, when excitement is followed by a commencing weakness, with a disposition to somnolency, venereal excitement is frequently manifested, on the nature of which it is very easy to be deceived, because in this state nothing is feared.

Indifferent erections occur. These may suffice to permit the commencement of coitus, but the sensibility of the genital organs is blunted, for the same reason that all other sensations are vague and dull. The pleasurable feeling may be sufficient to keep up the erection, but does not suffice to produce that high state of excitement which is necessary for the accomplishment of the act. This diminution of sensibility then, renders coitus incomplete, or retards its consummation, sometimes even rendering it impossible. It becomes evident, therefore, that such ineffectual efforts must favor the development of irritation in parts which are at the same time in a state of more or less active congestion.

Again on the other hand, it is well known that fermented liquors irritate the genito-urinary organs, and that those who take them in excess frequently lose their virility. It is well known, too, that drunkards are subject to chronic catarrh of the bladder, to engorgement of the prostate, dysuria, retention of urine, and chronic gleet; and I have before shown that wine is hurtful to patients laboring under spermatorrhœa (see case 21).

Fermented drinks, then, taken in excess, produce an excitement in the genito-urinary organs, which is very likely to run into a state of permanent irritation, at the same time that they disturb the intellect, blunt all sensations, and prolong the efforts of coitus by postponing the convulsive action which concludes the act. Hence it occurs that these tissues, already irritated by the direct action of the fermented liquors, are still more disordered by the violent and prolonged action of such unsuitable efforts. It is not wonderful, then, that coitus under such unfavorable circumstances should often produce hurtful results.

Characteristics of venereal excesses.—The *immoderate* and consequently *injurious* use of a thing, *useful* within proper limits, constitutes an excess. We must, therefore, consider the act of sexual intercourse under two points of view, in order fully to understand its different effects. It is widely different from all *abuses*, which can never be of service, however rarely they may be practised.

But to what extent may intercourse be regarded as moderate and useful, or at all events as not hurtful? When do excesses and consequently danger commence? These important questions have never been clearly resolved. In such a consideration each consults his own experience, and arrives at a different conclusion. The power and

activity of the organs of generation, as I have already stated, vary extremely in different individuals, and even in the same individual at slightly distant periods. No other organs in the economy present so great a variety in the activity of their functions. It is, therefore, evident that any statement in numbers would be incorrect as regards the majority of cases.

The *wants* of the genital system can alone furnish data applicable to each case. But the appreciation of these *wants* is not so easy as might be supposed. They vary with the individual, with the age, and a host of other circumstances, the combinations of which are almost infinite.

The genital *wants* may be factitious; a violent attachment may, in this respect, give rise to great illusions; the direct irritation brought on by *Herpes preputialis*, or by the presence of ascarides in the rectum, may excite morbid erections which have no connection with the real wants of the system. Irritation of the cerebellum, the spinal cord, or the nerves supplying the genital organs, may produce the same effects, so that the frequency and duration of the erections will not always show the amount of the true powers. In many persons the desires are greater than the powers of fulfilment; the imagination of such is constantly occupied by erotic ideas, whilst their physical powers are very little. The impulse in these persons is purely derived from the brain, and their immoderate desires cannot, therefore, furnish a measure of their real wants.

On the other hand, a too absolute and lengthened continence may end by throwing the genital instinct into a state of inertia, which might be mistaken for impotence, and which may lead to it, as we shall see by and by.

Excessive spermatic plethora is generally accompanied by a feeling of uneasiness and anxiety, with general discomfort, headache, laziness, and somnolency, or perhaps, in other cases, agitation, sleeplessness, impatience in temper, inaptitude for intellectual employment, despondency, love of solitude, and swelling and pain of the spermatic cords and testicles. These symptoms are especially seen about the age of puberty, in lads who have escaped falling into bad habits, and who have never had sexual intercourse; they are not rare in persons more advanced in life, who have been suddenly deprived of intercourse which had become habitual to them. It is remarkable that many of the same symptoms are found in cases of spermatorrhœa. It is sufficiently astonishing to find such opposite causes producing similar results, yet we see the same thing occur daily in other cases. For instance, too large or too often repeated bleeding constantly produces vertigo, dizziness, noise in the ears, convulsions, palpitation of the heart, &c., although these symptoms usually depend on a state of plethora. I have related many cases in which extreme weakness was accompanied by symptoms likely enough to cause a dread of apoplexy, cerebral affections, or disease of the heart.

From such facts, then, we may conclude, that opposite conditions

of the economy may produce phenomena sufficiently alike for skilful practitioners to be mistaken in them; and we must not be astonished at finding that a too long continence should bring on phenomena similar to those observed after too often repeated seminal discharges.

It is difficult, then, to judge *à priori* of the real wants of any individual, because the frequency and duration of the erections, the activity of the venereal desires, and the phenomena observed in the different functions of the economy, may prove deceitful. This is not the case, if we only consider the effects that immediately follow the venereal act. It is then always easy to foresee the remote consequences which are to be expected from more frequent sexual indulgence. The following signs cannot be misunderstood, and are applicable in all cases.

When coitus is followed by a sense of happiness, of general comfort, and of increased strength; when the intellect is more acute, and the body more active; when an inclination to take exercise, or to engage in intellectual excitement is observed, together with increased activity of the genital organs, it is evident that an imperious want has been satisfied within the limits necessary to health. The happy influence all the organs experience from the act is similar to that which follows the accomplishment of every other function necessary to the economy.

When, on the contrary, coitus is followed by a feeling of sadness, of uneasiness, fatigue, or satiety; when heaviness of the head and a disposition to sleep occur, with confusion in the ideas and disinclination for exercise, it may be presumed that the act has been too often repeated, or performed under unfavorable circumstances; and erections, however energetic, which occur soon afterwards, should be considered as excited by the commencement of irritation, and not by the return of the want.

It is only when coitus is followed by all these marks of debility, that it is injurious; indeed, sadness, ill-temper, and regret are never shown, unless the act be too often or unseasonably repeated. Such conditions, therefore, should be sufficient to show that there has been either excess or unfitness—which produce the same effects.

These two classes of phenomena, however, are rarely of so striking a nature as I have just supposed, because on the one hand, the want is seldom very imperious, and on the other, the excess is seldom very great; but at the same time there are few who have not experienced something analogous to the one case or the other. Cases intermediate between these extremes, constitute the ordinary course of life; then coitus is followed by no remarkable phenomena, and hence we must conclude that in the majority of cases it is far from exerting the hurtful influence on the economy that has been attributed to it. It is true, that I have related cases in which coitus seldom repeated was attended by the most unfortunate results; but in such cases the previous or concomitant circumstances must be taken into consideration.

The causes capable of rendering coitus hurtful are very various

and frequent. I have hitherto only considered a few of them. I now proceed to comment on others, which may act indirectly in bringing on spermatorrhœa, either by inducing excesses or by disordering the act itself.

Causes of Venereal Excesses.—In a former chapter I have pointed out the pathological causes that may bring on accidental irritation of the genital organs and excite abuse: it is evident that the same circumstances may equally lead to venereal excesses: what I have already said, therefore, applies to the subject specially under our consideration.

Age.—The sensibility which the genital organs acquire at the age of puberty, the kind of habitual orgasm of which they become the seat, the confidence in strength imparted by an unusual sense of vigor, together with the want of experience, may cause the youth to be carried away by the violence of his first feelings. But generally from our social state, he experiences obstacles sufficiently powerful to subdue his passions more or less completely. This would be highly advantageous, if the desires did not break forth at a later period, in a manner even still more dangerous. It is rarely, then, that the youth meets with circumstances favorable to habitual excesses capable of injuring his health. I have met with few such examples at this early age, in comparison with the number of cases of masturbation.

When, however, the development of the man is completed, and the law sanctions his emancipation from authority, he enjoys perfect freedom in his action, or he marries; and then it is, that free from all restraint, he gives license to his previously subdued passions. But if sexual intercourse is more frequent now than at any other period, the virile power also exists in greater energy, and the resistance to the causes of injury is more active: if the excitement, therefore, arise only from the genital organs, there will be no greater excesses now than at any other time, because the real wants are greater.

At a later period the powers diminish by degrees, until they become extinguished in old age, but the desires follow the same course. Thus, then, the energy of the genital organs, at the period of the greatest virility, would not suffice to induce excesses, if other causes were not superadded; and, on the other hand, the diminution of their power, with advancing age, would not render coitus more dangerous, but more rare.

Temperament.—The predominance of the lymphatic temperament renders the economy little capable of supporting venereal excesses, but at the same time, this temperament predisposes to them less than any other. All other circumstances being equal, individuals in whom the lymphatic temperament is very marked are less excitable, and less susceptible of being carried away by their passions.

The sanguineous temperament seems to be the one most favorable

to activity of the genital organs; but at the same time this temperament supports such activity better than any other.

In persons of nervous temperament, the action of the genital organs is apt to be confounded with that of the brain; of which I shall speak shortly.

Neither age nor temperament, then, can be set down as the true cause of venereal excesses, and of the disorders to which they give rise.

Genital Instinct.—The organs composing the reproductive system may be divided into two very distinct systems, the one destined for the material performance, the other for manifesting the impulses and directing the actions which lead to it. Proper harmony generally exists between these two systems at the periods of evolution and diminution of power in the organs, as well as at the time of their greatest power and activity: this is why the phenomena having reference to generation have been generally attributed to the exclusive influence of the sexual organs, such influence being more easily observed than that of the encephalon. I have, however, shown that the genital instinct may be developed long before the epoch of puberty; I now proceed to show that the two systems have not invariably an equal degree of development or activity, and to point out the results of the preponderance of one system or the other.

Genital Organs.—No other organs present such considerable differences either in development or power. I have met with individuals who early addicted themselves to unbridled masturbation, and who afterwards committed great venereal excesses, continued even to the age of sixty, without notable injury to their health; whilst on the other hand, I have seen others, who experienced very serious nocturnal and diurnal pollutions, as a consequence of very slight errors of conduct.

These differences of constitution are not always marked by characters announcing a predominance of one of the elements which constitute the organs; still less are they shown by the development of the frame or the muscular system. Thus, with a sanguineous, a nervous, or a lymphatic temperament, and with either a robust or a delicate constitution, the genital organs may present all the varieties of size, power, or activity.

The condition which predisposes least to sexual excesses is that in which development of the genital organs predominates over that of their encephalic organ. I have met with young men of extraordinary virile powers, who were only impelled by their physical wants. They experienced frequent and importunate erections, but their imagination remained unexcited. They practised masturbation, or had recourse to sexual intercourse, to free themselves from uneasiness, and thought no more of the act as soon as this uneasiness had ceased. Such patients have always consulted me for syphilis or blennorrhagia. The opposite conditions are those which predispose to excess.

Encephalic Organs.—I do not pretend to give an opinion here on

the part of the brain which receives the sensations derived from the sexual system. It is enough to know that some such organ exists, and that its action may precede that of the genital organs, and continue after it, or in other words, that this action of the brain may predominate. Such predominance of the genital instinct over the material instruments, is in general shown very early. The children we see occupied with women, five, six, or even ten years, before puberty, almost always show, during the rest of their lives, the same susceptibility for all that may produce or recall erotic ideas, whether such impressions arise from the genital organs, or are excited by the senses. They preserve a very lively and enduring remembrance of these impressions; their imagination gloats over them, and considers them in a hundred different ways: voluptuous images are mingled with their most serious thoughts, disturb all their meditations, and are present even in their dreams. They covet all women; but their virile powers do not suffice for the activity of their desires. Coitus fatigues and enervates them; they are aware of this, but are drawn into excess in spite of themselves, and as often as they are physically able. Such persons have no more power over their will than the insane; when they feel worn out after coitus, they make the best resolutions, which they break as soon as they are able, at the same time foreseeing that they will experience injurious effects from such infringement.

When desires are only excited by spermatic plethora, they are appeased as soon as the want is satisfied, and only return when the loss is repaired. There could, therefore, never be a real excess in such a case, if other causes did not determine the more frequent repetition of the act. Grave excesses, however, are almost inevitable, when the desires are found in great disproportion to the real wants of the system. A brilliant and active imagination, an exquisite sensibility, and great brilliancy of ideas, are often joined to this predominance of the sexual instinct. Individuals imbued with the spirit of poetry, whom we call *nervous*, frequently attach the most seductive colors to their recollections, and embellish them with imaginary charms; but their devouring passions are badly supported by their weak and irritable organs.

Such predominance of the nervous system too, renders the organs exposed to abuse or excess more impressionable; and as their functions may be easily perverted, it is evident that such individuals are very liable to the occurrence of spermatorrhœa. Other impulses derived from the faculties of the mind, may also induce an individual to overstep the limits of his true necessities. Of these I shall now speak.

Vanity is perhaps the most common cause of venereal excesses. Man covets the esteem of his race; and especially that of woman, of whom he is the natural protector. It is when in the presence of woman, that he is proud of his intellectual and physical superiority, and of his social position; but it is his virile power of which he is especially proud, and which he endeavors to prove—those who are

the least strong in this respect, fear the most to allow their weakness to appear. Hence excesses arise, which are not caused by the real necessities, and which do not spring from a violent passion. Young men who have given themselves up to the ardor of their passions soon after their marriage, endeavor to sustain the excesses with which they commenced. They dread causing a suspicion of coolness, or of infidelity, though they very soon repent their first imprudence—their irritated organs being no longer in the physiological condition which at first permitted them to support excesses. If I may judge from the facts I have learned from patients, their venereal excesses have been caused more frequently by an unfortunate vanity than by an ardent attachment. I admit all that an exclusive and blind passion concentrated on one object is capable of; but this does not prevent the impulses of which I have just spoken from acting at the same time; it must even lend them more energy.

Excitement caused by an ardent attachment undoubtedly exposes to great excesses, and it is not less evident that these excesses may become hurtful; but they are not so much so as if, were it possible, the same individual had committed them with perfect indifference. This is easily explained by referring to the excitement which the whole economy receives from feelings of joy and pride.

The sensations are more lively in proportion as the semen is better formed, and has remained (within certain limits) longer in its reservoirs. The excitement caused by its long-continued presence, may even proceed so far as to bring on a state of erotic fury, almost resembling mania. On the other hand, the sensations lose their acuteness when the semen begins to lose its stimulating properties, and coitus becomes more and more insensible, in proportion as the semen becomes more watery. All those who have consulted me in consequence of spermatorrhœa following venereal excesses, had remarked this diminution of pleasure long before any change took place in their health. At the same time that the sensations diminish, the erections become less perfect, and of shorter duration; they may even become so precipitate, that intromission is impossible. However rarely practised, coitus now is always followed by serious and general disorder, which passes off very slowly, sometimes even continuing ten days or a fortnight.

The diminution of pleasure is, therefore, the first sign which indicates that the individual has exceeded the limits of his real wants. The danger increases with the imperfection of the act.

What I have just stated is applicable to all seminal discharges, in whatever manner they may be produced; but by comparison, it becomes clear that they are more dangerous in proportion as they take place with less energy and afford less pleasure.

I need not repeat what I have already stated respecting the effects of coitus, as compared with those of masturbation; most surgeons agree on this point; but the same differences exist with regard to involuntary discharges. The same individual who could repeat coitus

several times without inconvenience, often feels worn out after a single nocturnal pollution. Advantage is always found to arise from substituting the natural mode of discharge for nocturnal pollutions, when those do not arise from irritation. The normal excitement resulting from coitus in such cases, gives tone to the whole economy, and especially to the genital organs; the discharges that take place are more easily compensated, and contraction of the ejaculatory ducts more actively opposes involuntary discharges. Nocturnal pollutions, on the contrary, leave the tissues in a state of atony, increase the relaxation of the ejaculatory ducts, and expose the patient to a return of the same accidents, and afterwards to diurnal pollutions. When nocturnal pollutions arise from irritation of the genital organs, coitus, by increasing that irritation, proves injurious; but when they are due to habit or to relaxation of the parts, coitus, even when often repeated, is of service as a substitute for them.

Nocturnal pollutions, when compared together, are liable to the same observations. All the patients who have consulted me in such cases, have noticed that at first the emissions were accompanied with dreams, violent erections, and lively sensations, and that they were then borne without injury; but that in proportion as these phenomena of excitement diminished, the pollutions produced more serious and lasting effects. Those which took place without erection or sensation were the most depressing. Diurnal pollutions, too, *cæteris paribus*, are more serious and more difficult of cure than nocturnal ones; and those which accompany the discharge of urine are more distressing than such as take place during efforts at stool. In a word, experience has convinced me that involuntary seminal discharges are serious in proportion as they occur easily.

To sum up then: whether the excitement arise from the cerebral system, the passions, &c., or from the presence of well-formed semen, emissions accompanied with the most energetic phenomena can alone be useful or uninjurious; and *cæteris paribus*, seminal discharges are more hurtful in proportion as they are accompanied by less energetic erections, and less lively sensations: in a word, as they are more *passive*.

I consider it of some importance thoroughly to establish this as a general principle, both because it is opposed to the ideas usually entertained on the subject, and because it is of daily application to the study and treatment of both voluntary and involuntary seminal discharges.

Accidental influences.—I have already spoken of the immediate effects of horse exercise, and alcoholic stimulants, as well as the remote ones of masturbation and blennorrhagia. One or two phenomena arising during sleep deserve mention.

Accumulation of urine in the bladder during the night, is a powerful cause of excitement of the genital organs—another proof of the intimate connection between the genital and urinary systems. This influence is well known to all who suffer from nocturnal pollutions;

nearly all such, warned by their own observations, take care to empty the bladder before going to bed, and every time they wake. Some even get into the habit of waking at stated periods for this purpose, and abstain from taking fluids in the evening. Others have told me that the presence of fæces in the rectum produces the same effects. The heat of the bed is also a powerful stimulus to the genital organs. It is not, therefore, surprising that the morning should be the period most to be feared by those addicted to masturbation, or tormented by nocturnal pollutions. Such erections, in most cases, do not arise from real wants, and therefore coitus becomes injurious. The act is indeed more or less an excess according to the weakness of the individual, and must be avoided.

General Effects of Venereal Excesses.—From the most remote ages a striking contrast has existed between the inhabitants of the East and those of the West. The following characters mark the different types. On the one hand, their habitual idleness and inactivity; dread of physical disturbance, or moral agitation; of change of any kind; and of all employment either of the body or mind; a dreamy existence; the life passed apart from men, and shut up among women; while on the other hand, their restless and constant activity; love of independence and liberty; an active life; aptitude for business; love of glory and aggrandizement; boldness and perseverance in enterprise; devotion to country and to principles; ardent desire of improvement, and of conquest, both by prudence and industry, and by war and colonization, by the patient observation of facts, and by the constant searching after truth. These characters have continued among all the changes of religion and politics, and are even more marked than ever at the present day. Considering all circumstances, the differences appear to me to arise almost entirely from the difference between the eastern and western nations in respect to marriage. On the one hand, there is polygamy, and on the other, monogamy. Throughout the East polygamy is encouraged; hence we see cowardly despots with crowded harems among the rich, and an impoverished and debased population, with a scarcity of females among the poor; from the latter circumstance the most revolting vices arise. In the West, on the contrary, monogamy is a strictly preserved institution; and we have domestic felicity, moderate governments, energetic and active lives; science flourishes; and the western nations have gradually become the mistresses of the world.

A circumstance remarked by many travellers in the East is, the anxiety with which cantharides and all other aphrodisiacs are sought after. Impotence arising from venereal excesses is common at an early age. The generative functions, then, appear to possess a very powerful and direct influence on the state of society, by affecting the physical and moral strength of those who compose it.

Special Effects of Venereal Excesses.—The influence of venereal excesses in producing involuntary seminal discharges was perfectly

well known to Hippocrates: it is probable, however, that he was aware of other causes.

How do venereal excesses act in inducing spermatorrhœa? By the influence of habit? by causing atony and relaxation of the parts? Doubtless we must take these circumstances into consideration; but there is a much more serious and much more frequent one. The local phenomena that immediately follow coitus, may be modified by the circumstances which preceded or accompanied the act; but they always present more or less increased action in the genital organs; the effects that result may then be referred to excitement, to irritation, or even to inflammation.

Whilst the organs are healthy, and intercourse is proportioned to the wants of the system, its effects is simply tonic and stimulant. The semen is more abundantly secreted and more energetically retained in the seminal vesicles, and so far the influence is useful, being within proper bounds. Coitus therefore is, under favorable circumstances, the natural excitement of the genital organs.

This is not the case with regard to masturbation, and the other abuses of which I have spoken, and hence such habits are so pernicious. Disturbance, disorder, and irritation alone result from unnatural abuses; a tonic effect is never produced. Intercourse, therefore, is substituted with advantage for either voluntary or involuntary discharges, so long as there is no irritation in the organs, but when irritation has once been set up, intercourse always increases the nocturnal and diurnal pollutions. A single connection, if there be irritation of the organs, may produce the most unfavorable results. Excesses, therefore, when the organs are healthy, do not produce their effects at first. But when they have been continued for some little time symptoms of irritation supervene, ejaculation takes place very rapidly, and there is often heat felt during micturition; the urine is more abundant, and there is frequent desire to pass it; the orifice of the urethra is red and injected. This irritation extends to the prostate and margin of the anus, as shown by a feeling of weight and uneasiness in the rectum and perineum, and by contraction of the sphincter ani, producing constipation. The spermatic cords and testicles are painful on pressure, and require to be supported by a bandage.

Sometimes chronic or even acute inflammation of the urethra may arise. In 1831, I was consulted by a peasant, about thirty years of age, for urinary fistula in front of the scrotum. He married at the age of twenty-two, and never had intercourse, except with his wife, who, on the other hand, never suffered from leucorrhœa, or vaginal discharge. The patient committed such excesses, that soon after his marriage inflammation of the urethra came on; this was situated chiefly in the spongy tissue, for there was very little discharge, and the chordee very severe. The passage of urine became difficult, and an abscess formed and broke in front of the scrotum. From careful and repeated examinations, I am convinced that the urethra was

completely obliterated to the extent of five or six lines, about half an inch in front of this fistula. The inflammation in this case then must have been severe, and it would appear that it was produced solely by excessive coitus.

The inflammation of the prostate is not always confined to its mucous follicles; it extends sometimes to the cellular tissue uniting them. Hence results more or less severe and complete retention of urine. In such cases catheterism should be avoided if possible.

Venereal excesses may also produce acute or chronic cystitis. I have lately treated a severe case of chronic cystitis, which had lasted five years and came on soon after a second marriage at the age of forty-five.

I have also several times met with symptoms of nephritis in individuals who had committed great excesses, and in whom no other appreciable cause seemed to have acted.

Inflammation of the vasa deferentia and testicles is by no means rare as a sequel to venereal excesses. The manner in which such inflammation is produced is well known.

Serious effects are, however, by far the most rare. I have not laid stress on them in order to show what ordinarily occurs, but that which takes place when the symptoms are less severe may be understood. Since irritation from venereal excesses passes so readily to the prostate and bladder, the seminal vesicles cannot escape, and this explains why involuntary emissions supervene. It is evident also from this fact that the involuntary discharges do not arise from atony or relaxation.

It is, however, difficult exactly to determine where the excitement of the genital organs that follows coitus begins to pass into irritation. As it is of much importance to decide this point, I shall describe the most usual symptoms that are manifested during the change.

At first the erections are more frequent and more energetic, and lead to a belief in a vigor which does not exist. New excesses are committed at a period when intercourse ought to be left off.

Frequent desire of micturition is the symptom that most frequently precedes involuntary discharges produced by venereal excesses. I have frequently been consulted by patients for this symptom alone, who had already suffered in health from unsuspected spermatorrhœa.

The changes in the phenomena of the act also merit serious attention. The erections, after having been frequent, long continued, and importunate, become rare, incomplete, and of short duration; ejaculation takes place with increasing rapidity, so that at length intromission is scarcely possible. The sensations also diminish in a very remarkable manner, and coitus becomes very fatiguing.

The first changes announce that irritation is being set up by the over-excitement of the parts; the second, that diurnal pollutions have already occurred.

When these symptoms first show themselves, the disorder would,

in many cases, be arrested spontaneously, provided the patients would put a check on their desires. This rarely occurs, however; and on the other hand, most of those who have sufficient power over themselves to preserve absolute continence, suffer at first from nocturnal pollutions, which cause them to relapse.

But as the economy becomes weaker, the patients are more continent; their desires diminish; their nocturnal pollutions are less frequent, and at length cease altogether, being replaced by diurnal ones. The patients are now strictly continent, yet derive no benefit; and hence, they often believe that the disorder of their health has caused the diminution in their virility. Some patients have no nocturnal pollutions, or, at all events, such pollutions continue a very short time; this arises from their tendency to constipation. The efforts necessary at stool bring on emissions rare at first, but afterwards frequent and abundant, in spite of enemata, and even when diarrhœa takes the place of constipation. In a short time these discharges occur also during the emission of urine.

Patients rarely have any suspicion of such evacuations; and when their health is so much deranged that they obtain medical aid, they are unable to give any exact details as to the origin of their disorder. According to the symptoms most apparent, therefore, the practitioner consulted diagnoses, chronic gastritis, commencing cardiac disease, threatening apoplexy, or pulmonary irritation. He bleeds, or applies leeches and blisters: if, on the other hand, he considers the case one of hypochondriasis, he prescribes mineral waters, amusements, travelling, &c. Still the disorder progresses, or at least, only a momentary amelioration occurs; consultations are held, but if any suspicion of venereal excess arise, it is always overthrown by the specious objection of which I have already spoken, while describing the effects of masturbation, viz.: that intercourse has ceased for a long time, and that the health has from that period become still more disordered. The details given are precise and circumstantial; the patient has high interest in confessing all the truth; he has nothing shameful to hide; his statement is, therefore, received without hesitation by his medical attendants. Hence we may imagine the errors which are likely to arise in the treatment of these cases.

CHAPTER VIII.

CAUSES OF SPERMATORRHŒA.

Action of Certain Medicines.

CERTAIN medicines—as astringents, purgatives, narcotics, stimulants, and diuretics especially—may bring on conditions from which spermatorrhœa may arise.

Astringents.

CASE XLVI.

Intermittent fever—Large doses of bark—Obstinate constipation—Diurnal pollutions—Symptoms of chronic gastritis, and of disease of the heart—The use of douches followed by rapid improvement.

M. S——, an officer, about thirty years of age, consulted me in 1828, for supposed disease of the heart, from which he had suffered for about eighteen months. He was tall, thin, and very pale; his voice husky, and his manners timid. On examining the cardiac region with the stethoscope, I found that the pulsations were rapid and tumultuous, and occasionally intermittent and irregular, but there was neither abnormal force nor extent of action, and there was no friction sound, nor bruit de souffle. The palpitations were much increased by active exercise, especially by mounting a hill, but they came on frequently whilst the patient was in a state of absolute repose, being excited by any unexpected noise, or by slight moral emotion. I was convinced that M. S—— had no organic disease of the heart, and soon after he had been told so, his pulse assumed its normal characteristics. He gave me the following history of his case.

During the winter of 1826, whilst at Corsica, he assisted in extinguishing a fire which occurred during the night, and took a severe chill. Shortly afterwards, he suffered from a very obstinate intermittent fever, for which he took large quantities of bark, always in the form of boluses. From this period, he became subject to obstinate attacks of constipation, his stomach became very irritable, and his digestion disordered. Several times he had symptoms of chronic gastritis, which was treated by leeches, antiphlogistic regimen, and baths. At length palpitations and difficulty of breathing came on gradually, tending to create a suspicion of cardiac disease, to combat which, small bleedings were frequently practised, and digitalis given without benefit. The patient attributed his constipation and digestive disorder to the bark he had taken, and the disorder of his heart to the excitement he had experienced during the fire.

By a little attention, I discovered the mode in which the bark taken had induced the symptoms the patient suffered from; obstinate constipation supervening, brought on involuntary emissions during defecation; these were at first slight and rare, but they afterwards became more abundant, and after a time quite habitual, notwithstanding the frequent use of enemata. The patient had been aware of these discharges from their commencement, but he attributed them to his prolonged continence. The urine also frequently contained semen. On the other hand, his erections had diminished by degrees, and had left him entirely, together with his venereal desires, for more than a year. He had never committed any excess, or practised any abuse, and had never had either blennorrhagia or syphilis.

Cold ascending douches, iced milk mixed with lime-water, and cold lotions on the perineum, produced a rapid improvement, and the season for using mineral waters having arrived, I advised the springs of Bareges. From that time I have had no communication from the patient.

Palpitations in this case, as in many others that I have related, arose from diurnal pollutions. These discharges could only have been caused by straining at stool, the patient's constipation being evidently attributable to the prolonged use of bark in substance. From analogy we may suppose that many other remedies may produce the same effects.

Purgatives.

I have already shown that irritation from spasmodic contractions of the rectum may extend to the seminal vesicles, and produce just as serious diurnal pollutions as those which arise from mechanical compression of the same organs. Therefore, if ascarides, diarrhœa, &c., can excite involuntary emissions, as well as a mechanical obstacle to defecation does, we may easily understand that drastic purgatives, by irritating the rectum, may expose the patient to the same dangers as astringents do by bringing on constipation. Drastic purgatives, as is well known, act chiefly by irritating the large intestines. Spasmodic contractions of the rectum may, therefore, be excited, and may induce diurnal pollutions, the severity of which will be proportioned to the extent and duration of the irritation, but as this irritation usually continues a very short time, the seminal discharges which result from it scarcely deserve to be considered as a disease. It is, however, easy to conceive that the too frequent repetition of drastic purgatives, or their too active character, may bring on in the rectum and neighboring parts, a more permanent state of irritation, which may become habitual, and may continue after the cessation of its exciting cause.

If, however, the abuse of purgative medicines may bring on spermatorrhœa in persons not previously affected by it, it is evident that those who were previously affected by the disorder must be much injured by their use. This fact becomes very important, because in almost all cases of spermatorrhœa the constipation is very obstinate, and the patients regard it as the primary cause of their sufferings.

It is to obviate this constipation that they seek medical advice; and the symptoms of hypochondriasis and cerebral congestion they manifest, induce the gentlemen consulted to administer purgatives freely. The patients themselves constantly recur to purgatives, and, although often worse after their use, they hope that the remote effects will prove more favorable. Under no pretext should the medical attendant permit the administration of anything more active than mild laxatives in these cases. Indeed, it is even doubtful whether laxatives can be used with impunity.

Narcotics.

CASE XLVII.

Frequently repeated narcotism at the age of sixteen from the vapor of tobacco—Dilatation of the pupils—Vomiting—Constant headache—Constipation—Nocturnal and diurnal pollutions—Impotence—Cauterization at the age of nineteen—Rapid recovery.

M. S——, of Stockholm, short and stout, and of lymphatico-sanguineous temperament, enjoyed excellent health from childhood, until at the age of sixteen, he entered a tobacco manufactory in May, 1835, and was employed in a small room where newly made cigars were dried at a high temperature. At least ten thousand cigars were constantly in the stove. At first, M. S—— did not suffer any inconvenience, because the doors and windows of the drying-room were left open; but about the beginning of November he was attacked by headache, which was felt principally behind the ears. This increased by degrees in severity and duration, and by the end of the winter had become constant; the patient was neither able to employ himself during the day, nor to sleep by night. Leeches were applied behind the ears, and on the following day he was seized by general indisposition, frequent vomiting, as well before as after meals, dilatation of the pupils, and constipation.

From this time the patient fell into a profound melancholy; he became excitable, timid, and incapable of any serious occupation. A seton was inserted in the nucha, and the application of leeches was repeated. No improvement took place, however, and blisters were applied behind his ears. These were followed by retention of urine. Soon afterwards, weakness of the lower extremities, loss of flesh, and palidity of the countenance, were added to the patient's other symptoms. The mineral springs of Carlsbad and Ems, and the use of sea bathing, with cold douches on the head, relieved the vomiting; but the other symptoms still continued.

In this condition, the patient came to consult me in July, 1836. From information received from the medical gentleman under whose care the patient had been at Stockholm, Paris, &c., I imagined the sea bathing had been most useful of all the means previously tried. I therefore advised M. S—— to continue taking salt-water baths until the end of the season, and consequently I did not see him again until the beginning of winter, when his weakness was much increased; his headaches continued unrelieved; his countenance was pale and livid; his intellect very sluggish; his memory uncertain; his sleep short and broken, with constant drowsiness; the pupils

extraordinarily dilated, and vision very imperfect; in fact, the patient seemed to be still laboring under the effects produced by the cigar stove.

The primary cause of this patient's condition could not be doubted; but the effects of narcotic poison usually pass off in a day or two. In this case, on the contrary, the headache had been combated by various means for two years. I was, therefore, considerably embarrassed as to what I should advise, when accidentally I saw the patient's urine. I was much surprised to perceive an abundant deposit resembling semen at the bottom of the vessel, and on questioning M. S—— I learned that, although he had never been addicted to masturbation, and had very rarely had sexual intercourse, shortly after the symptoms of narcotism first confined him to his bed, he had experienced abundant nocturnal pollutions, which increased in frequency. In November, 1836, he had as many as three each night; after this they gradually decreased in frequency, so that he had then only three or four weekly; he remarked that he was always worse on the following day. At first these pollutions were accompanied by energetic erections, and lascivious dreams; but these phenomena had greatly diminished, and the pollutions were no longer appreciable, except by the marks left on the patient's linen. For a long time M. S—— had neither experienced venereal desires nor erections, although he was only nineteen years of age. Spa water, iced drinks, cold lotions, &c., having produced no benefit, in the beginning of December I introduced a catheter. The sensibility of the urethra was such that I determined on cauterizing the prostatic surface. I had little hope of benefit arising from this operation, but a remarkable effect was produced. From that moment the nocturnal pollutions became more and more distant, and the constipation ceased spontaneously. On the tenth day the patient's urine was perfectly transparent, and from that time his headache, which had been unsuccessfully treated for two years, disappeared entirely; his sight became gradually stronger, and his pupils contracted; his ideas became clearer; employment was sought, and M. S—— was soon able to resume his occupation. His virility returned with great energy; during six months, obstinate erections were established every night, and often during the day, on the least cause of excitement, but no involuntary discharges took place. These violent erections, arising from the unaccustomed retention of the semen in its reservoirs, diminished by degrees; the wants became less imperious, and the functions returned to their normal condition.

I have seen M. S—— frequently since his recovery, and I am able to state that during two years his health has been perfect. In a letter which I have recently received from him, dated Stockholm, he informs me that the change of climate has not been injurious, and that he never enjoyed better health. He has resumed the habit of smoking, for which he felt insurmountable disgust during his illness.

This case shows very clearly the injurious influence of tobacco on the genital functions. The question arises, whether this influence is due to the action of tobacco on the cerebro-spinal system, or to the direct action of the agent on the spermatic organs? The first symptoms manifested presented all the characteristics of poisoning by narcotic substances; and these symptoms were very intense, and much prolonged; headache, too, was constantly present, and situated behind the ears: these circumstances might lead us to suppose

that the pollutions were caused by some special action of the tobacco on the cerebellum. But cauterization alone arrested the spermatorrhœa; the effects of the nitrate of silver were sudden, complete, and permanent. Impotence was, in a few days, replaced by violent and prolonged erections, which diminished only after six months; and it is worthy of notice, that the cephalalgia and dilatation of the pupils, which had continued from the commencement of the narcotism, only disappeared after the spermatorrhœa had been relieved.

There was, then, an idiopathic affection of the ejaculatory ducts, which was cured by the local action of the nitrate of silver; and the cephalalgia, dilatation of the pupils, &c., were kept up by the involuntary seminal discharges. The persistence of the symptoms for two years after the patient was removed from the influence of the tobacco, is thus explained.

The mode in which certain stupefying poisons act on the economy, and especially the dilatation of the pupils, might induce us to believe that the spermatorrhœa arose from relaxation of the ejaculatory ducts; but in the case of M. S——, the nocturnal pollutions were at first accompanied by phenomena which indicated active over-excitement of the genital organs. The application of blisters was followed by retention of urine, and exacerbation of all the symptoms; but if the involuntary discharges had arisen from relaxation, they would have been diminished by the absorption of cantharides. The excessive irritability present in the urethra, too, especially near the bladder, leaves no doubt as to the existence of acute irritation in the prostatic portion of the canal, and this irritation would of course extend to the spermatic organs. Thus we may account for the remarkable success of the cauterization.

CASE XLVIII.

Nervous temperament—Repeated narcotism between the ages of twenty and twenty-two from smoking—Impotence, &c.

I have a young man of very nervous temperament at present under my care, in whom nocturnal and diurnal pollutions have brought on pain in the loins, palpitation, difficulty of breathing, &c., symptoms which were supposed to arise from disease of the spinal cord, cardiac affection, and commencing phthisis. Among the exciting causes of these involuntary discharges, the effects of smoking occupy the chief place. The following is the patient's statement:

"At twenty years of age I wished to accustom myself to smoking; but a day never passed without my experiencing complete intoxication, attended with vomiting, vertigo, and trembling of the limbs. I continued the habit, however, and I soon began to perceive that my sight became weak, and that I lost my memory; my hands shook; and my digestion became much disordered. I noticed, also, great debility of the genital organs; my erections ceased; and at the age of twenty-two I found myself completely

impotent." This patient had rarely practised masturbation, and had never committed any excess when he first began to smoke; his health had previously been excellent. It is, therefore, evident, that the impotence, as well as the other symptoms, arose from the action of tobacco. Impotence at the age of twenty-two can only be produced by involuntary seminal discharges, provided there be no physical disability. In the present case, there was no doubt on the point, the patient himself having discovered diurnal and nocturnal pollutions.[1]

The action of tobacco on those who smoke for the first time, is too well known to require description: more or less disorder of all the functions, varying according to the constitution of the individual, invariably arises from it; and this disorder always presents more or less of the characteristics of poisoning by narcotics. These effects go off by degrees, as the patient becomes habituated to the use of tobacco, and generally after a time cease to be manifested at all. Some nervous and excitable individuals are unable to accustom themselves to the habit, as in the case just mentioned; in others again, smoking becomes an artificial habit, which in many cases is almost a necessity.

But this empire of custom has its limits, beyond which the narcotic influence reappears. In such as are not easily affected, this acquired habit is generally supported with impunity; but even then, if it is indulged in to excess, it must after a time be injurious. Thus it is that the most accomplished smokers often experience vertigo, cephalalgia, anorexia, &c., when they have remained long in an atmosphere densely filled with smoke, which is then drawn into the lungs, and probably produces worse effects than when merely drawn into the mouth, or swallowed, as in smoking.

In a word, then, if the power of habit can prevent the momentary effects of smoking from showing themselves, the frequent repetition of the use of tobacco produces more lasting effects on different organs. Disorder of the digestive organs is well known as occurring in inveterate smokers; that of the genital organs has not hitherto been noticed.[2] I believe, however, that it is by no means rare.

Cantharides.

I have already noticed that the application of a blister frequently contributes to increase or develop involuntary seminal discharges. But cantharides are not employed as a blistering agent only; they have been administered internally for the relief of impotence and to cure seminal discharges, which have been supposed to arise from atony or relaxation of the genital organs. None of the patients by whom I have been consulted had ever received even momentary benefit from the administration of cantharides; many experienced

[1] This case being still under treatment, I have omitted its further details.

[2] Many inveterate smokers among my professional friends, have mentioned to me the diminution of their venereal desires, as one of the effects of tobacco.—[H. J. McD.]

serious increase of all their symptoms—complete impotence taking the place of weakness of the organs. One patient, for whom an injection into the urethra of tincture of cantharides diluted with water had been ordered, received no benefit from any of the means I could devise for the cure of involuntary discharges brought on by such imprudence. The unsuccessful employment of cantharides, in cases of spermatorrhœa, might be taken as further evidence, were any required, that the disease does not generally arise from atony, or relaxation, but from irritation of the genital organs.

Camphor.

The action of camphor is the very opposite to that of cantharides. It is by sprinkling camphor over blisters that the irritating action of the cantharides on the genito-urinary organs is avoided. Camphor relieves, more than any other remedy, the priapism and great pain in the genito-urinary organs induced by the internal administration of cantharides. Hence it is generally and with reason considered as an anti-aphrodisiac.

I believe, then, that in moderate doses and under certain circumstances, camphor may be employed with advantage in the treatment of spermatorrhœa; I have, however, remarked that in too large doses, or when continued for a long time, camphor may induce more or less serious and obstinate involuntary discharges. One of my patients, who put camphor between the prepuce and the glans penis, suffered from such serious diurnal pollutions that his life was in danger; he had, however, previously suffered from involuntary discharges.

Nitrate of Potass.

I should not mention this preparation did I not consider it necessary to point out a grave error in the opinions generally received respecting its action on the genito-urinary organs. Nitrate of potass is supposed to possess the property of quieting the organs, and of removing venereal desires. Saline mixtures containing nitrate of potass are prescribed every day for the relief of the inflammatory symptoms in the first stage of blennorrhagia: there cannot be a greater error. Nitrate of potass is also regarded as a diuretic, because ordinarily it increases the flow of urine; and this is precisely why its sedative properties should be doubted. The quantity of urine can only be increased by stimulating the functions of the kidneys, or in other words, by acting on them as an excitant; when administered in too large a dose it produces hæmaturia, pain, &c. But it is not on the kidneys alone that nitre produces this stimulating effect; it increases all inflammations of the bladder, whether acute or chronic; it is even contraindicated in the most simple case of vesical irritation.

I have seen nitrate of potass produce the same effects in diseases of the prostate; it increases the stabbing and pricking pains and the sense of weight, which the patient always feels in that region. The following case shows that nitre may act in the same manner on the urethra.

A merchant of Gênes, wishing to take a purgative, sent to a druggist for an ounce of sulphate of magnesia. By mistake an ounce of nitrate of potass was returned by the messenger and taken Violent inflammation of the urinary passages, accompanied with a discharge resembling blennorrhagia, resulted, swelling took place in about the centre of the urethra, and when the acute stage of inflammation had passed off, a circumscribed induration, which obstructed the discharge of urine, remained. Twenty years afterwards the patient still suffered from this obstruction, for the formation of which there had been no other cause than the inflammation produced by the nitrate of potass. The patient had never had blennorrhagia, either before or after, and had never suffered any injury of the part.

It appears, then, that the nitrate of potass acts as a stimulant of the whole urinary apparatus, and it is at least probable that it produces the same effect on the spermatic organs. I am led to this opinion partly by analogy, but chiefly, because more than forty of the patients whom I have treated for involuntary seminal discharges had taken nitrate of potass in some form or other, and all, without exception, found themselves worse afterwards. Many of them also observed the same effects from preparations of squill, and, in fact, all other diuretics.

Ergot of Rye.

This singular production seems to act with as much energy on the genital organs of man as on the female uterus. In the districts where spurred rye is common, and the peasantry are not careful to separate the diseased grain from the healthy, the men show a considerable disposition to commit venereal excesses, and the women frequently abort. The population, generally, also present signs of premature decrepitude, which we can easily imagine may arise from involuntary seminal discharges brought on by the excesses they commit.[1]

Coffee.

The effects of coffee on the cerebro-spinal system are well known, but sufficient attention has not been paid to its action on other organs. Taken in moderate quantities, coffee excites the bladder and kidneys, increases the secretion of urine, and renders its dis-

[1] M. Robert, in the Annales de Thérapeutique, relates a case in which the ergot of rye is said to have cured spermatorrhœa. after cauterization and other means had failed. The medicine was given in pills in two grain-doses, combined with one grain of camphor. One of these pills was taken twice a day. The details of the case, however, are by no means clearly given. [H. J. McD.]

charge more frequent. It acts in the same manner on the spermatic organs, augments the venereal desires, favors erections, and accelerates ejaculations: taken in excess, however, it seems to produce injurious effects.

CASE XLIX.

Excessive use of coffee—Frequent and profuse discharge of urine—Nocturnal, and afterwards diurnal, pollutions—Impotence, &c.—Cauterization—Sulphuretted baths—Recovery.

A professor, æt. thirty, engaged in a new method of tuition, had recourse to very strong coffee to keep himself awake, and took eight or ten cups every night. A large quantity of urine was secreted, and micturition was much increased in frequency. After a few weeks the desire of emptying the bladder became so frequent and imperious, that the patient was obliged to leave his class several times during their meeting. Soon after he suffered from constipation and disordered digestion, attended with great discharge of flatus. His intellect and memory declined, so that he became unable to finish his course of instruction, and sleep had left him entirely, although he had for some time given up taking coffee.

On his consulting me, he confessed that he had become completely impotent, after having experienced frequent and abundant nocturnal pollutions, which diminished by degrees, and had not appeared for three months. I found his urine perfectly transparent, almost colorless, and very abundant; there was not the least cloud perceptible, but at the bottom of the vessel there were numerous transparent granules, which left no doubt as to the existence of diurnal pollutions.

Catheterism showed excessive sensibility of the urethra, especially near the neck of the bladder; and on this account I performed cauterization. The operation was followed by rapid improvement, and a few months afterwards the cure was perfected by the use of sulphuretted springs.

It is evident that the diurnal pollutions in this case arose only from the immoderate use of coffee; the first symptoms appeared soon after, and the patient had been subjected to no other cause capable of producing this affection. The irritation continued for six months after he had left off taking coffee; thus the effect was prolonged quite independently of its first cause, and in a manner which would lead one to suppose that it would not have ceased spontaneously.

What passed in the urinary organs is a good index of what was going on in the spermatic; the secretion of semen was increased as well as that of urine, and its excretion also became more frequent. The nocturnal pollutions diminished by degrees, because they were replaced by diurnal ones, which became more and more frequent and profuse. Perfect similitude, therefore, existed between the urinary and spermatic symptoms; their respective progress and characters, and the extreme sensibility of the prostatic portion of the urethra, show clearly enough the mode in which coffee brought on spermatorrhœa. It is likely enough that the occasional or moderate use of coffee

should stimulate the venereal desires, whilst they are diminished, and even completely extinguished by it when taken in excess. Its action is the same in both cases—that is to say, it excites the genito-urinary organs.

I have seen many other cases in which spermatorrhœa followed the immoderate use of coffee, but other causes acted simultaneously, so that the effects could not be traced so distinctly to one single cause as in the case I have just related. Almost all the patients, however, were scientific or literary men, who wished to keep up mental activity in order to prolong their hours of study. Some of these patients recovered by the use of baths and regular active exercise, combined with a strict regimen: others required various kinds of treatment—the natural sulphuretted waters being the most generally successful. Weak, delicate, and excitable constitutions appear most easily affected.

Another circumstance having reference to coffee is worthy of notice. All those who have consulted me for serious nocturnal or diurnal pollutions had given up its use of their own accord: they noticed that after taking coffee they experienced agitation, disordered vision, involuntary contractions in their muscles, and especially a notable increase in the secretion of urine, and in the involuntary seminal discharges.

Tea.

Analogy leads me to suppose that tea taken in excess may produce the same results as coffee; I have not, however, met with any well-marked cases illustrative of its action.[1]

There are many other agents which may excite or increase involuntary seminal discharges, but their action is not sufficiently energetic or often enough repeated to cause serious disease. I do not, therefore, mention them specially here, but shall take occasion to comment on them as cases present themselves.

I have now examined all the causes of involuntary seminal discharges which act from without. I have still to speak of those causes which may be attributed to the influence of other organs, and to congenital predisposition.

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[1] Experience enables me to confirm M. Lallemand's opinion, as to the injurious effects of tea on persons affected with involuntary seminal discharges. Several of my patients had discovered that tea and coffee always proved hurtful to them, and had renounced their use before consulting me. Such patients have found no ill effects follow the use of cocoa. I have not, however, met with any case in which the origin of involuntary discharges could fairly be attributed to the abuse of tea or coffee.—[H. J. McD.]

CHAPTER IX.

CAUSES OF SPERMATORRHŒA.

Action of the Cerebro-spinal System.

CEREBELLUM.—I have already stated that sexual ideas may precede the evolution of the genital organs, and always remain predominant, so as to produce a kind of erotic excitement quite disproportioned to the real wants. I may add that these precocious and excitable individuals are most alive to the diminution of their virility. In general, when this diminution arises from age, it is insensible, because the desires diminish in an equal proportion. But the persons I have described are more sensible than others to this change, and when it occurs rapidly and prematurely, it produces a deep impression on them, and frequently drives them to commit suicide.

Most surgeons have noticed the depression of spirits caused by amputation of the penis or testicles; but in this respect, also, there is a great difference between different individuals. A few years ago I removed the penis of a man, æt. forty-five, for cancerous disease. He recovered, and was fit to leave the hospital, when his wife came to see him for the first time after the operation. During the rest of the day he was silent and sad, and the following morning he was found dead. A post-mortem examination, made with the utmost care, failed to show any appreciable lesions of important organs.

Such striking cases of despair following the loss of the functions are rare; but it is very common to see grief derange the health, and thus shorten the patient's days. Old people, from whom portions of the genital organs have been removed, rarely experience this moral impression. I have always noticed, in such cases, that the joy of being cured is not broken by any regret. Whence does this indifference to the loss of virile power arise, if not from the weakening of the venereal desires, produced by old age?

I have had a patient, æt. thirty, in the hospital for some time, who received an enormous sabre wound on the nucha. A long cicatrix exists across the back of the neck from ear to ear. Venereal desire has entirely left him, and his testicles are atrophied. Erections, of course, have disappeared; yet this patient experiences more pleasure at having *reformed*, than sorrow at the loss of his virility. He always jokes when speaking of the wound and its consequences. I can only attribute this carelessness to his sexual ideas having left him at the same time as his virile powers.

From these facts, then, I conclude that the generative function requires not only the instruments necessary for the accomplishment of intercourse, but the organ in the encephalon destined to receive the sensations from these parts, and to direct their functions; that these two systems exercise a reciprocal influence over one another, in which influence the encephalic organ may preponderate either constantly or accidentally, according as the organ is developed prematurely, and in excess, or as it enjoys a momentarily increased activity.

Gall and his followers have regarded the cerebellum as the organ of physical love and the regulator of the genital functions, and on this point they have shown more unanimity than on any other; this is not the place to discuss the correctness of their hypothesis, but I must say, that from my own experience, I consider it at least probable.

CASE L.

Masturbation—Extreme weakness of the limbs and senses—Erections excited by percussion of the occiput—Catheters left in the urethra—Rapid recovery.

Dubourdeaux, æt. twenty-one, a soldier in the 36th regiment of infantry, of strong constitution, practised masturbation at the age of fourteen as often as three or four times a day without much injury to his health. At the age of twenty, he entered the army. A few months afterwards, he contracted a blennorrhagia, and, while suffering from it, performed a long march. He was scarcely cured when he took another long march, bivouacking at night, for about a month. Otitis occurred, and was treated with leeches and blisters, but ended in suppuration. After this was cured, the patient suffered much from noise in the ears and vertigo, and his sight became very weak.

On the 21st of December, 1830, D—— came to the hospital of St. Eloi, in the following condition: itch; enlargement of the prostate; sense of weight in the rectum; extreme weakness of all the limbs; serous infiltration of the hands, legs, and feet; an almost entire loss of vision. After the itch was cured, the paralysis of the inferior extremities increasing, issues in the loins were prescribed, but produced no benefit.

When the patient came under my care, he could neither stand, nor distinguish the numbers on the beds in his ward. He told me, that on accidentally striking his occiput, he had experienced a lively sensation resembling that produced by ejaculation, together with injection of the corpora cavernosa, producing more or less complete erection. He had since frequently repeated percussion of the occiput, which was always followed by the same phenomena; the voluptuous sensation induced seemed to pass through the whole length of the spinal cord, to the extremity of the sacrum. Some circumstances leading me to believe that the patient abused this discovery, and practised manœuvres he did not admit, and the swelling of the prostate at the same time rendering the discharge of urine difficult, I left catheters in the bladder, increasing their size gradually, and taking care to withdraw them as soon as

sufficient inflammation had been excited, and to replace them when the pain in the urethra had subsided.

The result soon convinced me that my suspicions had been correct. By degrees the paralysis of the lower extremities, the œdema of the hands, and the weakness of vision were relieved. After introducing the catheter six times in as many weeks, the patient had recovered his strength, stoutness, and the free exercise of all his functions. He left the hospital a few days after, confessing his errors and promising not to repeat them.

From the first information given by this patient, I thought that the attack of otitis had probably produced some chronic affection of the brain or its membranes, but the sequel showed that the almost perfect paralysis of the lower limbs, the swelling of the hands, and other symptoms, exclusively arose from masturbation. I have already mentioned the advantages derivable from the presence of a catheter in the urethra, in checking masturbation; but in the present case, a very remarkable circumstance offered itself, viz., the influence exercised on the genital organs by percussion of the occiput. The effects of this procedure were so constant, that the patient was able to procure himself erections at will, and to give himself up to his passions without restraint.

CASE LI.

Sickly childhood—Nervous temperament—Masturbation rare—Coitus still more so—Symptoms of aneurism and gastritis—Nocturnal pollutions—Predominance of erotic ideas—Tension at the nucha—The application of cold lotions to this region followed by considerable improvement.

A tax-gatherer, æt. thirty-four, of nervous temperament, whose childhood had been very delicate, from his having suffered from digestive disorder, with frequent vomiting, consulted me. He had practised masturbation occasionally about the age of sixteen, and at a later period had had sexual intercourse, but never more frequently than three or four times a week. At eighteen years of age, he suffered from palpitation of the heart, attended with oppression of breathing, pain in the stomach, and involuntary muscular contractions. These symptoms gave rise to suspicions of aneurism, gastritis, &c.; in consequence of which, frequent abstractions of blood, both locally and generally, and the use of blisters and issues, were prescribed; with the exception of the issues, these means all proved injurious. The blisters evidently seemed to favor the occurrence of nocturnal pollutions, which took place three or four times a week about this time, taking the place of voluntary emissions. Shortly before he consulted me, this patient attempted sexual intercourse by the advice of his physician, but found himself much worse afterwards. All the precautions recommended to prevent the return of the nocturnal pollutions had also proved unsuccessful, and the patient had remarked that these were more debilitating in proportion as they took place with less signs of erection or feelings of pleasure. Their effects were often felt for several days.

The extraordinary presence of erotic ideas in this patient struck me forcibly. Notwithstanding the small development of the genital organs,

nothing could remove lascivious images from his imagination; they were present during the most serious study. In vain he gave up theatres and amusements; in vain he had recourse to serious books, and religious or scientific discussions; he was constantly assailed by libidinous thoughts, which presented themselves under a variety of forms, and were ever present in his dreams. He experienced, also, an habitual sense of tension and uneasiness in the posterior and inferior region of the head. Of all the means employed, cold lotions applied to this region alone produced any notable diminution in the frequency of the nocturnal pollutions; but this effect was never of long duration.

In this patient the causes by no means tallied with the serious effects produced, or with the persistence of the disease. Numbers have practised masturbation and coitus much more frequently without experiencing any ill effects. On the other hand, the constant presence of erotic ideas showed an activity of the genital instinct, which was by no means in relation with the condition of the genital organs. The sensation referred to the nucha, and the effects of cold lotions applied to this part seem to indicate that the affection was produced, or at least kept up, by abnormal excitement of the cerebellum.

In several cases of involuntary seminal discharges, I have found the patients complain of habitual heat, dull pain, and sense of tension in the occipital region; sometimes accompanied with pulsation of the arteries. One of my patients experienced a nocturnal pollution whenever his head rested on a soft pillow. I must admit, that in such cases I have not obtained much success by using applications to the nucha and its neighborhood; indeed, I have only once seen temporary improvement result from this treatment.

On the other hand, these symptoms are much more rare than any others of which I have hitherto spoken. Thus, for example, symptoms which we may refer to the brain, are much more frequently presented. There are few patients who do not experience diminution of memory and intellect, pain in the frontal region, pulsation in the temporal, and weight in the anterior and the lateral parts of the head, with attacks of vertigo, dazzling of sight, and cerebral congestion; some even have serious falls; and the integuments of the face are much more frequently red and burning than those of the nucha. Symptoms of chronic stomach disorder are still more common, and it is by no means extraordinary to see accidental irritation of the stomach increase or re-excite involuntary seminal discharges. The influence of the cerebellum in causing spermatorrhœa is, therefore, a subject which requires further research, with varied and numerous cases, in order for it to be properly understood.

In such cases my experience leads me to recommend the application of ice and leeches to the nucha, when particular symptoms are observed in this region, or when other means have failed. But in order to judge the effects of these remedies fairly, it is necessary to abstain from all other treatment at the same time, and to guard

against preconceived opinions. Exaggerated opinions have done more injury to the truth than the most violent opposition.

It is impossible, for instance, to admit, with Gall, Voisin, Londe, Chauffard, &c., that we should always direct our remedies towards the cerebellum in cases of satyriasis, nymphomania, &c., or that the cerebellum is always the origin of the phenomena which take place in the genital organs. Such an assertion scarcely requires a serious consideration. It is hardly necessary to refer to the powerful and immediate influence exercised over the thoughts, dreams, venereal desires, erectile tissues—indeed, over all the functions, and all the organs of the economy—by the presence of well-formed semen in its reservoirs. Such effects are seen daily and constantly, and have been well understood for a long time. Ascarides, by causing irritation in the rectum, suffice to excite long-continued erections, even in children, and to incline towards abuses and excesses ; or, by acting directly, to bring on debilitating involuntary emissions. Sebaceous matter retained between the prepuce and glans, may produce the same effects. In women, excision of the clitoris takes away the passion for masturbation. It is well known, too, that the presence of an eruption on the labia often excites nymphomania. How do these facts accord with the opinions of those who would refer all such influence, and would direct all their remedial measures, to the cerebellum ?

There are other arguments which I regret to see incessantly brought forward to prove the action of the cerebellum on the genital organs. As an example of these I may mention the effects which *sometimes* accompany apoplexy of this organ.

Gall well explains the proneness to masturbation in such hydrocephalic children as attain the age of puberty, by remarking that this affection, acting only on the brain, allows the cerebellum a predominating influence. This deduction seems correct, and may be applied with just as much truth to idiots and cretins. But apoplexy of the cerebellum instantly abolished the function of the part attacked : to explain pathological erections by this alteration, and to conclude that the cerebellum is the exciting organ of the genital functions is, therefore, an evident contradiction. Instead of laying stress on such facts as these, Gall and his followers should have regarded them as serious objections to their system ; they should have sought to discover how erections could take place in spite of the greater or less destruction of the cerebellum ; they would then have seen that such erections are less common than they are supposed to be in cerebellar apoplexy, and that they much more frequently accompany injuries of the spinal cord, &c.,—circumstances which the adversaries of phrenology have taken care to remark : so true is it, that truth makes itself known by all ways.

The exaggeration and false reasoning that have obscured all discussions relative to the true seat of the genital instinct must not, however, induce us to forget the importance of pathological facts. What

I have said, should make the profession take into consideration the influence the cerebellum may possess in causing involuntary discharges of which they are unable to discover the cause, especially when such discharges are accompanied with special symptoms referred to the occipital region.

Spinal Cord.

The opinion has been given, that diurnal pollutions are sometimes the cause, and sometimes only a symptom, of atrophy of the medulla spinalis. The following case which has come under my observation, I think throws some light on this subject.

A private in the engineers wishing to get out of his barracks to visit a female, fell from a great height on his buttocks. Serious concussion resulted, but no fracture. Notwithstanding bleeding, leeches, cupping, issues, &c., the lower extremities remained paralyzed. After a time, however, galvanism restored slight motion, and obscure sensibility. Still the glans, the prepuce, and skin of the penis and scrotum, remained completely insensible. Pinching, and pins driven into them were unperceived by the patient. Catheterism, which at first was frequently necessary, never induced complaints. But chronic vesical catarrh supervening, I cauterized the bladder and its neck, and this operation gave just as much pain as in other patients.

The same phenomena followed. At first the urine was sanguinolent and thick, but soon lost this appearance, and was passed with greater force and facility. Whilst treating this patient, I often found the penis in complete, and indeed remarkable erection. I mentioned this to the patient, who told me that he often suffered from this state of priapism, which he found very disagreeable on account of the obstacle which it formed to the discharge of urine. In order to relieve himself, he had several times tried masturbation, but had never been able to procure ejaculation, notwithstanding the erection was perfect, and he had persevered in his manœuvres. He experienced no pleasure, and only attempted it in the hope of relieving the priapism. Having one day obtained permission to leave the hospital, he visited the female, to see whom he had scaled the barrack walls in so unfortunate a manner. He passed several hours with her in almost continual connection, without being able to procure ejaculation, and without experiencing the least sensation, On the other hand, all his functions were well performed, with the exception of slight costiveness; he gained flesh daily, and his moral faculties were not affected; abundant nocturnal pollutions took place at long intervals, and were preceded by erotic dreams, but accompanied with little pleasure.

This case shows clearly the special influence of the spinal nerves in contradistinction to that of the branches of the sympathetic, distributed to the different parts of the genital apparatus. In fact, in this patient, all the phenomena dependent on the cerebro-spinal apparatus were abolished, whilst the others had not experienced the

least change. Voluntary ejaculation was impossible, because the penis had lost all sensibility, and consequently, all its influence over the seminal vesicles. This confirms what I have already stated respecting the difficulty of ejaculation caused by intoxication or narcotism. It is sufficiently evident that alcoholic drinks, &c., when the stupor is perfect, may retard ejaculation, or even render it impossible, although erection may be complete. In this patient, there was constant and energetic priapism, which was not accompanied by any lascivious ideas, because it was produced directly by the accumulation of semen in its reservoirs, without any sensation being transmitted to the encephalon, at least during the waking state. But during sleep, all the senses being inactive, as well as the cerebro-spinal system, and the nerves derived from it, sensations transmitted by the branches of the trisplanchnic, might awaken images and associations of ideas, as well as produce from time to time lascivious dreams and nocturnal pollutions—proving that these phenomena are directly under the control of the great sympathetic.

On the other hand, this patient never had diurnal pollutions, notwithstanding the complete paralysis of the nerves given to the genital organs by the spinal cord; we may conclude, therefore, with every show of reason, that involuntary diurnal pollutions cannot be *symptomatic* of *atrophy* of the spinal cord, or of the nerves arising from it.

I do not imagine that the same thing holds good as regards irritation or excitement of the spinal cord, which may be transmitted to the genital organs by the nerves which are distributed to them. I believe that serious seminal discharges may arise from this cause—founding my opinion on the injurious influence produced in some cases by issues or cutaneous eruptions in the lumbar region, as well as by the manner in which lying on the back produces nocturnal pollutions, and the incontrovertible benefit derived in some cases of spermatic discharges, from douches and cold applications on the lower portion of the spinal column. I have, however, no records of any case in which this spinal irritation was sufficiently marked and isolated to merit its being related here.

CHAPTER X.

CAUSES OF SPERMATORRHŒA.

Congenital Predisposition.

THE causes of which I have yet to speak are very various, and for the most part, sufficiently obscure. The facts which I shall have to relate are even less known than those I have treated of hitherto. They are more difficult of appreciation, and probably they present

also greater interest. They refer, in fact, to unfortunates, whose future is seriously affected by causes entirely independent of their conduct, but which weigh down all their lives like a kind of fatality. They differ from all the causes I have hitherto examined, by being inherent in the organs of generation themselves. But they may present themselves under very different aspects; they may arise either from vicious conformation, from a condition of original debility, from a congenital relaxation, or irritability of the organs, or from hereditary predisposition.

In examining these various *congenital* causes, I shall, as before, pass from the more evident to the more obscure; and I shall take this opportunity of commenting on the characters, by means of which we can sometimes estimate, with some degree of precision, the powers, so unequal, of the generative organs. This is of considerable importance in the study and treatment of involuntary seminal discharges.

Sebaceous Matter.

CASE LII.

Natural phimosis—Frequent nocturnal pollutions from the age of puberty—Abundant and fetid sebaceous secretion between the glans and prepuce—Circumcision at the age of twenty-three followed by immediate relief.

M. B——, æt. twenty-three, of nervous temperament, having enjoyed good health up to the period of puberty, from that time presented a yellow and leaden appearance, with sunken eyes, forehead covered with acne punctata, and timid manners. For a long time he had appeared as if plunged into deep melancholy, and constantly sought solitude. He was restless, but was unable to bear fatigue. Digestion was difficult, and his intellect dull. This disorder had lasted four or five years, but had increased sensibly during the last year before M. B—— came to consult me. I suspected him of bad habits, but he assured me that he had escaped them from want of desire, and that he had never had sexual intercourse. From the period of puberty, however, M. B—— had been subject to nocturnal pollutions, the frequency and abundance of which had progressively increased; and in spite of the means generally recommended in such cases, pollutions occurred every night, and sometimes two or three times during the night. He had never noticed ascarides in the fæces, nor experienced itching at the anus.

I was uncertain to what cause to attribute these pollutions, when on examining the genital organs, I noticed that the opening of the prepuce was very narrow, and that abundance of sebaceous matter escaped. Pressure made from behind forwards produced the discharge of a large quantity of matter of milky appearance and considerable fetor. I concluded, therefore, that the natural phimosis, by preventing the discharge of the sebaceous secretion, was the cause of involuntary discharges, and in consequence recommended circumcision, which was performed immediately. I found a large quantity of sebaceous matter resembling soft cheese in color and consistence, and of a very disagreeable smell, covering the surface of the glans, and especially collected round the *corona glandis*. The glans itself was vividly red, almost

entirely deprived of its epithelium, extremely sensitive—the least friction causing a discharge of blood.

From this moment, M. B—— passed a fortnight at a time, and sometimes longer, without having nocturnal pollutions, which afterwards only arose from spermatic plethora. A rapid change took place in his health and habits, so that at the end of the month he was scarcely recognizable.

This case is the most simple and perfect of the kind that I have met with. It shows clearly enough, that natural phimosis may be sufficient to bring on pollutions, for the patient had never practised masturbation, nor had sexual intercourse. It was evident that the prolonged retention of the sebaceous matter gave it an acrid and irritating character—the constitution being free from humoral disposition, or cutaneous affection. On the other hand, the genital organs were well developed, and the health was not very seriously affected, so that excision of the prepuce produced a sudden and durable effect. I have seen many analogous cases, but in these the effects of this mal-conformation of the prepuce in causing involuntary discharges, were not so marked, because other causes were usually superadded. Thus, in one case, ascarides were present at the same time, and in many others the patients had practised masturbation. Masturbation in such cases was generally excited spontaneously, and it is likely enough that the phimosis should contribute to this result. Irritation of the glans by sebaceous matter excites importunate erections and titillations, which attract the attention of children to the parts, and induce handling and friction. We may, therefore, attribute the spontaneous occurrence of masturbation in young children who are thus formed, to the too long-continued presence of the sebaceous matter between the glans and prepuce. Numerous examples have left me no doubt on this subject.

The following case, which is still under my care, presents remarkable circumstances.

CASE LIII.

Natural phimosis—Erections at the age of eight—Attempt at coitus at nine—Vesical catarrh—Diurnal pollutions—Paraplegia, &c.

A peasant consulted me for his son, æt. fifteen, who, for two years, had experienced a constantly increasing paralysis of the lower extremities. On his sides and loins were marks of numerous issues which had been tried during two years. Large excoriations had formed on the sacrum and trochanters.

On examining the genital organs, I noticed that the prepuce was very narrow; and on pressing it to get rid of the sebaceous matter which presented at its orifice, the penis became erect. I learned from the parents that this boy had erections at the age of eight; and that at nine years of age, he had been found attempting coitus. The boy himself admitted that the itching with which he was tormented led him to rub the genital organs, and thus induced manœuvres which he had since continued.

The first symptom that presented itself was frequent desire of micturition, and this was followed in about a year by complete incontinence of urine. In the course of the second year, the patient's legs grew weak; he lost his intellectual capacity; digestion became disordered; diarrhœa came on; and the discharge of urine and fæces caused excoriation of the skin. Salt and aromatic baths, tonics, excitants, &c., had been just as useless as issues. The cause of the disease was unsuspected.

Masturbation had become very rare, but the urine was thick, muddy, and very fetid—so much mucus was passed, that I was unable to make sure of its containing semen—but the patient had constant pollutions at stool.

I first performed ablation of the prepuce; and eight days after, I cauterized the bladder and surface of the prostate. A month afterwards, the urine was perfectly transparent, and presented a healthy appearance; it was no longer passed involuntarily. Sensibility of the skin of the lower extremities had returned. Improvement was here arrested, however, and I lost sight of the patient.

This patient had never been subjected to the influence of bad example, and had always been well cared for. He explained clearly how he was led to practise masturbation; and circumstances gave an appearance of truth to his recital. It is, then, to the irritating action of the sebaceous matter that we must attribute his unfortunate condition.

Natural Phimosis.—In the venereal wards at the Hospital St. Eloi, numerous soldiers present themselves yearly for attacks of balanitis, which they consider *bastard clap*. Certainly, in many of these cases, the discharge arises from the action of blennorrhagic virus; blennorrhagia is present at the same time, and both discharges have supervened on impure connection. But in many other cases, the inflammation arises from the acridness of the sebaceous matter, caused by its too long retention between the glans and prepuce. Such cases of balanitis are rarely observed, except in persons whose prepuce is too contracted to permit the glans being uncovered. Sometimes they occur as the result of drinking or fatigue, without any connection having taken place. These inflammations rapidly disappear when the prepuce has been removed, or even when the parts are kept constantly washed—leaving no doubt as to their true cause.

In many cases, when I have practised circumcision for congenital phimosis, I have found the glans and prepuce adherent to a greater or less extent, especially in the neighborhood of the *corona glandis*, around which the sebaceous matter accumulates most readily, and whence it is most difficult of removal. In some cases I have seen these adhesions extend over half the extent of the glans, and they were always situated in the parts furthest from the preputial orifice. In a few cases, I have only found the point of the glans free from adhesions. Such adhesions could only be established by the destruction of the mucous linings of the parts—these linings never becoming adherent so long as they retain their mucous structure.

The inflammation of the surfaces of the glans and prepuce must, therefore, have been sufficiently severe to cause superficial ulceration.

I have frequently seen the surface of the glans excoriated, with elevated papillæ and drops of blood exuding from them; at other times I have found the glans deprived of epithelium with excavated ulcers. In such cases, the corresponding surface of the prepuce was always more or less excoriated, or ulcerated also; and these excoriations were often accompanied with inflammatory swelling of the lymphatic glands in the groin. These ulcerations have been confounded with chancres; but their edges are thinner, and they are less deeply excavated; the neighboring parts, too, are covered with a layer of sebaceous matter of caseous aspect and fetid smell. Such ulcerations disappear after the removal of the prepuce, their appearance becoming changed even in twenty-four hours. Fomentations and cleanliness do all the rest.

Such is the condition which the parts present in cases of recent balanitis; and these are the inflammations and ulcerations that cause more or less extensive adhesions of the prepuce to the glans; such adhesions are generally cellular, but sometimes fibrous or even cartilaginous, according to the severity and frequent repetition of the inflammation.

Various degrees of induration also result, according to the intensity, the duration, and the frequency of the phlogosis. Thus, I have often found the mucous membrane hardened, thickened, and covered with numerous papillæ, sometimes fibrous or even cartilaginous, with three times its natural thickness. I have also met with cases in which the prepuce has become cancerous. I have operated in several cases of cancer of the pēnis, too, which certainly arose from no other cause. The patients were generally peasants between fifty and sixty years of age, who had never known other than their wives, but who had frequently suffered from balanitis, attended by abundant discharge, swelling of the prepuce, and excoriation of its opening, which was so contracted as to prevent the passage of the glans. I have seen one case also, in which balanitis, irritated by a forced march, and the abuse of alcoholic stimulants, passed into gangrene, by which the greater part of the glans was destroyed.

Such have been the accidents which I have observed in those whose prepuce was too narrow to permit the glans being uncovered; accidents which I can only attribute to the long retention of the sebaceous matter in a kind of cul-de-sac, into which a certain quantity of urine passes every time the patient makes water.

But natural phimosis is not the only cause of the injurious effects produced on the genital organs by the sebaceous matter; as the following case will show.

CASE LIV.

Very long prepuce—Badly developed genital organs—Childhood delicate—Incontinence of urine—Sebaceous discharge from the orifice of the prepuce at the age of ten—Nocturnal pollutions increasing in frequency—Hypochondriasis—Loss of memory and failure of intellect—Constipation—Diurnal pollutions—Constant applications of lotions attended by relief—Circumcision at the age of twenty-eight, followed by cure.

M. J. B——, of Amsterdam, of delicate constitution and lymphatic temperament, was subject during childhood to incontinence of urine, and always suffered from frequent desire to make water. About the age of ten, a whitish matter formed, and was discharged from underneath the prepuce; after which erections occurred, and were soon followed by emissions: a very disagreeable smell accompanied the preputial discharge. The seminal discharges increased as the patient's passions were roused, and he grew sad, silent, discontented, and constantly occupied with the origin of his disorder. He imagined that the whitish discharges arose from venereal disease, although he had never had connection. His health became much disordered, and at the age of nineteen he mentioned his condition to his medical attendant. Lotions were prescribed, which removed the sebaceous matter and produced considerable improvement in the patient's health.

M. B——'s bowels became constipated, however, and he perceived that he passed semen while at stool, in consequence of the efforts necessary. The nocturnal pollutions diminished in frequency, but still occurred occasionally.

When M. J. B—— consulted me in November, 1836, he presented the following condition: small stature, limbs slight and chest narrow; skin fair and soft; hair white and thin; face very pale; manner timid and embarrassed; hesitation; habit of stammering, arising from disorder in the intellect and loss of the memory; genital organs remarkably small; penis small and short, hidden among long scanty white hairs; prepuce very long, forming numerous folds in front of the glans; surface of the glans covered by a thin layer of sebaceous matter, notwithstanding the utmost cleanliness on the part of the patient; scrotum compressed and much folded, containing only the right testicle, about the size of an almond, the left being felt in the inguinal canal attached to a portion of omentum. No spinal curvature (which the patient had feared), his mistake arising from the projection of the hips and pelvis, which resembled those of a woman.

I removed the prepuce entirely in order to put an end to the influence of the sebaceous matter on the glans; catheterism not giving much pain, I did not consider cauterization necessary; but in order to give tone to the organs, I left a catheter in the bladder for an hour or two at a time once a week, and ordered the free use of cold douches to combat the constipation. The patient's temperament being exceedingly lymphatic, I afterwards prescribed three or four aromatic baths weekly, with the habitual use of Spa water.

These means lengthened the periods between the nocturnal pollutions, diminished the constipation, and lessened the involuntary discharges that took place when the efforts at stool were considerable. Acupuncture of the perineum and prostate produced more rapid and decided effects. After

this had been practised, sixteen days were passed without nocturnal pollutions, and the efforts at stool did not cause any seminal discharge. By degrees the patient's face became more healthy-looking and animated; his strength and energy returned; his character regained its boldness and gayety; erections became frequent and energetic; and his health altogether having become as good as could be desired, M. B—— returned to his home.

Six months afterwards I accidentally met M. B—— in Paris; he frequented theatres and amusements, and went into society; indeed his character was quite changed.

I have seen few men so badly developed as M. B——. It was certainly to the poor development of the penis that the length of the prepuce was attributable—the skin of the penis not being longer than natural, though it proved exuberant when compared with the parts it was intended to cover. The scrotum presented the same appearance as the prepuce, and from the same cause. It was retracted towards the pubes, and formed numerous and deep folds—the testicles not being more developed than in a child of eight years; the left one, too, was entangled in the corresponding inguinal canal. This slow descent of the testicles is a sign of weakness, which corresponded with their small dimensions.

The incontinence of urine to which M. B—— was long subject, announced debility of the urinary passages, from which no opinion could be drawn in favor of the power of the spermatic. The connection between the two systems showed itself to the last—a frequent desire to micturate accompanying the seminal discharges.

The fancied deformity of the spinal column was merely a projection of the hips, which gave the form of the female sex—a conformation which I have frequently observed with extreme weakness of the genital organs. I should notice that M. B—— was born and brought up in Holland; that his childhood was delicate, and that his temperament was very decidedly lymphatic.

It may be readily conceived, that with these predispositions M. B—— escaped all bad habits, and that he continued continent; yet at ten years of age he was subject to frequent nocturnal pollutions. How was this? The pollutions seem to have arisen from the stimulating influence of the sebaceous matter collected between the prepuce and glans. The improvement derived from the use of lotions at the age of nineteen corroborates this opinion. These means, however, only gave momentary relief; circumcision at the age of twenty-eight, did not suffice alone to bring about perfect re-establishment, in consequence of the debility of the genital organs and the obstinate constipation which had excited diurnal pollutions, added to the difficulty of breaking a habit which had continued eighteen years. Aromatic baths, Spa water, frequent douches, and lastly, acupuncture, were employed to combat these complications. The remarkable effect of the last remedy shows that habit had much to do with keeping up the pollutions.

CASE LV.

Very long prepuce—Badly developed erectile tissues—Abundant secretion of sebaceous matter—Seminal emissions induced by horse exercise, and afterwards by incomplete intercourse—Marriage unconsummated during five years—Diurnal pollutions—Circumcision followed by rapid cure.

M. C——, of robust constitution, born in Switzerland, the son of healthy and strict parents, was early imbued with rigid moral and religious principles. At the age of eighteen he experienced for the first time, while on horseback, an abundant seminal emission, and he afterwards frequently had recourse to the same means to excite a return of the voluptuous sensations, against which he had never been warned. After a time, too, he found a means of procuring them by other manœuvres. Still he did not practise these abuses very often, often abstaining for a month or two at a time; and consequently his health was uninjured. At the age of twenty-five, having never had sexual intercourse, he married. Four years afterwards, being disappointed at not having children, M. C—— consulted his medical attendant, who, by dint of questioning, discovered that the marriage had never been properly consummated. Frequent and abundant emissions had indeed taken place, even with much facility; but they had been produced by simple pressure, or, at most, by slight external friction. Unfortunately for M. C—— his erections, which had been very energetic at first, had progressively diminished, so that he was now quite unable to profit by the instructions he received.

Ferruginous preparations, friction on the loins, cold injections into the urethra, and various tonics were employed, and did more harm than good. M. C—— was, therefore, sent to consult me in July, 1837, five years after his marriage.

He was then thirty years of age, tall, strongly built, and apparently in excellent health; he experienced, however, a degree of debility in his hands and legs; all his functions, with the exception of those belonging to generation, were well performed. The penis was remarkably small; the prepuce, on the contrary, much longer than the erectile tissues, formed numerous folds in front of the glans, and was lined with a large quantity of sebaceous matter; several thick layers of it were also accumulated on the surface of the glans, which was much injected and extremely sensitive. The urine always contained a more or less abundant flocculent deposit, in which I invariably discovered spermatozoa.

I immediately performed excision of the prepuce, and a few days afterwards, the urine became transparent, and the erections reappeared—weak at first, but soon acquiring energy. The object of marriage was at length properly fulfilled.

I have recently learned that M. C—— is about to become a father.

The abuses to which this patient was impelled spontaneously were too rarely practised to have had any power in producing this singular affection; besides, immediately after his marriage his erections were frequent and active enough, but ejaculation took place too rapidly; by considering this in connection with the fact of seminal emissions

having been excited by horse exercise, we must arrive at the opinion that the penis was excessively sensitive. This could not be attributed to predominance of the erectile tissues, these being, on the contrary, remarkable for their paucity; some irritating cause must, therefore, have excited and kept up the abnormal sensibility of the glans, and this irritation could only arise from the sebaceous matter on its surface being altered by too long retention. This opinion is strengthened by the simple excision of the prepuce sufficing to arrest the diurnal pollutions, and to bring about complete performance of the genital functions.

Exuberant Prepuce.—In the cases I have just related the genital organs were remarkable for their small development. The *corpora cavernosa* were small and short, and were surmounted by a very small glans, the whole forming a kind of vermiform appendage in front of the pubes, composed almost entirely of corrugated skin, and nearly hidden among long and scarce hairs. The scrotum presented an analogous disposition; it was retracted towards the pubes, and formed numerous and deep folds, The testicles were remarkably small, and in the 54th case, one of them had not passed the inguinal canal. The extreme length of the prepuce, as well as its numerous folds, must be attributed to the small development of the erectile tissues; and the numerous and deep folds of the scrotum arose from the smallness of the testicles. These circumstances are, therefore, frequently met with together, and very often congenital hernia, varicocele, or great width of the pelvis, with the rounded form of the female, are superadded.

All the patients of this kind that I have met with have possessed a delicate constitution, and had passed a sickly childhood; they were, generally, too, of nervous or lymphatic temperament. Most of them had received a very strict education.

Still these patients have generally suffered from nocturnal pollution arising, without any kind of excitement, about the ages of ten or twelve; or they have been led *spontaneously* to commit serious abuses before the age of puberty (one of my patients committed venereal excesses at a very early age); and they all fell promptly into a state of complete impotence, arising from diurnal pollutions.

The premature erections from which these patients suffered are certainly not attributable to the rudimentary condition of the genital organs, nor to their sickly infancy; the circumstances in which they were placed, too, had no influence in causing abuse; and the patients did not suffer from ascarides. The premature activity, therefore, arose from simple local excitement of the penis; and this was not produced by the presence of semen, because in many cases the testicles had not begun to secrete. The accumulation of the sebaceous matter around the glans, is the only sufficient explanation of this habitual abnormal irritation; and this opinion is strengthened by the more or less frequent occurrence of discharges, and by the habitual excoriation of the opening of the prepuce; by the frequent

attacks of inflammation, by the tenderness of the glans, and the injection of its surface. The remarkable effects produced by cleanliness, and by excision of the prepuce, leave no doubt on this subject.

Such persons, then, as have the prepuce very long and folded in front of the glans, are exposed quite as much as those who have a natural phimosis to all the inconveniences which arise from the collection and putrefaction of the sebaceous matter; and the irritation in both cases extends to the urinary and spermatic organs.

There is, however, one point of difference between natural phimosis and exuberant prepuce, which it is of importance to notice. Excessive length of the prepuce generally depends on paucity of erectile tissues, and is frequently coincident with rudimentary testicles; it results, therefore, that in this case the irritation acts on weak and mal-formed organs, which are easily affected by the abuses or excesses which it excites: the involuntary seminal discharges that occur in these cases are, therefore, very difficult of cure. In cases of natural phimosis, on the other hand, circumcision alone generally suffices to bring about a cure, because the narrowness of the prepuce does not, like its exuberance, accompany a small development of the genital organs.

In cases of exuberant prepuce, things are not so simple, for it does not suffice to remove the part, or even to relieve the irritation of the urethra and bladder; congenital debility of the genito-urinary organs remains, which it is often very difficult to remove by tonics, on account of the susceptibility of the tissues arising from their long irritation; this debility, too, arises from the primary organization of the parts, and is consequently difficult to cure entirely. Such patients seldom possess extraordinary vigor.

I have still to speak of cases in which there is an excessive or vitiated sebaceous secretion, although the prepuce may be of proper form.

Abundant and vitiated secretions of sebaceous matter.—In many cases the sebaceous matter is not confined by a too narrow or too long prepuce; it seems rather to be reproduced very rapidly, or its properties to be modified by some pathological condition. The mucous follicles of the glans and prepuce are much more developed and more active in some individuals than in others, and furnish habitually a much greater quantity of sebaceous secretion. This particular disposition shows itself early, and continues during the whole life; it is a permanent condition, and its effects may show themselves at any moment. Extreme cleanliness might perhaps prevent any inconvenience being felt; but as the gravity of the consequences that may result is not suspected, and as besides, this peculiar predisposition cannot be foreseen by parents, there is no motive for causing children to practise ablution, or friction of the parts—which indeed, by drawing their attention, might be dangerous. These cases are not practised then at the period of puberty; yet it is then especially that they are requisite in cases where the sebaceous secre-

tion is disordered, on account of that orgasm which at that age seizes the whole of the genital apparatus. I am thoroughly convinced that this particular circumstance is the direct cause of numbers of cases of involuntary discharges, as well as very frequently of the spontaneous abuses of which young lads are the subjects.

There are other cases in which the secretion is increased or altered by a morbid condition, which is ordinarily intermittent, arising almost always from a special disposition of the economy, particularly from cutaneous diseases, often enough hereditary ones. The constitution of such patients is ordinarily weak and delicate; their childhood, sickly. The first symptoms of these cutaneous affections which generally sooner or latter attack the mucous membranes, are mostly experienced in the head or face. The children are subject to ringworms, acne, tetters, abscesses in the neck, alternately with attacks of ophthalmia, otorrhœa, coryza, angina, &c. At the approach of puberty, these weakly constitutions generally improve, and seem about to become hardy; but the revolution effected by that important crisis has not always the durable and salutary effect on the constitution that could be desired. The genital organs become the centre, and attract the congestion which formerly acted chiefly towards the head; and hence cutaneous eruptions occur in the neighborhood of the anus, in the perineum, on the interior of the thighs, or the scrotum, at the base of the penis, and more than all, on the prepuce —bringing the most unfortunate consequences. Whatever may be the species of these eruptions, however unimportant they may appear, it is of the utmost consequence to pay attention to them when they attack the prepuce or glans.[1] From them arise frequent balanitis, more or less abundant, and acrid sebaceous discharge, excoriations, herpes, erysipelatous redness of the prepuce and glans, frequent attacks of urethritis, often as severe as virulent clap, and almost always more difficult of removal, frequently also giving rise to serious errors of treatment. This irritation, too, sometimes suddenly attacks parts at a considerable distance from the orifice of the excretory canal; hence the sudden appearance of pain in the perineum, or neck of the bladder; hence the painful swelling of the *vasa deferentia* and testicles; hence also the no less sudden disappearance of these symptoms, on the unexpected appearance of inflammatory disorder on some other part of the body.

It is easy to conceive that these irritations may provoke abuses or temporary excesses, as well as more or less serious occasional seminal discharges; but as these are not merely nocturnal pollutions, and as diurnal ones are more common, more serious, and very difficult of discovery by the patients—their existence is seldom suspected; so that they do not know how to account for the periodical derangement experienced in their health precisely at the times when

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[1] See Chapter V.

they are not troubled with apparent disorder. Their friends understand still less the frequent and sudden changes of character they experience—the alternations of gayety and hypochondriacism, of activity and torpor. Such patients are, therefore, very often regarded as maniacs; their peevish restlessness, and strange paroxysms, are attributed to wrong-headedness, to attempts at originality, or to some other equally erroneous explanation.

After a time diurnal pollutions occur almost constantly; and now there are only slight remissions in the symptoms; the health remains imperfect, and the paroxysms occur more and more frequently; at last matters grow still worse, and the patient's disorder becomes constant.

But the patients and their medical attendants are led astray during the most severe periods of the disease, by the diminution or entire cessation of the nocturnal pollutions; diurnal discharges, whose effects are much more serious, take their place; and this is why, on the entire cessation of nocturnal pollutions, the disorder becomes permanent, and complete impotence is often established. Lessening of the nocturnal pollutions is not likely to lead the patients to suspect the true cause of their disorder; they imagine themselves the victims of a syphilitic affection, founding their opinions on the discharge and excoriations that occur in the neighborhood of the glans and prepuce, or on the attacks of urethritis to which they are subject. I have met with many patients who had spent a considerable portion of their lives under courses of mercurial treatment, which had been repeated over and over again, because intercourse scarcely ever took place without producing excoriations; these they fancied were chancres, however little cause there might have been to suspect syphilitic contagion. In such patients, too, the mucous membrane of the urethra becomes altered in structure, so that they are more and more exposed to urethral discharges from very slight causes; and the repetition of such discharges confirms their belief in a syphilitic taint.

In these cases cauterization is the most powerful means we can employ. Still it is necessary, after considerably modifying the condition of the urethral mucous membrane, not to neglect acting on the skin and on the whole economy by means of the sulphuretted baths. It is wiser also to perform circumcision, than to trust to the patient's cleanliness, in order to guard against the inconveniences arising from superabundant secretion of the mucous follicles of the prepuce and glans, and to remove the parts beyond the possibility of further irritation.

I have spoken several times of the influence exercised by excretory canals on the glands that supply them; on comparing the glans penis with other openings to excretory ducts, we see that it alone possesses an extensively developed erectile and nervous tissue. It is true the nipple presents something similar, and its influence over the lacteal secretion is well known; but there is vast difference be-

tween the vessels and nerves of the nipple and those of the glans penis. In the glans everything seems arranged to increase the exquisite sensibility of the surface. Is it to be wondered at, then, that the functions of the seminal vesicles and testicles are much influenced by every action on so impressionable a surface? and that the accumulation of sebaceous matter provokes importunate erections before puberty, and abuses or precocious excesses, in persons who would seem to be out of danger of them, on account of the small development of their genital organs?

The divisions under which I have treated this subject are intended to show that the irritating action of the sebaceous matter may arise either from its too long retention, from a local affection, or from a general disposition. In the first case excision of the prepuce is indispensable, and when there is simply a natural phimosis, this is generally sufficient. But when the prepuce is excessively long, after its removal, and even after cauterization of the prostatic surface, we have still to combat the natural debility of the organs—a debility sufficiently evident by the exuberance of the skin in front of the rudimentary erectile tissues. In cases of superabundant secretion of sebaceous matter, of herpes preputialis, or other skin affections, having a tendency to fix themselves on the prepuce, it is more prudent to circumcise the patient than to trust to the most careful cleanliness; there is no comparison between this trifling operation and the importance of the involuntary discharges which may return with a return of the preputial irritation, even if once relieved by the use of sulphuretted waters or other means. Indeed, after having long and seriously reflected on the numerous cases that have come under my notice, I have arrived at the opinion, that the discontinuance of the practice of circumcising children is to be regretted; the operation is, without doubt, unnecessary in many cases, but it can never be injurious, and in a great proportion it would be exceedingly useful.

Congenital Debility.

CASE LVI.

Relaxed genital organs—Spermatic cords varicose—Few but debilitating nocturnal pollutions—Opposite effects of coitus—Unsuspected diurnal pollutions—Constant headache—Disordered senses—Intellectual debility—Hallucination—Tonic treatment at the age of twenty-one, followed by recovery.

In the month of June, 1835, General Mina placed under my care the son of one of his friends, who had been treated unsuccessfully for a chronic cerebral affection by distinguished practitioners, both in England and Germany.

M. P. G——, twenty-one years of age, was well made, of moderate height, and robust appearance; his face and *embonpoint* bespoke health,

although he had complained of headache for several years, and often showed serious derangement of his ideas, which were generally wandering and obtuse. His feeble and husky voice, and timid and embarrassed manners, led me to suspect masturbation; I was completely mistaken, however. Whilst examining an inguinal hernia, which had come on without apparent cause, I noticed evident marks of semen on the patient's shirt; and he told me that while travelling the night before, he awoke deluged with this *glairy matter;* that he often experienced similar evacuations without dreams, erections, or any other sensation sufficient to awake him. Further examinations convinced me that the patient passed semen also at stool, and that his urine constantly contained a considerable quantity. I was, therefore, convinced that the supposed chronic cerebral affection was nothing more than mistaken spermatorrhœa—which the result soon confirmed.

The cause of these discharges was sufficiently obscure. The patient's parents were strong and healthy, and he had ten brothers and sisters, all in good health; there was no hereditary disease in his family, and his infancy had been passed without ailment. At the age of sixteen nocturnal pollutions had occasionally appeared, without dreams, and without sensation; the patient was completely ignorant of everything appertaining to sexual intercourse, as well as masturbation. He was passionately fond of study. At the age of seventeen he had frequent headache and disordered vision; obtuseness in his ideas; loss of memory; intellectual employment fatiguing and unrepaying; he had several times, too, long fits of unconsciousness without apparent cause. At the age of eighteen, M. P. G—— was placed in a commercial school at Paris; two months afterwards he left his studies one evening on account of a violent headache; a vague but imperious feeling, to which he yielded, impelled him towards the other sex. The following day he was much better; he felt more vigorous both physically and morally. But notwithstanding the beneficial effect, the patient yielded only once more, although he felt much relieved on that occasion also.

Soon afterwards, M. P. G—— was placed in a commercial house in London, where he worked assiduously for two months, at the end of which time he suffered from headaches, giddiness, disordered vision, noise in his ears, &c.; residence in the country produced a slight improvement, which was, however, lost on the patient's returning to the same occupation; so that after a short time he was unable either to write or to keep his accounts. He experienced such frequent giddiness, and so great weakness in his legs, that he dared not go out alone. At length his intellect became deranged to such an extent that he doubted everything he heard or saw, all that he did, and even his own existence. By degrees his digestion also became deranged, and his medical attendants sent him to travel in Belgium and Germany. During this long journey he became more and more disordered; everything seemed illusory and fantastic; he fancied himself in a painful dream. He imagined too that every one was ridiculing him, and conspiring against him; and he especially suspected three Englishmen who followed the same route, and who he thought were plotting together against him. One of these was especially hateful on account of his ironical manner; and the patient was a hundred times tempted to precipitate this gentleman into the Rhine as he passed him on board the steamboat; these hallucinations remained on the patient's memory after his recovery, like a kind of nightmare. At the close of this journey he was brought to consult me.

When I saw him his nocturnal pollutions recurred only at intervals of

eight or ten days, which did not, however, prevent their debilitating effects; these were the more remarkable when contrasted with those of coitus, already mentioned. The patient too experienced the same state of weakness when he had erotic dreams or venereal desires, even although no apparent discharge took place.

These phenomena were easily explicable by the presence of diurnal pollutions; but there was nothing to account for the early development and constantly increasing recurrence of these abundant discharges. The examination of the inguinal hernia gave some information. I have already stated that it came on without appreciable cause; announcing great relaxation in the inguinal rings; the opposite side too showed a marked disposition to the occurrence of hernia; the veins of both spermatic cords were varicose; the penis of moderate size, was very long and soft, and the scrotum was so relaxed that the patient was obliged to wear a suspensory bandage. I passed a very large catheter, too, into the bladder, without experiencing the least resistance, and without the patient's giving the least sign of pain.

The union of all these circumstances led me to conclude that the spermatorrhœa was exclusively due to atony of the ejaculatory ducts; and consequently, I daily left a catheter in the urethra for two hours at a time; at the same time the patient took iced milk three times a day; and iced wine mixed with Spa water at his meals; and used cold lotions frequently, with a hard bed, and horse exercise. These means brought about a prompt and decisive change; within a fortnight the patient's headache had left him, together with the aberrations of intellect which had accompanied it; his perceptions became clear, his ideas precise, his motions prompt and decided; the use of mineral waters, especially of alternate hot and cold douches on the loins and perineum, consolidated his cure.

I saw M. P. G—— the following year, and also in August, 1838; his diurnal pollutions have not reappeared; nocturnal pollutions happen after prolonged continence; they are energetic, and do not injure the health. All his functions are perfectly well performed.

This case is another example of the powerful effects produced on the brain by involuntary seminal discharges. In the present case the pollutions evidently arose from congenital atony of the generative organs. It is like enough that I should not have discovered these debilitating discharges, had I not done so accidentally while examining the patient's inguinal hernia. Nothing in the patient's conduct could have led me to suspect the presence of pollutions, and his constitution, as well as the history of his family, did not point out any local weakness. On the contrary, circumstances were present which would lead away from the true cause of his disorder; his nocturnal pollutions were very rare, and coitus was on both occasions followed by remarkable improvement in the health. This may be easily explained by bearing in mind what I have already said respecting the different effects of different kinds of spermatic discharges;—the excitement produced by the normal act diminishing the relaxation of the tissues and the abundance of the involuntary discharges.

How was it that this patient did not show more inclination towards the other sex, especially after having noticed the beneficial effects of his first intercourse? He attributed this indifference to the profound melancholy which possessed him from the period of puberty; but this sadness disappeared, and his ideas completely changed after his cure. The indifference, then, arose from the diurnal pollutions of which he was the victim.

This patient's hallucinations were of the same nature as those of Esquirol's patient (Case thirty-two), only that the conviction of a general conspiracy against him was more confirmed. If in one of his moments of rage he had thrown his supposed enemy into the Rhine, would this hallucination have been admitted? If so, would its cause have been even suspected?

Varicocele.—I have met with many cases of involuntary seminal discharges occurring in patients who were affected with varicocele. I have at present before me three consultations and numerous notes of such cases; but they are for the most part incomplete, because I am ignorant of the results of the means employed. I will, however, briefly relate all that can be gained from them relative to spermatorrhœa.

One of these patients was addicted to masturbation about the age of ten; he practised it, however, much less frequently than the majority of his companions; and corrected himself at the age of fifteen. Another committed some slight venereal excesses, but very irregularly and for a very short time on each occasion. A third suffered from simple blennorrhagia, after which swelled testicle came on the day after a ball. A distinguished barrister first experienced nocturnal pollutions during the period of his examination; afterwards he had numerous relapses, following the excitement of important causes, and was obliged to give up his profession, notwithstanding his talent, because the pollutions, becoming diurnal, weakened his memory. It is probable that in these cases no bad effects would have been produced if the patients had not been predisposed to them. Other patients affected with varicocele and pollutions pursued courses of life which might be considered exemplary, if compared with the lives led by hosts of individuals who never suffer any bad effects from such proceedings. I have besides questioned those patients who have consulted me for varicocele alone, and I have found that the greater number complained of want of power in the organs. Delpech made the same remark; and he attributed this want of power to the torpidity of the venous circulation which retarded the spermatic secretion; he thought, too, that by taking away the varicose veins he would be able to restore the functions to their normal condition; the unfortunate death of the author of this proposition is sufficient to show its fallacy.[1] As far, however, as regards the debility of the

[1] The unfortunate Delpech was assassinated in the middle of the day by a patient from Bordeaux, on whom he had previously operated for varicocele. The murderer immediately afterwards blew his own brains out.

spermatic organs in such persons, I agree with him perfectly; indeed, it is a point which I have observed too often to admit of my doubting it. I have also remarked that in many of those cases the testicles are soft and small, and when the spermatic veins of one side only were varicose, I have invariably remarked that the testicle of that side did not correspond in development to that of the other. Pott has related several cases of the same kind.

If masturbation, venereal excesses, orchitis, &c., favor the development of varicose veins in the spermatic cords, this can only take place in persons who are predisposed to that disease by congenital weakness of the parts; for many persons are exposed to the operation of all these causes without having varicocele, which disease often comes on without appreciable cause. The same thing happens here as in varicose veins of the lower extremities; fatigue of the parts, as well as everything which hinders the free return of blood, undoubtedly contributes to render the veins varicose; and yet are there not many who pass hours together standing, and who wear tight garters, but nevertheless do not suffer from varices? whilst there are numbers, on the other hand, who are victims of this infirmity without being particularly exposed to the action of such causes. It must, therefore, be admitted in the latter class of cases, that there is some primary weakness or congenital disposition in the affected veins to become varicose.

Since, then, we see want of energy in the genital organs so frequently accompanying varicocele, it is evident that the venous system is not alone in a state of atony or relaxation; and it is, therefore, of consequence to pay attention to the condition of the veins in order to judge of the power of the genital organs as well as of the predisposing causes of involuntary emissions. Such signs point out the remedies to be used in these cases.

CASE LVII.

Hypospadias—Impotence—Frequent seminal discharges.

Morgagni relates with his customary precision, an interesting case of impotence, which he attributes to the malformation of the glans, but which was evidently due to involuntary discharges; the following are the principal circumstances.

The patient was scarcely thirty; he was by no means strong, and was affected with an old ophthalmic disorder. He admitted that although he had been married two years, he had never had sexual intercourse; this he attributed to the glans penis being curved downwards, and perforated near its base, instead of at its point. The inferior wall of the urethra was in fact wanting in the neighborhood of the glans, and a little behind it; the prepuce was divided in the same manner and resembled that of the clitoris. The penis was of its natural development, the testicles were large, but the scrotum appeared relaxed. At the period of puberty, the erections had

been complete, the glans being fully injected as well as the rest of the penis; an uncomfortable sensation even arose in the part where the urethra was wanting; but this sensation diminished by degrees in proportion as the glans entered less into erection. At the time of the patient's marriage the tumefaction of the glans took place very rarely; at last it ceased entirely; "the glans remaining flaccid and insensible from the time when, in useless efforts at intercourse, the patient discharged large quantities of semen, which escaped very promptly."

Morgagni is inclined to think that the absence of the urethra underneath the glans was the cause of its not becoming erect in this case; the rest of the penis was capable of erection, but the glans being a portion of the *corpus spongiosum*, and receiving its blood from the bulb, was incapable of becoming so. This explanation, although plausible and founded on the distribution of the arteries of the penis, rests on an incorrect hypothesis; for in cases of this nature the parietes of the urethra are not wanting, there is only defective union in the median line, which by no means interferes with the presence of the *corpus spongiosum*, nor with its receiving its proper arteries. Besides, the malformation in Morgagni's case was equally present at the age of puberty, yet the patient experienced erections at that time into which the glans entered, so much so, indeed, as to cause a painful sense of dragging in the situation of the urethra. The patient's impotence was, therefore, due to some other cause, and this cause was evidently the same that acted in case fifty-five. The impotence, therefore, arose from habitual and unperceived seminal discharges, favored by the congenital debility of the organs. Morgagni's last sentence is sufficient to prove this. When did the glans entirely cease to become erect? "From the time when in useless efforts at sexual intercourse, the patient discharged large quantities of semen, which escaped very promptly." These repeated and abundant seminal discharges then rendered the erections less and less energetic, and at last thoroughly imperfect.

The rapidity with which ejaculation took place is observed in all cases of this nature; and this hasty emission, whether it arises from irritation or debility, or both, which opposes intromission as much as the insufficiency of the erections, is always accompanied by diurnal pollutions: to these, therefore, the impotence is due (although very often they are unsuspected), and they are invariably exasperated by unavailing efforts at coitus, which increase the irritation and debility of the parts. On the other hand, too, such appreciable discharges joined to those which are unsuspected, sufficiently explain why the erections become daily less energetic, and the formation of the semen less perfect.

The remarkable coincidence of hypospadias with debility of the genital apparatus has induced me to quote the above case. Hypospadias is a rare malformation, and has never been studied in reference to its connection with weakness of the organs. It is well known that

Louis XVI had hypospadias, and the Memoirs of Madame de Campan leave no doubt that his marriage was not consummated for several years. I have met with one case of hypospadias in the hospital St. Éloi; it was accompanied with nocturnal and diurnal pollutions, but I only had an opportunity of observing the patient for two or three days, and I cannot say decidedly that these pollutions arose solely from a natural weakness of the organs.

CASE LVIII.

Atrophy of one testicle at the age of eight—Nocturnal and afterwards diurnal pollutions—Frequent desire of micturition, &c.

I have at present a student, æt. twenty-seven, under my care, who, from the period of puberty, has been troubled with nocturnal at first, and afterwards with diurnal pollutions. All his functions are deranged, and he is now incapable of any intellectual employment. He has never had sexual intercourse, and he has not been addicted to masturbation. When about eight or nine years of age he suffered from inflammation of the left testicle without evident cause. After having continued very large for some time, the organ atrophied by degrees, so that it is reduced to the size of a horse-bean, the spermatic cord being also very thin. The urethra is extremely sensitive, especially in the neighborhood of the prostate, and the patient makes water very frequently—this symptom dating from his childhood.

There existed without doubt in this unfortunate individual a congenital disposition to phlogosis of the genito-urinary organ; this showed itself at the age of eight, by spontaneous inflammation of the left testicle; from that time irritation continued in the neighborhood of the bladder, and extended its influence to the right testicle. This accounts for the occurrence of nocturnal pollutions at the age of puberty. Spontaneous inflammation of the testicles in childhood is then a sign of a morbid condition of the genital organs, and the destruction of one of the testicles does not remove the patient from the danger of involuntary seminal discharges, which may even be sufficiently abundant to injure the health.

Natural Relaxation of the Ejaculatory Ducts.—There are a certain number of cases of involuntary seminal discharges, which it is impossible to attribute to any satisfactory cause; which are not accompanied by any sign of irritation; and to explain which we are obliged to admit a natural disposition, debility or congenital relaxation of the spermatic organs, and especially of the ejaculatory ducts. This condition sometimes coincides with more or less characteristic external signs, but in other cases it is only shown by its effects. The following remarkable case will explain what I have to say on this obscure but important subject.

CASE LIX.

Lymphatic temperament—Incontinence of urine—Neither masturbation nor sexual intercourse—More and more frequent nocturnal pollutions—Relaxation of the sphincters of the anus and neck of the bladder—Treatment unsuccessful.

M. M——, of very marked lymphatic temperament, was subject to incontinence of urine up to the age of twelve or thirteen. His religious enthusiasm induced him to embrace the ecclesiastical profession. He had never practised masturbation, nor had sexual intercourse. Puberty did not take place until the age of eighteen, but was accompanied with nocturnal pollutions—rare at first—then more frequent; and at length occurring daily and quite passively. All his functions were successively deranged, and at the age of twenty-three, five years from the commencement of the disorder, M. M—— consulted me in the following condition:

Skin white, cold, and clammy; limbs rounded; hair white; no beard; pelvis very large; hips projecting; flesh soft; genital organs pretty well developed, but very flaccid; scrotum much relaxed; hair very scanty; blindness nearly total; enormous dilatation of the pupils; considerable decrease of intellect and memory; extreme weakness of the limbs; progression almost impossible without the support of a stick; digestion difficult; involuntary discharge of fæces several times a day; micturition frequent during the day; incontinence of urine at night; nocturnal pollutions repeated several times at night without erection or sensation; semen very fluid; urine often muddy. I passed an immense catheter into the bladder without experiencing the least resistance, or giving the patient the slightest pain; the anus was almost wide open, permitting the introduction of three fingers into the rectum without the least difficulty, and without exciting any action of the sphincters.

I prescribed aromatic baths, stimulating frictions and applications; ice internally and externally, Spa water, quinine, &c.; and I performed two cauterizations of the urethra, all without the least success; after four months' treatment I lost sight of this unfortunate patient, leaving him in just the same state as when he first consulted me.

All circumstances combined in this case to convince me that the patient spoke truth when he asserted that he was ignorant of masturbation, and had never had sexual intercourse. The incontinence of urine and fæces; the form of the pelvis; the flaccidity of the genital organs; the general state of the economy; all seemed to show that the ejaculatory ducts shared the relaxation of the sphincters of the anus and bladder, and that this original atony was the sole cause of the nocturnal and diurnal pollutions. This case is the most remarkable one of the kind that I have ever met with, on account of the combination of circumstances that accompanied the relaxation of the ejaculatory ducts, and from the absence of every complication that could have excited involuntary seminal discharges; it enables us to understand cases in which there are similar but less marked

predispositions, and which are accompanied by less evident or even nearly inappreciable signs.

CASE LX.

Sickly childhood—Extraordinary nocturnal pollutions at sixteen—Some time after, pollutions during defecation—Ejaculation impossible—Slow discharge of semen after the subsidence of erection—Urethral canal very slightly sensitive—Prostatic surface hard and cartilaginous.

In the year 1825 I was consulted by a medical student, æt. twenty-one, of small stature and spare habit, in consequence of deafness, which had made considerable progress during two years. After injecting the Eustachian tube a few times, applying a seton, &c., the beneficial effects of which were very trifling, the patient spoke to me about nocturnal and diurnal pollutions which were accompanied by extraordinary circumstances. The following are the chief facts of the case:

The patient's health was weak until the age of sixteen, when puberty occurred, and he suffered from frequent erections and nocturnal pollutions. These discharges continued from that time; they were often excited by lascivious dreams, but were not always preceded by erections; when erection occurred, it was not during its continuance that the discharge of semen took place, but only after the swelling of the penis had passed off, the matter discharged dribbling over the neighboring parts instead of being forcibly thrown off as in true ejaculation. This matter resembled white of egg, and stained the linen in the same manner; it was often so abundant that the patient was compelled to change his shirt. The evacuations were followed by debility, languor, and headache. Whatever quantity of semen was passed he never experienced the slightest voluptuous sensation, so that at first he thought himself affected with incontinence of urine, and when these abundant discharges took place, not being able to prevent them, he rose suddenly to micturate. Often while at stool a similar discharge took place in greater or less quantity, according to the degree of constipation.

Sexual intercourse had been very rare, and always accompanied with similar circumstances; the erections were energetic and long continued; indeed, they lasted an indefinite time, for fatigue alone put an end to the act—seminal discharge never under any circumstances took place until the cessation of the erection. The same thing occurred during a few attempts at masturbation, which the patient practised from curiosity, for he never experienced sufficient pleasure either in these manœuvres or in coitus, to practise them from inclination; he had an ardent desire to get rid of his nocturnal pollutions, which he believed arose from defective contractility in the seminal vesicles.

This patient was very thin and remarkably pale; his digestion was much disordered; his memory treacherous; his intellect weakened; and the least application to study excited obstinate and almost constant headache. He experienced noise in his ears; and this deafness was very probably due to the same cause, although he imagined himself the subject of some local affection.

I did not observe anything particular in the patient's form nor in the size and consistence of the external organs of generation, but on passing a

large catheter into the canal, I remarked that it possessed very little sensibility; and especially in the prostatic region, where the instrument was arrested. On taking a smaller one I succeeded in reaching the bladder; and in passing the prostate, the instrument seemed to rub on a hard cartilaginous surface, which, however was quite smooth and regular. The patient remained quite passive during this examination, which lasted a long time. The prostate examined through the rectum did not seem larger or less regular than natural. Its firmness presented nothing remarkable. These examinations, repeated at the intervals of several days, always gave similar results.

I performed cauterization of the prostatic portion of the urethra in the hope of modifying its abnormal condition, but no benefit was obtained. Dilatation by means of gum-elastic catheters was not of great service.

This is the only case of the kind of which I am aware; it presents characters quite different from those which generally accompany nocturnal and diurnal pollutions; but it does not the less belong to the class of such cases caused by original disposition in the spermatic organs. The patient's statements bore the semblance of truth. He suffered from pollutions many years before attempting either coitus or masturbation; indeed, it was only in the hope of relieving his disorder that he committed these acts; for he was not enticed to them by any feeling of pleasure. His remarkable seminal discharges seem to have arisen from the induration and loss of sensibility of the surface of the prostate and neighboring parts, and this condition seems to have been congenital.

Symptoms of Debility of the Genital Organs.—Before proceeding further, it may be as well to consider for a moment the characteristics we have already noticed, as showing debility of the genital organs.

We have seen that excessive development of the prepuce arises from smallness of the penis, and that in the same individual the scrotum is often much folded and retracted towards the pubes, because the testicles are very small. Such an elementary condition of the erectile tissues and secreting organs necessarily augurs little energy in these fundamental parts of the genital apparatus, and must prove an unfavorable prognostic as regards the condition of the ejaculatory ducts, seminal vesicles, and other parts removed from external examination. But these characters are not always equally marked, and do not always stand alone.

Hypospadias arises from defective union of the opposite parietes of the urethra; and whatever may have been the cause of this arrested development, it indicates debility of the parts, because their formation has not been completed. The parts have wanted energy or vital force from the beginning. Is it likely that this condition will be altered later in life? All I have seen of these cases, leads me to a negative conclusion. Cases of epispadias, too, consisting of defective union of the corpora cavernosa, and, still more serious, eversion of the bladder arising from a similar cause, support this

opinion; such individuals are even more feeble, in respect of their genital functions, than those afflicted with hypospadias.

The following circumstance, too, may be referred to the same cause, although it is less evident. All surgeons who are frequently in the habit of passing instruments in the urethra, are aware that great differences exist with respect to the size of the meatus. In some cases it is exceedingly small, and placed at the summit of the glans; in others, again, it is large, gaping, and extends from the apex to the corona glandis, or even lower. It is evident, that this increased size of the meatus arises from the same cause as hypospadias, that is to say, from defective union of the two walls of the urethra. In some cases, it seems a commencing hypospadias, the opening descending lower than the glans. Now, I have met with few cases of involuntary seminal discharges where the urinary meatus was very contracted, and in all cases of this kind that I have seen, the disorder had been produced by repeated attacks of blennorrhagia, serious and long-continued abuses, or great sexual excesses, thus showing considerable activity of the genital functions; whilst, on the other hand, I have met with numerous involuntary discharges in those whose meatus was larger, and such discharges have been produced by comparatively slight causes, and were much more difficult of relief.

My practice of examining all such patients with a large catheter, in order to ascertain the degree of sensibility of the urethral mucous membrane, led me to make this observation long since, and I have since found it remarkably constant. Generally, in cases of large orifice, the remainder of the urethra as well as the neck of the bladder is also very large, which might leave one to suppose that the ejaculatory ducts may partake of the same condition. However this may be, I believe I may mention *extended orifice of the urethra*, as a sign of congenital debility of the organs, and consequently of predisposition to involuntary discharges.

The firmness of the erectile tissues, also, differs much in different individuals, independently of their size and form. Whenever I have observed the penis resting on the scrotum, the corpora cavernosa empty, soft, flaccid, and without resistance or elasticity on pressure, I have remarked that the organs possessed little energy, and that the powers of resistance to causes capable of inducing involuntary discharges was very slight, whilst these were always difficult of cure.

In cases, too, where the glans presents a remarkable development in proportion to the penis, the latter being long in the corpora cavernosa, whilst the former is swollen, overshadows the corpora cavernosa, and is always uncovered, or, at all events, badly covered by the prepuce, the parts want energy. The erections are often incomplete in such cases, especially towards the base of the penis.

As regards the testicles, their smallness is not the only circumstance worthy of consideration. Many of my patients have been afflicted with inguinal hernia, frequently congenital.

Congenital hernia must be attributed to one of the following causes: either the inguinal canal has wanted contractile power, the process of peritoneum accompanying the testicle has been distended with serum, or the testicle has descended late into the scrotum. Under all these circumstances there is evidently radical debility of the parts. It may, indeed, diminish considerably as age advances, but we can never expect to find the parts remarkable for their energy. Since I have directed my attention to this subject, I have constantly noticed that patients afflicted with congenital hernia presented much smaller testicles than those of healthy persons of corresponding age. The following fact, too, is very decisive. When hernia is present on one side only, the corresponding testicle is always smaller than the opposite one, and frequently this difference extends to half the size of the organs. For a long time I fancied this small size of the testicle arose from compression of the parts by the hernial sac, but I have met with the same circumstance in persons who early wore a truss. I then thought that compression of the cord by the pad of the truss might give rise to this defect, but I have not noticed corresponding conditions in those who have worn a truss for accidental hernia. The descent of the testicle into the scrotum often does not take place until long after birth, and in one of the cases I have related it was not complete until the age of twenty-eight (case fifty-four). In all the cases of this kind that I have had opportunities of observing, the organ has been far from possessing its normal size and form; and still further, in cases where I have had an opportunity of examining, after death, the bodies of those whose testicles had not descended, I have invariably found the body of the gland small, soft, and elongated. and the epididymis deformed and unfolded. I have frequently, too, ascertained the exactitude of the opinions of Cloquet on the causes that oppose the descent of the testicle; this distinguished observer has pointed out that the testicles are always detained either by some malformation or adhesion, and such alterations must necessarily influence the functions of the organ.

To resume, then: congenital hernia, slow descent of the testicles into the scrotum, or their final retention in the abdomen, must be attributed to debility of the parts, to adhesion, or to alterations in their structure, which must more or less injure their functions.

The form of the testicle is also of considerable importance. The body ought to be ovoid, regular, and smooth; the least inequality observed on its surface denotes some internal organic alteration. The size of the epididymis should be proportioned to that of the gland itself; any swelling of this part shows that inflammation has taken place, and has not been entirely removed. Such inflammation may have left marks of its presence in other parts through which the semen passes, and consequently, in the seminal vesicles, and even after it has been completely removed, is very likely to return in the altered tissues. It often happens that neither children nor their parents are able to assign any cause for the occurrence of these

inflammations, either because they take place during early childhood, or because they come on without any appreciable injury. I have met with more than one patient who fancied that he had three testicles, and this delusion has generally arisen from the increased development of the epididymis forming a kind of supplementary swelling attached to the testicle. Whenever I have found this swelling considerable, the true testicle has been smaller than natural, and in a few cases it was completely atrophied. The investigations I have made in such cases have convinced me that the organ did not act, or acted badly. The patients are not, however, removed from the dangers of involuntary discharges by this circumstance, because the two organs are not equally affected. I have related a case, in which one of the organs was completely atrophied from infancy, notwithstanding which obstinate nocturnal pollutions occurred at puberty: these were only attributable to active irritation of the other organ.

Every alteration, then, in the form of the testicles, must be attributed to some old-standing affection, and announces some internal lesion, which necessarily injures the functions of the part, and warns us of the possible occurrence, at some time or other, of other affections of the same organs. However slight it may be, this alteration in the form of the testicles merits serious consideration in attempting to appreciate the amount of the virile powers, and the disposition to other diseases of the spermatic organs.

I may make just the same remark concerning the vasa deferentia. When they are so thin that difficulty occurs in distinguishing them from the other structures of the spermatic cord, it is a sign of debility; but this sign is never met with alone; the testicles are always small, sometimes even rudimentary; all the secreting apparatus seems to remain in the same condition as before puberty. When, on the other hand, the vasa deferentia are swollen, knotty, or enlarged, towards the epididymis, it is evident that they have been previously the seat of some inflammation.

Softness and flaccidity of the testicles also show little energy in the gland whatever may be its size. I have met with this symptom in many patients remarkable for their continence, and the severity of whose voluntary discharges bore no relation to the slight accidental causes that excited them. On the other hand, this flaccidity of the testicle is usually accompanied by a similar condition of the corpora cavernosa, which justifies one in presuming that the portions of the genital apparatus which are removed from external examination, partake of a like disposition.

I have already stated that varicocele must be regarded as a sign of debility of the genital organs. The debility of the venous system of the testicle justifies us in supposing a want of energy in the remainder of the secretory apparatus; besides which the stoppage of the circulation through the veins of the cord must injure the capillary circulation in the testicles, and consequently, retard the secretion of semen. I have noticed this in cases of simple engorgement of

the veins of the cord, especially when coincident with considerable elongation of the organ.

Encysted hydrocele developed in the midst of these vessels presents the same indication for the same reasons.

Again, all the parts of which I have spoken may possess their ordinary volume and natural form, but yet may present a decided flaccidity announcing serious debility. This relaxation especially, is easily noticed in the scrotum. Not only does this organ extend to a great length, but is soft, smooth, and without hair or folds; its surface is moist; no motion occurs in it from the contraction of the dartos or cremaster muscle, and its cellular tissue is often infiltrated with serum. The most remarkable case of this kind that I have met with is that related at page 227, case 59, in which no sexual desire was ever manifested, but the subject of which, at the age of puberty, became subject to pollutions which nothing relieved.

Lastly, all my patients whose virile powers were originally weak, had very sharp intonation of voice, sometimes quite falsetto. Their hairy system, too, was little developed. One patient at the age of seventeen, had not a single hair on his chin or his genital organs. These characters resemble those found in eunuchs, with this difference, that the health of eunuchs does not become disordered.

Symptoms affecting the Urinary Organs during Childhood.—The spermatic apparatus does not attain its full development until the age of puberty, but the urinary organs perform their functions from the period of birth. The connection that exists between the two systems is so intimate, that the observations drawn from the one first in action foreshadow the affections to which the other may become liable.

Incontinence of Urine.—It must have been noticed, that in several of the cases in which involuntary discharges were manifested spontaneously or from very slight causes, the patient had been subject to incontinence of urine from infancy. I have met with numerous cases in which this was the case, and they were all remarkable for the facility with which involuntary discharges occurred. I shall, therefore, briefly review such circumstances in these cases, as may throw any light on the connection existing between congenital affections of the urinary passages and involuntary seminal discharges.

In proportion as the child's intellect becomes awakened, he understands the care lavished on keeping him clean, and accustoms himself to assist, until at length he arrives at an age when he has acquired sufficient empire over his habits to avoid soiling his bed or his clothes, at least except in cases of accident. This period varies according to the child's education and mental progress. But when the cerebral functions are thoroughly developed, and the most determined will, and best sustained attention, are not sufficient to prevent the untimely discharge of the urine, there is a more or less disgusting infirmity. Punishment has no effect; it is from the medical man that aid must be sought.

This condition of the urinary organs may present infinite shades of variety; the worst is that in which the child is unable to hold his urine, even when awake, so that it escapes in an almost continuous manner without his knowledge. This degree of incontinence is seldom observed, except in idiots, whom we must leave out of the question, because of their want of intelligence, leaving them in precisely the same condition as the infant in the cradle. Next come those cases in which the neck of the bladder does not contract strongly enough to prevent, for any length of time, the passage of urine, even during walking; so that when the desire cannot be immediately satisfied, the want of power in the neck of the bladder allows a portion of the urine to escape, notwithstanding all the efforts of the will. It is evident, that in such patients the urine will escape much more readily during the night. When it is only during sleep that the escape of urine takes place, the infirmity is grievous enough, but even then it may present many shades of severity. In some cases, the involuntary emission takes place every night; in others it only occurs when the bladder was not carefully emptied before the patient went to sleep, or because a large quantity of fluid had been drunk during the evening. And lastly, in a few cases, the discharge is nearly voluntary, because it follows some dream excited by the distension of the bladder; in these cases it may be considered rather as an accident than as a habit.

Great difference also exists in the duration of this infirmity: in the worst cases it continues after puberty—more or less changed, however, according to the influence which this important period of life exercises on the constitution. In all my patients who had pollutions after incontinence of urine, I have remarked that the latter infirmity continued at least until the age of seven or eight years; in many it continued until the approach of puberty, and such patients always retained a frequent desire of emptying the bladder, as well as considerable difficulty in resisting that desire, especially when acting energetically.

It is evident, from what I have just stated, that incontinence of urine diminishes in proportion as the constitution gains strength, and that it generally ceases entirely at the age of puberty, or is, at least, always considerably modified; and this is enough to show, that the infirmity arises from original debility of the urinary passages. The treatment, too, that is most successful, supports this opinion. All useful remedies are derived from the tonics and astringents. I have invariably found benefit from aromatic baths in such cases, and I have now treated a vast number of them. I consider, therefore, that incontinence of urine arises from atony or debility of the neck of the bladder.

It is not without reason, then, that the approach of puberty is considered likely to effect a cure in such cases: such a result is explained by the urinary passages sharing the excitement set up at this period in the genital organs; and this intimate connection is sufficient to

point out that incontinence of urine in childhood is a bad symptom, when considered in connection with the powers of the genital organs, in after life. The cases I have seen leave no doubt on my mind on this subject; and I should add that aromatic baths have been very useful in cases complicated in this manner. After aromatic baths I may mention cold bathing, ferruginous preparations, quinine, columba, &c., which are also useful in relieving the incontinence of urine itself. Sulphuretted baths have also frequently produced good effects.

Retention of Urine.—This accident is very rare in childhood. I have, however, notes of two cases of obstinate involuntary discharges in which it occurred. In the first case, frequent retention took place about the age of two years, and was occasionally so serious that the aid of the catheter was required for its relief. Up to the age of sixteen, too, the patient was never able to pass urine without making ineffectual efforts for a quarter of an hour or more; and even when he consulted me he was obliged to wait five or six minutes before the discharge took place. He was also subject to hæmorrhoids from infancy, which is very rare. The susceptibility of the genital organs was so great in this patient, that pollutions were produced by viewing lithographic plates showing the anatomical details of pregnancy.

The other patient was a young man, æt. twenty-one, who consulted me for pain in his chest and stuttering, which had come on after puberty. Retention of urine occurred occasionally during his childhood up to so advanced a period that he was able to furnish an exact detail. At the age of fifteen, after having travelled some time with a female—causing him considerable excitement—he passed a large quantity of semen with the last drops of his urine; afterwards the same circumstance frequently occurred without any previous excitement. He noticed also that he passed semen during efforts at stool. He occasionally practised masturbation, but at very distant intervals, and he never passed on such occasions more than two or three drops of semen. He had opportunities of sexual intercourse six times in four years, and on each occasion found himself completely impotent. This patient deceived himself curiously as to the cause of his want of power: once he imagined that it arose from the disgust inspired by a prostitute; once from the respect he felt towards a mistress; on another occasion he eat too much before going to his rendezvous; at other times he had drank too much punch, eaten too many strawberries, &c. I mention these subterfuges, because patients who are in this unfortunate position take vast trouble to deceive themselves.

The impotence in this case arose from diurnal pollutions which had evidently long preceded the rare attempts at masturbation which the patient committed. He came to consult me for an affection of the chest, and stated that he should return shortly. Two years afterwards, however, I learned from his elder brother, who consulted me

for a similar affection, that he became so ill as to be unable to undertake the journey, and that he died at the expiration of three months. His brother strikingly resembled this patient, not only physically but morally; he was also affected with stuttering. There was, therefore, in these two brothers, a congenital predisposition to involuntary seminal discharges, shown in the younger by very early retention of urine. The younger one, too, died, while the other recovered easily enough.

The following consultation has recently been sent me. The patient's grandfather died of a calculous affection; his father is of very nervous temperament, and subject to retention of urine arising from affection of the prostate; the patient himself, born during the disturbances in La Vendée, has always been delicate and very irritable. He has never been able to empty his bladder completely, whatever efforts he may make for that purpose, and the first jet of urine is always long in appearing. He practised masturbation very rarely when between fourteen and fifteen years of age. He is, however, subject to debilitating nocturnal pollutions, which have injured his health. Warm baths, abstinence from wine, and a non-stimulating diet, together with refreshing beverages, were the means which produced most benefit.

In all cases of early retention of urine, a decided disposition to irritation of the prostate is to be suspected, instead of debility and relaxation of the parts such as are found in persons who have been subject to incontinence when children.

To resume, then: incontinence of urine is a symptom the more serious in respect to the genital functions in proportion as it is more complete and prolonged, and the pollutions which follow it so easily are to be attributed, in a great majority of cases, to congenital relaxation or debility. Such pollutions are always very obstinate.

Retention of urine announces just as surely a disposition to phlogosis in the prostatic portion of the urethra; and this is more marked in proportion as the retention occurs early in childhood, a period at which the organs are not exposed to the irritations that act on them after puberty.

Hereditary Transmission.

CASE LXI.

Blennorrhagia at the age of twenty-one—Pains in the testicles—Pollutions during four years—Serious gastric and cerebral symptoms occurring in paroxysms—Hereditary predisposition—Iced milk—Cauterization—Acupuncture—Sulphuretted baths—Recovery.

In November, 1835, Dr. Guillemot requested my opinion on a patient of his, whom he thought affected with chronic cerebral affection. The following are the chief facts.

M. M——, of lymphatico-nervous temperament, and excellent disposition, whose father had been weak and unhealthy, passed his childhood without suffering from any serious disease, but was always subject to diarrhœa, accompanied by very painful tenesmus, which generally yielded to slight medical treatment, but was reproduced from very slight causes. He led a sedentary, studious life, and had never committed excesses of any kind.

In 1827, at the age of twenty-one, he contracted simple blennorrhagia, which yielded quickly to the use of demulcents; soon after, he experienced a vague dull pain in the testicles, which troubled him much on account of its seat and its constancy, although his medical attendants did not consider it of consequence. He had also repeated nocturnal pollutions, followed by fatigue and general uneasiness, especially when they occurred very frequently. His erections, too, were sometimes painful. During four years, he suffered constantly from indisposition; he had frequent attacks of indigestion, repeated headache, and sudden attacks of giddiness, although these were slight and passing. His memory and aptitude for intellectual employment were diminished. In 1831, he had strange noises in his right ear, accompanied with buzzing and momentary deafness, which went off and returned without evident cause. The attacks of cerebral congestion became more severe, but were still of short duration.

In March, 1832, the first serious attack occurred; it was ushered in by an abundant discharge of urine with notable digestive disorder, and was afterwards marked by violent spasms and constant giddiness, which did not allow the least motion of the head without loss of consciousness. Venesection and leeches were had recourse to, with marked increase of the agitation and other symptoms. Blisters and a seton in the nucha were followed by momentary relief; but similar attacks soon recurred.

In 1833, the patient experienced much dread of the cholera; he had symptoms of hypochondriasis, which were attributed to fear, and completely lost his hearing on the right side. In November, he was bled in the foot, and injections of vapor and fluid into the ears were practised without benefit. Russian and Egyptian baths were used; immediately afterwards, several violent attacks occurred, exactly similar to those before suffered. A severe regimen was now ordered, together with a large issue in the nucha; no benefit resulted. A venereal taint was now suspected by Récamier, and mercurial baths ordered without any effects worthy of notice. The attacks were now supposed to be periodical, and sulphate of quinine was ordered; but on the third day of this new treatment, a still more serious attack occurred, and Marjolin and Baudélocque were consulted. Fresh issues were made in the nucha, and mercurial pills and decoction of sarsaparilla were ordered. During three months little change occurred. There was violent pain in the right shoulder, with an eruption in the neck.

In the spring of 1834, a slight improvement took place, which lasted two months, after which, the same attacks returned with increased frequency and severity. Valerian and belladonna were now prescribed without benefit. In the spring of 1835, another remission in the symptoms took place; but at the end of the summer, the same accidents recommenced.

When I saw the patient, his last attack had continued upwards of a month almost without remission; his emaciation and pallidity were striking; he lay on his back quite motionless, not daring to lift his head from the pillow, or even to turn from right to left; on the least attempt at motion all things around him seemed to turn at the same time that he turned with them, and

the room appeared to sink with him; his cephalalgia was intense and constant, and especially felt in the region of the right ear; the corresponding temporal region was more sensitive than the other, and the mouth was drawn to the opposite side when his lips were in motion. There was constant stiffness of the neck; he was unable to bear the least light or noise, and even a slight motion of the air increased his irritability, and caused serious symptoms. His pulse was feeble and remarkably slow; his urine, passed abundantly, was muddy, and deposited much sediment, containing phosphate of lime, with a thin mucus uniformly mixed, and a denser deposit which occupied the lower layer.

It seemed evident that this deposit contained semen in abundance, although I was unable to satisfy myself completely of the presence of spermatorrhœa, on account of the quantity of urinary salts present. The patient asserted, that several of his most severe attacks had come on immediately after abundant nocturnal pollutions, and that he always felt worse the day after they had taken place. Still the deafness on the right side, the pain in the neighborhood of the right ear, and the deviation of the mouth to the opposite side, seemed to indicate a chronic affection of the right internal ear, which probably had extended to the membranes of the brain in the neighborhood. On the other hand, both the patient and Dr. Guillemot had noticed that every attack had been preceded by an abundant secretion of clear colorless urine, with marked disorder in the digestive organs. I still feared that I might be misled, by having my mind preoccupied with the subject of spermatorrhœa, and I therefore, at this time, declined to advise cauterization.

Iced milk, however, I ordered, and it re-established the functions of the stomach in a short time, and increased the patient's appetite, which he was obliged to satisfy frequently under the penalty of again suffering from cerebral symptoms. Camphor was insupportable on account of its influence on the head, and opiate enemata produced constipation. Syrup of nymphea, however, had a better effect. After its use the nocturnal pollutions became more rare, and the urine, after several variations, at length continued perfectly transparent (excepting on the days following nocturnal pollutions), during forty days. By degrees, the severe attacks became less frequent, and the patient at last passed two months without experiencing any: his deafness was less complete; his attacks of giddiness ceased, and at length he had resumed his ordinary diet, and thought himself cured, when in the middle of March, 1836, his nocturnal pollutions again became more frequent; the urine constantly contained an abundant spermatic deposit; his digestion grew difficult, and with the symptoms of gastric derangement, the giddiness and cephalalgia returned. Decoction of nymphea in injections, and the presence of a catheter in the urethra for an hour or two at a time, caused these nocturnal and diurnal pollutions to diminish considerably, but the coincidence of new disorders accompanying the return of the pollutions, left no doubt as to the origin of the disease, and I therefore advised cauterization. This was performed some time afterwards, and still later, I used acupuncture.

These means produced a profound and lasting change in the functions of the spermatic organs; for, from this time, the nocturnal pollutions became more and more rare, and the urine rarely contained either spermatic deposit or mucous cloud. The other symptoms also gradually diminished from this period, clearly showing that they arose from involuntary seminal discharges. The attacks of giddiness disappeared so completely that M. M——, in travelling through Switzerland shortly after, was able to pass on a mule

along narrow precipices, and on the brink of torrents, without suffering the least inconvenience.

M. M—— being convinced of the return of all his functions, has married, and became a father a few months since.

From the conclusion of this case, it is impossible to doubt the true cause of the gastric and cerebral disorder, and it is evident, that their habitual coincidence was owing to their arising from the same cause. The frequent intermittences of the disorder are not wonderful after the cases I have already related, besides, during these intervals of a month or two at a time, the health was never perfectly re-established. The patient was only less ill than usual. Before having severe attacks, too, the patient had suffered from slighter ones, to which he paid no attention, but which only differed from those which occurred afterwards in their intensity and duration.

M. M—— had complained for a long time of dull and wandering pain in his testicles, painful erections, and frequent debilitating nocturnal pollutions. If, therefore, his medical attendants had paid attention to these symptoms, they must soon have discovered the cause of his disorder.

It was impossible to mistake the influence of blennorrhagia in exciting these nocturnal and diurnal pollutions, and I did not seek any other cause; but Dr. Guillemot sent me some very judicious observations, which I must mention here. M. M——'s father was always an invalid; he was subject to frequent and obstinate catarrhs; his appetite was irregular and his stomach very inactive. The state of his digestion, too, exercised great influence over his character. All his family noticed the analogy between his symptoms and those of his son.

M. M—— has also a brother who resembles him physically as well as morally, and who suffers from frequent but less severe attacks of giddiness. He is also subject to nocturnal pollutions, especially when travelling, and Dr. Guillemot has often found traces of spermatic deposit in his urine. He is frequently constipated, and passes a certain quantity of semen during his efforts at stool. He is subject also to eruptions on the glans and prepuce. For these symptoms he has quite recently consulted me. The similarity of these circumstances recurring in M. M——'s father and brother is worthy of notice; indeed, there is no reason why the genital organs should not partake of the family resemblances, that exist in features, height, temperament, &c.

I think, therefore, that in this case the involuntary discharges, and the serious disorder to which they gave rise, depended more on hereditary predisposition than on the blennorrhagia.

The following is a very remarkable circumstance of the same kind, which came under my notice in 1830:

CASE LXII.

Nocturnal and diurnal pollutions occurring in three brothers.

In 1822, M. C——, æt. nineteen, suffered from frequent nocturnal pollutions, although he had frequent sexual intercourse. One night on awaking he endeavored to prevent ejaculation from taking place by firm pressure on the bed; he succeeded; but the next morning, without any other evident cause, the passage of urine was painful; the second day the pain in the urethra increased; the patient had discharge, fever, dysuria, and even strangury. These symptoms lasted a month and more, their severity being, however, diminished by demulcent drinks, local and general baths, and a strict regimen. Before the patient was quite well he attempted coitus, which was accompanied with severe pain in the urethra. A little while after there was abundant deposit in the urine.

In 1823, after a very tiring walk, this patient experienced a lively burning in the urethra during the passage of urine. The discharge, too, returned, but passed off without any treatment. During the five years following, although he was strictly continent, he suffered from constant burning in the urethra, with from time to time dysuria, pain in the loins, and abundant deposit in the urine.

In 1829, he was in a state of profound melancholy and depression; he suffered from difficulty of breathing, a sense of weight at the epigastrium, anorexia, frequent liquid stools, and heavy pain in the lumbar and hypogastric regions. Whenever he went to stool, a considerable discharge of watery semen took place, and the same thing happened frequently during the emission of the last drops of urine, as well as after he had experienced the least venereal excitement, although he had not had erection. The prostate was not enlarged, but painful on pressure.

The patient's elder brother, æt. twenty-five, of robust constitution and remarkable muscular strength, possessed active virility at the age of nineteen, when he had daily meetings with a female whom he endeavored to seduce, often renewing his attempts three or four times in a few hours. At first, obstacles only arose from the pain caused, and the unfavorable circumstances that accompanied these meetings, but after a time his erections became incomplete, ejaculation took place very rapidly, and at last took place on the first approaches. Afterwards he addressed himself to other females, but then he perceived that his erections were incomplete, rare, and of short duration; he experienced frequent and almost passive nocturnal pollutions, with pain in the testicles and spermatic cords, and, at last, involuntary discharges during efforts at stool; his health, however, was not much disordered.

The younger brother, æt. nineteen, also suffered from nocturnal pollutions, without erection, involuntary discharges at stool during the emission of urine, and even while in company with a female. These he attributed to considerable ungratified venereal excitement, which he had experienced daily for a long time together.

The coincidence of nocturnal and diurnal pollutions in three brothers, the eldest æt. twenty-seven, the youngest nineteen, is remarkable enough; all three being strong and well made. It is worthy of note also that the gravity of the symptoms was exactly pro-

portioned to the age of the individuals, and consequently to the duration of their disease; for it seemed to have commenced in each case at about the same age.

The causes which favored the development of the disease in these three brothers were too slight in each case not to require the hypothesis of congenital disposition to account for its appearance. Cases of this kind are rare, but those above related are sufficiently characteristic to leave no doubt of the possibility of hereditary predisposition to involuntary discharges existing without any sign in the genital organs denoting its presence.

Congenital increased Nervous Susceptibility.—I have met with a considerable number of patients in whom involuntary discharges were referable rather to an originally excited sensibility of the genital organs, than to congenital relaxation. None of these patients had been exposed to the influence of any cause sufficient to account for the occurrence of spermatorrhœa.

In general such patients were of sickly constitution, and more or less marked nervous temperament; they had been delicate from childhood, and subject to various spasmodic disorders. Some of them presented involuntary twitching of the muscles of the face, hesitation of the speech, &c.; their imagination was active, and their moral and physical sensibility very acute. They were very restless, and bore contradiction, or mental excitement, badly.

In childhood they presented local symptoms, which indicated peculiar susceptibility of the urinary organs, every impression of fear or anxiety showing itself in this direction. What would have produced shuddering or palpitation in other children, in them caused a secretion of clear watery urine, which they were obliged to discharge frequently; a sense of constriction of the hypogastrium, and a sense of titillation generally accompanied its discharge. This condition of the urinary organs continued more or less severe in all the cases until after puberty, when it became joined with other symptoms. One of these patients one day experienced at the age of sixteen a fit of irritability and impatience, which, however, he succeeded in repressing; and he then felt sudden and impetuous desire of micturition: whilst emptying his bladder he perceived a large quantity of pure semen discharged with the last drops of urine. This occurrence was the forerunner of nocturnal and diurnal pollutions, which at the age of twenty-seven had entirely ruined his health. Another, at the moment of competition for a college prize, was unable to find an expression he wanted; at the same time he felt a want to make water, which he resisted by firmly crossing his legs; but his impatience increased, and he shortly experienced an abundant emission without either erection or pleasure. A third patient suffered in the same way under similar circumstances; he saw the moment approach for sending in his thesis; the more he endeavored to hurry, the less freely his expressions flowed; at length, on hearing the clock strike, he suffered from so great mental disorder that he nearly fainted; at

this moment emission took place. A fourth having mounted on a high gutter of a house to take some sparrows' nests, looked down into the court below, and was suddenly seized with such terror that he fainted; on recovering and escaping from his dangerous situation he found that he had had an abundant seminal emission. The same circumstance occurred to a fifth, who, in descending a ladder, missed his footing and fell. Another patient told me that if he looked down from a height, or only fancied himself on the brink of a precipice, he felt a sense of contraction in the genital organs, which passed rapidly to the base of the penis, and ended by causing emission. The motion of a swing produced the same effects in a seventh.

Almost all these excitable persons were exposed to erection, and even to pollutions whenever they rode on horseback.

Although all these involuntary discharges were caused by extraordinary circumstances, I should not have paid much attention to them if they had not been followed by nocturnal and diurnal pollutions, which the most trifling circumstances rendered very serious. The disease, however, did not always put on a serious aspect immediately after these singular accidents; very often, indeed, it only injured the patient's health long afterwards; but as its gravity could not be explained by any *occasional* cause, I feel myself compelled to admit the existence of a congenital increased nervous susceptibility of the genito-urinary organs. Everything indicates, in fact, that the organs of these patients were rather excitable than weak and relaxed; and this condition was congenital because manifested from the earliest infancy. This excessive sensibility of the genital organs is, however, not always preceded by a similar condition of the urinary apparatus.

In all these cases, tonics and excitants always produced bad effects; proving that the genital organs were not suffering from atony.

Long-continued Continence.—I have already shown the vast advantage of chaste habits, strict principles, and moderate desires; I have now to point out the inconveniences resulting in certain cases from absolute and long-continued abstinence from sexual intercourse. The effects produced by complete privation afford the most certain evidence of the original strength or debility of the genital organs. If they are powerful, such privation proves a kind of torture which may induce the most serious abuses, or disorder in all the functions; if irritable, prolonged abstinence causes abundant and frequent nocturnal pollutions; if weak and little developed, such privation is not painful; the pollutions are rare and in small quantity at first, but still they produce a serious effect, and after a time they become more and more severe and difficult of cure.

These signs of energy, irritability, or weakness in the genital organs, are more certain than those drawn from their external appearance.

The patients of whom I am about to speak are all remarkable for the facility with which they support privation from sexual intercourse. Their lives are exemplary in all respects; not only have they never committed excesses or practised abuse, but for the most part they have never even had any relations with the opposite sex. In these cases the temptation is so slight that to conquer it is not any great merit. Such constant and easy continence is an unfavorable sign when considered in reference to the powers of the genital organs; and we should much deceive ourselves if we adopted, without examination, the explanation the patients give of their conduct. They generally attribute their continence to strict morality, to religious principles inculcated in early infancy, or to the effects of good example; they omit altogether to mention the little desire they have had to combat. But when such patients wish to break their long and easy continence, they find themselves completely unable; not on one occasion only, but habitually; not under unfavorable circumstances, but during many years of marriage. Such a state of things during the period of the greatest virility completely explains the ease with which they maintained their former long continence. Most of these patients, too, feel a strange presentiment of the catastrophe which awaits them. They have a suspicion of their weakness, and hence they manifest an instinctive repugnance to marriage, and hesitate long before they are able to make up their minds to enter that state.

A great facility, then, of supporting absolute continence, ought to lead us to suspect want of power in the genital organs; as well as diurnal pollutions when nocturnal ones do not occur, because the continued presence of semen will stimulate the least powerful organs into occasional action.

Let us now see what are the effects of such long continence, especially in these weak individuals. If fatigue be hurtful to all organs, so moderate exercise is necessary to them as soon as they are in a condition to act. The generative organs are not beyond the influence of this general law. All surgeons admit that prolonged inaction produces the same effects on the genital organs as on any other: that is to say, that it diminishes their energy and activity. The inactivity of these organs in children and eunuchs arises from the non-secretion of semen; no pollutions can therefore arise in such cases, and the health does not become disordered. On the contrary, in the unmutilated adult, want of power can only be attributed to very serious diurnal pollutions, often very difficult of cure. As soon as the evolution of the genital organs commences, the testicles begin to act; if their structure be not accidentally injured, they continue to secrete until a very advanced age. This secretion, it is true, may be diminished by the absence of all excitement, direct or indirect, or by momentary weakening of the system, or by the special action of certain medicines; but it never ceases entirely from the age of puberty to the commencement of old age. Hence results an evident deduction, viz., that in the absence of all voluntary evacuation the

seminal vesicles must become filled more or less rapidly, and after a time must become distended; so that if the secretion be not evacuated in quantity in an open and sudden manner, it must escape by degrees at periods more or less close, and under circumstances which render this evacuation difficult to be ascertained. In other words, if nocturnal pollutions do not occasionally occur, it is because diurnal ones exist.

From the numerous cases I have related, it is evident how slow and insidious the progress of this disease may be; and it is remarkable that those who have fallen into the most deplorable condition, and whose cure has been most difficult, have been precisely such as had supported the disease longest without suffering much.

In studying the cases attentively, it becomes evident that the disease commences by nocturnal pollutions, accompanied with lascivious dreams, energetic erections, and a lively sense of pleasure. But this orgasm diminishes by degrees. and the emissions at last take place without erection or sensation; such nocturnal pollutions become more rare, and sometimes cease entirely, and then the health of the patients becomes seriously and rapidly affected, much to their astonishment, as they have no suspicion that diurnal pollutions have been added to the nocturnal ones, and at last have entirely taken their place.

By reflecting on the succession of the phenomena in individuals who have done nothing to aggravate their condition; and taking into the consideration the salutary effects which sexual intercourse produced in many of the cases that have come under my notice (see case fifty-six), it is impossible not to admit that prolonged inaction of the genital organs diminishes the tonic resistance of the ejaculatory ducts, disorders their sensibility, and perverts their functions without being able to prevent the formation of semen by the testicles, or its passage into the seminal vesicles. Absolute continence, therefore, renders the expulsion of semen more and more easy in these cases without diminishing its secretion in an equal proportion.

The striking and numerous cases of this kind that I have met with, leave no doubt on my mind as to the true cause of the deceitful calm of the genital system. The erections and the desires undoubtedly cease; impotence is established; the organs no longer give the least sign of activity; nothing can remove their torpidity; all this is incontrovertible; but this condition is far from one of rest, especially of reparative rest; no advantage to the economy can result from it, in whatever manner the other functions may be performed; it is truly a pathological state; and it may exist long without appearing serious or sensibly affecting the constitution. But it becomes aggravated with the prolongation of the continence, and grows daily more difficult of cure.

The good health of such patients is only apparent; the least circumstances disorder it, and what they suffer is unsuspected; their parents, their most intimate friends, are ignorant of the cause of the

various disorders they complain of; the medical man who possesses their confidence is not better informed, because the patients themselves do not suspect it; thus their indispositions are set down to *ennui*, tendency to melancholy, or hypochondriasis. When their diseases become more serious, their constitutions are said to be delicate, impressionable, or unhealthy, or they are considered *malades imaginaires*. They are told that they pay too much attention to themselves, or that they have fondness for medicines. Medical men in large practice get tired of hearing their long series of inexplicable complaints, and get rid of them by advising travelling, or change of air. Charlatans rob them; officious friends advise marriage, or occupation to fill the void in their existence; every one blames, because no one understands them. Incapable of all serious occupation or deep affection, they grow discontented with themselves and still more so with others; absorbed by one sole thought, they return unceasingly to themselves to seek the cause of their condition, and soon become misanthropical.

When the disease has arrived at this point, it must make progress, because the normal exercise of the organs is indispensable to give them tone and to put an end to the involuntary seminal discharges; but these no longer permit the erectile tissues to pass out of their torpidity. We must, therefore, commence by arresting these pollutions; but when they have become diurnal their existence is easily mistaken, and their cure is more difficult in proportion as the period of inaction has been more prolonged.

From these facts it results that the least excitable and the most continent and timid individuals are precisely those for whom habitual continued continence is most injurious; they endure it with less immediate inconvenience than others; and although any excess would be very prejudicial to them, absolute privation possesses the greatest dangers. In fact, natural moderate exercise can alone give to their organs sufficient energy, and sufficiently regular habits to arrest nocturnal pollutions, and to prevent the occurrence of diurnal ones. No one would think of depriving a delicate child of exercise simply because he shows less disposition for it than his companions. Every one, on the contrary, would understand that it is the only means by which his weak constitution can be strengthened, if not rendered hardy. The same reasoning holds good in respect to the cases under consideration.

General Review of the Causes of Spermatorrhœa.—It has been seen that the causes of involuntary seminal discharges are very numerous, and that their mode of action varies much. Hippocrates wrote only of venereal excesses. Tissot and his successors added masturbation. The incompleteness of this list is evident. These two causes were supposed to act invariably in the same manner; whereas I have proved that their influence varies in different individuals, and even in the same individual at different times. All pollutions, too,

whether nocturnal or diurnal, were referred to relaxation of the genital organs; but I have shown that a very opposite condition produces the same effects; indeed, that this supposed relaxation seldom exists alone, especially under the circumstances stated.

I will now briefly recapitulate these causes. The first I considered was *blennorrhagia*—tracing the inflammation from the orifice of the glans penis, and considering all the changes produced by it in the tissues. Secondly, I spoke of *cutaneous affections*, pointing out the mode in which, by propagation of the cutaneous irritation through its continuity with the mucous lining of the urethra, involuntary seminal discharges arise. Thirdly, I considered the *influence of the rectum*. This I divided into two kinds: the one being mechanical, arising from an obstacle to defecation, or from constipation, the other a vital action, producing its effects by the extension of irritation from the rectum to the prostate and seminal vesicles. The fourth cause of which I treated, was *abuse*. Here I pointed out the various causes of abuse, their importance, and the varieties of abuses. On these points I laid considerable stress, on account of their importance to the well-being of the human race; I also pointed out the effects of abuses, and the means to be taken to prevent them. The fifth cause that came under my notice consisted of *venereal excesses*, and here I showed the circumstances which constitute excesses, and the conditions in which slight sexual intercourse may be injurious. I showed, also, that factitious desires may arise and carry intercourse beyond the actual wants of the system. The general and special effects of venereal excesses also occupied my attention. Sixthly, I considered *the action of certain medicines*, inducing involuntary seminal discharges. I showed the effects of astringents, purgatives, and medicines which stimulate the urinary organs, such as nitrate of potass, &c. I also mentioned the action of coffee and tea, when taken in excess. Seventhly, *the action of the cerebro-spinal system* occupied my attention. I here considered the action of the cerebellum and spinal cord. Eighthly, I considered *congenital predisposition;* and here malformations came under my notice, with phimosis, exuberant prepuce, vitiated secretion of sebaceous matter, hereditary predisposition, congenital debility, &c. I also passed rapidly over the symptoms by which debility of the genital organs may be recognized, and the conclusions to be drawn from incontinence of urine during childhood. I also made a few remarks on disorders of nervous susceptibility, and on the effects of continence on cases in which the genital organs are originally in an atonic condition. I have, in this first part of my work, related many cases—too many perhaps to suit the taste of some readers—but I found myself under the necessity of treating the subject of involuntary discharges as an entirely new one, and of proving each proposition as I proceeded—the scanty writings on the subject that have hitherto appeared, being not only useless, but worse,—full of errors.

CHAPTER XI.

SYMPTOMS OF SPERMATORRHŒA.

I HAVE hitherto been occupied only in considering the causes of spermatorrhœa; its symptoms now claim more special attention.

A cursory glance at the symptoms of involuntary seminal discharges is sufficient to show, that some may be referred exclusively to the genital organs, while others extend to all the functions of the system. The first constitute the disease, the second are only its more or less remote consequences. I divide the symptoms, therefore, into two great groups of *local* and *general* symptoms, in order to approximate, in their natural position, those phenomena which are most nearly connected among themselves. Both divisions are, nevertheless, intimately connected.

While considering these symptoms singly and in order, I shall avoid all those subtle divisions that have been proposed, into pollutions attended with erection, pleasure, spasmodic contraction, &c.; such being, in my opinion, only useless complications of the subject.

LOCAL SYMPTOMS.

Nocturnal Pollutions.—Those involuntary discharges that take place during sleep are easily ascertained; but it is not always so easy to appreciate the degree of importance to be attached to them, because they are not all equally injurious; under some circumstances they are even useful. The most abundant nocturnal pollutions are far from being always the most hurtful. When they arise from true spermatic plethora, they often relieve erotic excitement, with its accompanying agitation, anxiety, uneasiness, and indefinable trouble in all the functions. They are followed by a general feeling of comfort; the head becomes clearer, the ideas more rapid, and the motions more nimble; there is more inclination to amusement, and to every kind of occupation. I admit that nocturnal pollutions do not often produce such good effects, but then they are not often the result of spermatic plethora; they may, too, easily lose their character, so that habit alone tends to make them more and more frequent. In the greater number of cases, however, these evacuations are of very little importance.

But this state of excitement is too violent to last long: by degrees the organs become fatigued. Deprived of their natural functions, and consequently, being unstrengthened by regular exercise, they

may at last fall into a state of atony, or the seminal vesicles may preserve the habit of contracting, under the influence of slight or indirect excitement. The evacuations now produce the effects quite opposite to those experienced in the beginning. There are, on waking, feelings of discontent, idleness, weight in the head, disorder in the ideas, &c., but this condition passes off in the course of the day, and the patient is quite well on the following morning, if no further emission take place. After a time, these effects become more serious and lasting, and two or three days are required to remove them completely. There is, however, no disease as yet, because the economy is not as yet permanently disordered; but there is a degree of instability in the patient's health, a valetudinary condition, the progress of which it is necessary to arrest.

In these simple and early cases moderate coitus is useful; it gives tone to the organs, and breaks off the habit of involuntary emissions. At a later period coitus has its dangers.

When nocturnal pollutions are excited by abuse, by venereal excesses, or by the irritation of ascarides, they frequently produce serious disorders soon after their appearance, and the disease rapidly progresses. By degrees all the phenomena of excitement which preceded or accompanied the crisis, disappear entirely; emission occurs without dreams, erections, pleasure, or, indeed, any particular sensations; so that the patients only discover what has taken place by finding the marks on their linen when they awake. At the same time, the seminal fluid loses its consistence, color, smell, and even spermatozoa by degrees, and more and more resembles mucus or prostatic fluid. It is impossible to doubt its identity, however; the changes take place slowly, and frequently patients are able to follow their progress. These watery evacuations are followed by similar but more violent effects; besides, the seminal vesicles alone can furnish so abundant a discharge of viscid matter. The emission is sudden, the patients never having a constant seminal discharge. A similar evacuation does not always take place every night, though sometimes discharges may happen frequently in one night; and this the patients are easily able to ascertain, because their sleep is light and broken. As to the absence of erection during these discharges, it cannot be doubted, as the matter is found in the hair around the base of the penis, in the perineum, and even on the thigh. When it becomes dry after flowing over the skin, it forms a thin, brilliant pellicle, resembling the mark left by a garden snail. Generally, a good deal of this matter, too, is found on the interior of the prepuce; sometimes even the prepuce is entirely filled with it, showing the flaccidity of the penis, and the little energy of the seminal vesicles. This kind of progressive decrease in the excitement of the genital organs, with the corresponding increased alteration in the qualities of the semen, is accompanied with notable increase in the severity of the general symptoms, and in the difficulty of treating them.

In nocturnal pollutions, and, indeed, in all involuntary seminal discharges, the semen rarely undergoes any other alteration than those of which I have spoken; even when the patients have practised masturbation or coitus so furiously as to cause emissions of blood. I have only met with one case in which the pollutions were sanguinolent, and that only for a few days. The semen is also rarely purulent or sanious, at least during any length of time, in patients affected by involuntary discharges; such characters evince a profound lesion of the spermatic organs, which would be soon followed by death if it continued in so great intensity. It often happens that ordinary spermatorrhœa follows these sanguinolent or sanious emissions; but so long as the disease preserves the characters of a simple inflammation it must be considered as such, and treated accordingly. The effects of nocturnal pollutions are generally supposed to be proportioned to their abundance, frequency, and the energy of the phenomena that precede and accompany them: this conclusion is, however, extremely false. In all the cases of nocturnal pollutions related by authors, occurring *critically*, and putting an end to alarming symptoms, the discharges have been very copious, and often repeated in a single night. It may easily be conceived, therefore, that it is only in an extreme state of spermatic plethora that such frequent discharges can take place. But, putting aside these exceptional cases, we may often be deceived as to the importance of nocturnal pollutions when considered only with respect to the abundance and frequency of the discharges; for the virile powers vary much in different individuals, and we have no certain means of establishing the relation between this power and the constitutional strength of the patient. Besides, on the other hand, it is generally when the pollutions become less frequent and abundant that they are followed by serious and long-continued general symptoms. This anomaly is, however, only apparent, because the nocturnal pollutions become joined with diurnal ones that occur insensibly. It is, therefore, of importance to warn both surgeons and patients of the errors they commit daily in estimating the value of nocturnal pollutions by their abundance and frequency.

It is generally believed that erotic dreams excite nightly discharges, and they are, consequently, considered very dangerous. But the lascivious images that present themselves during sleep arise from excitement of the genital organs in the same way as the erections and the contractions of the seminal vesicles. These phenomena all coincide; they all arise from the same cause; but one does not depend on the other.

Two kinds of these dreams may occur; the one arising from true spermatic plethora, and presenting pleasant images unmixed with any disagreeable sensation; the other, excited by irriation of the organs, and mingled with filthy or disgusting ideas. After a time, too, these dreams may degenerate into true nightmare, accompanied with terrible sensations and difficulty of respiration, and in the

middle of the agitation the seminal emission takes place unaccompanied by any lascivious idea or voluptuous sensation. The danger commences when the erotic dreams diminish in vigor, and their return is one of the most certain signs of improvement.

The same thing may be said of the energetic and long-continued erections, and the active contractions that take place under similar circumstances. The diminution of the energetic phenomena alone should cause uneasiness, the most debilitating discharges, and those most difficult of cure being those that take place most passively. The more the seminal fluid, too, loses its distinctive characters and becomes watery, the more hurtful are the effects of the discharges on the system.

Diurnal pollutions are distinguished from nocturnal ones by their taking place during the waking state. They may be divided into two classes: those that happen during defecation, and those that occur during the emission of urine.

The diurnal pollutions that happen during defecation are more easily discovered than those that take place during the emission of urine; they do not, however, always constitute a disease, although they can never be critical or useful like certain nocturnal pollutions. So long as they happen rarely, and are accidental, the health is not injured; but when they do not cease on the removal of the accidental exciting cause, they incline to become more and more frequent, and to continue from habit, and after a time constitute a disease which may become serious and obstinate. The transitions are sometimes so insensible, that it is difficult to establish fixed characters for them, which shall be constantly applicable to practice.

When a robust individual has been submitted to unusual continence, and to the long-continued motion of a carriage, he may experience, after a few days travelling, an abundant discharge of semen during the violent efforts excited by accidental constipation. This is not a matter for much alarm; all will disappear as soon as the cause is removed. But habitual and constant travelling in a carriage may bring on permanent constipation, and a habit of involuntary discharges, very difficult to break off. The diminution of the erections under these circumstances is not always attributable to the genital organs becoming accustomed to the heat and motion of the carriage; but very often to the frequent repetition of unnoticed diurnal pollutions. The same thing may happen with respect to daily and long-continued horse exercise. Generally the organs habituate themselves to the action, but occasionally diurnal pollutions come on, and do not readily pass off, although their cause may have been removed.

The same may be said of the effects of long-continued sitting, in literary men and others. After having produced increased heat in the margin of the anus and perineum, with frequent and prolonged erections, sedentary habits are often followed by a completely opposite condition, without the transition from one state to another being

appreciable. The long use of astringents and bitters, together with, in fact, all causes capable of inducing constipation, tend equally to transform diurnal pollutions, which were harmless at first, into serious and intractable disease.

In all cases of this nature, it is not habit alone that tends to perpetuate the evacuations; there is also want of power in the rectum, which continues to increase in proportion as the system becomes weaker. Defecation requires the assistance of powerful efforts of the abdominal muscles, and this produces compression of the seminal vesicles.

On the other hand, all causes irritating the rectum may produce spasmodic contractions in the seminal vesicles, so that diurnal pollutions may be produced as well during diarrhœa as during constipation: such an effect is generally of short duration; but it may become permanent, provided the rectal irritation be long-continued, or return frequently. Such susceptibility of the seminal vesicles, too, announces an unfortunate disposition to the occurrence of these discharges; and this is the point of chief importance in the consideration of pollutions produced by a hot, cold, or irritating injection, by an active purge, &c.

The same remarks hold good when applied to the pollutions excited by hæmorrhoids; very often they only come on when such hæmorrhoids are increased accidentally, but they may continue afterwards, and even become habitual.

In all such cases as I have just been considering, it is for the practitioner to appreciate the importance to be attached to the discharges, and it is by their effects that he must judge them, rather than by abundance; for some patients support their effects better than others, and the danger varies according as they are accompanied or not with other pollutions—as, for instance, with those that occur during the discharge of urine.

The seminal vesicles sometimes contract from sympathy, rather than from being compressed by the rectum. This is easily observed, in some patients, who never pass semen during the efforts at defecation, but only *after* the passage of fæces, and even sometimes whilst adjusting their dress. In such cases a sudden convulsive shock is felt between the perineum and neck of the bladder, sometimes with slight turgescence of the penis and a certain amount of pleasure; and the fluid is discharged by two or three spasmodic contractions which may even project it a short distance. If these discharges always occurred after defecation they would be as easily discovered as nocturnal pollutions, for the fluid could not escape the patient's observation. But such cases are the rarest; and in all others the discharges are generally less suspected in proportion as the disease becomes more serious. In fact, at first, when the discharges depend on long continence, accidental constipation, &c., they are very copious, and generally attended with more or less turgescence of the penis and slight sensations, which attract attention. The semen, too,

possessing its normal characteristics, cannot be mistaken in these cases, and the sensation it produces in passing through the urethra is very different from that excited by the passage of urine. But as I have before stated, in proportion as the disease progresses, the semen becomes more aqueous, it is expelled with less effort and less copiously. Thus, supposing that the small quantity of fluid discharged be not passed together with the urine, the patient may imagine that he has only passed mucus or prostatic fluid—an opinion which, if he mention the circumstance to his medical attendant, is very likely to be confirmed.

It is well known that after violent efforts at defecation, a small quantity of viscid matter may be expressed from the follicles of the prostate, and may form, with the mucus of the canal, a drop of thick and stringy fluid which stops at the orifice of the glans; but is this the reason why every one who states that he has passed semen while at stool, should have his assertion contradicted without examination? This, nevertheless, happens daily. Patients who take the precaution of emptying the bladder before going to stool, are not to be so easily deceived; for the prostatic fluid, joined with the urethral mucus, never furnishes more than one or two drops of thick thready matter, which is almost always transparent; and the most simple reasoning suffices to show that these fluids never can be expelled in any quantity at one time, because they have no reservoirs to accumulate in. Whenever, therefore, a quantity of fluid amounting to a spoonful is expelled at once, there can be no chance of its consisting merely of prostatic fluid and mucus.

Seminal discharges that take place during the emission of urine are the most serious and most obstinate of all, because they are the most often and most easily repeated. They are also very obscure on account of the alterations the semen undergoes, and of its mixture with the urine—at least, in the majority of cases. I must, therefore, lay considerable stress on the means by which the presence of these discharges may be ascertained.

First, the semen never mixes with the urine at the commencement of the discharge. It only escapes with the last drop, and when the bladder finishes emptying itself by energetic and spasmodic contractions; sometimes even it escapes by itself after the bladder has been completely emptied. The desire of making water occurs very often in these cases, and sometimes, though camparatively seldom, the penis becomes slightly turgescent, and two or three convulsive motions expel the fluid in jets. Generally. however, there is no interval between the discharge of urine and the seminal flow, and the phenomena are so connected that they cannot be separately distinguished. I have verified the fact of the semen being only expelled during the last contractions of the bladder, so often, however, that there can be no doubt on the point.

Habitual gleet is liable to become aggravated from very slight causes, and may give rise to a cloud in the urine, which it is possible

may be taken for seminal fluid; to avoid this error, it is sufficient to recollect that in gleet it is always the first jet of urine that is cloudy —the cloud consisting of cast-off epithelial scales, mucus, and prostatic fluid, which have accumulated since the previous act of micturition. Whenever the bladder, too, contains blood, pus, mucus, &c., these extraneous matters, being heavier than the urine, are collected near the neck of the bladder, and consequently are discharged first when the patient is standing. The contrary takes place with regard to semen. These remarks will be found of considerable importance in practice, for gleet and vesical catarrh are often present at the same time with diurnal pollutions, and render the diagnosis very obscure. In simple and early cases, on desiring the patient to make water in a bath, it is very easy to distinguish the semen discharged with the last drops. In such cases it possesses considerable opacity, and contains a number of granules which become dispersed in the water, troubling it very considerably. In older cases it is still easy by a little attention to prove the presence of semen;—the urine suddenly acquires greater density; besides, the semen is seldom so totally changed as no longer to contain whitish particles, or distinct granules.

It must be borne in mind, however, that the variations are very great between one day and another, so that pollutions may not be noticed on every occasion.

In most cases the presence of semen in the urine may be discovered at the first view. In cases that are recent, small, semitransparent irregularly spherical granules, of variable size, somewhat resembling bran, are seen at the bottom of the vessel. These cannot be confounded with any urinary salt, because they appear before the fluid has cooled; they are soft, and do not adhere to the sides of the vessel. On the other hand, neither urethra, prostate, bladder, nor kidneys can furnish similar granules, especially when the urine is transparent; they must come, therefore, from the seminal vesicles, and may be regarded as a sure proof of diurnal pollutions. The patients, too, are generally made aware of the passage of the semen by a peculiar sensation, arising from the unaccustomed density of the urine; they often distinguish also the spasmodic contractions of the seminal vesicles which produce these diurnal pollutions. It is worthy of remark, too, that such pollutions occur almost always after some venereal excitement, as, for example, after an erotic dream, lascivious conversation, &c.; or, after some mechanical excitement of the genital organs; and often while the erectile tissues are more or less turgescent the desire of micturition is felt. The union of these circumstances sufficiently indicates that such pollutions are the least passive of those that occur during the passage of urine; they are also the least serious and the most rare.

Other patients experience very different phenomena. The penis shrinks towards the pubes in consequence of the pain that extends from the neck of the bladder to the glans. The passage of the urine

over a very irritable point of the canal causes the spasmodic contractions into which the sphincters and seminal vesicles soon enter. Different sensations sometimes announce the occurrence of a pollution; sometimes it is a sense of heat at the margin of the anus; sometimes a shiver or general uneasiness; and, occasionally, a darting pain in the nipple, &c. Patients who are accustomed to these particular occurrences well know that they will find a deposit of flocculent matter in their urine after experiencing them.

When the disease has made further progress the passage of the semen is hardly appreciable by the patients, and the urine no longer deposits such large granules at the bottom of the vessel. There is, however, a thick homogeneous whitish cloud sprinkled with little brilliant points which descend to the bottom of the vessel, and have been compared, with justice, to the deposit formed in a strong decoction of barley or rice. Repeated microscopic examinations have left no doubt on my mind that such clouds are in a great measure due to much altered semen, and that the brilliant points come from the seminal vesicles.

Certain precautions are necessary in order to observe all the characteristics of which I have spoken. In the first place, each discharge of urine should be collected in a separate vessel, because the excretions passed at different parts of the day do not often present the same appearances. The morning urine generally contains most deposit, especially when the night has been restless. Urine passed after moral or physical excitement of the genital organs also contains a large quantity, as well as that after a sudden chill, an attack of indigestion, or violent emotion of any kind. Often the urine is perfectly transparent during a whole day, or several days, and the patients under these circumstances experience a remarkable improvement in their symptoms.

This method of studying the urine permits us therefore to follow all the oscillations of the disease, and to appreciate those causes which act most energetically on each individual. Such causes may be very different, and even opposite to one another; thus, for instance, in one person, cold dry weather is injurious; in another, warm and moist.

The vessels to receive the urine ought to be quite transparent. Round-bottomed glasses, like exaggerated and much deepened watch glasses, are useful; but champagne glasses are more advantageous when the deposit is wanted for microscopic research.

Other Diurnal Pollutions.—Certain other diurnal pollutions may occur, but in such cases there are generally involuntary discharges during defecation and the emission of urine, present at the same time.

Such pollutions may take place during horse exercise, from the jolting of a carriage, the friction of the clothing, mental excitement, and in a few very rare cases without either moral or physical provocation. In the last cases the patients experience suddenly, while

engaged in study, a pinching in the prostatic region, with a sense of spasmodic contraction between the bladder and rectum; perhaps they get rid of these sensations by change of posture, pinching the skin, &c.; but the discharge of semen takes place with the next emission of urine. I can only attribute these phenomena to some special irritation of the seminal vesicles, or of the nerves distributed to them.

Impotence.—Loss of virility, when not attributable to any evident cause, must be considered a local symptom, and one of the most certain of involuntary seminal discharges. The effects of age, of serious diseases, and of lesions of the testicles are of course left out of the question in this statement: and there are also other cases which must be carefully distinguished from habitual and acquired impotence.

Under the influence of powerful moral impressions, of whatever kind, the genital organs may occasionally not respond to the most energetic desires. Sometimes even the violence of the excitement may prevent its external manifestation. But this condition passes off with its exciting causes, and the same individual under other circumstances regains his normal vigor. Such accidental occurrences must, therefore, be distinguished from habitual impotence.

In other cases, too, the evolution of the genital instinct never perfectly takes place; some even never experience a commencing puberty. I once saw a man, thirty years of age, very fat, without beard or hair on the pubes, whose testicles and penis appeared to belong to a child of seven or eight years; he had never experienced either erections or venereal desires. This case may be considered as the type of congenital impotence. It is rarely so complete, but in no case must it be confounded with the acquired condition.

On the other hand, again, acquired impotence presents different degrees which are important. Some patients never have complete erections, others only experience them accidentally, as, for instance, at the moment of waking, or when the rectum or bladder is distended. But such erections never acquire the same degree of energy as normal ones. In other persons, again, the morbid sensibility of the organs is so great that emission takes place on the least contact, without perfect rigidity of the *corpora cavernosa*. In this case—the least serious and the most common of all—there is yet impotence, even although intromission be possible, because fecundation cannot be the result of so precipitate an act, by means of which the seminal fluid cannot pass into the neck of the uterus. These are cases of only commencing impotence, which may be as slight as possible; but when it has continued some little time, we may be sure that involuntary discharges are present. Those involuntary discharges which take place during defecation and the emission of urine being the only ones of which the patient may not be aware, we may infer whenever any notable and permanent diminution of

the genital functions occurs, that the patient suffers from diurnal pollutions.

The presence of well-formed semen in the seminal vesicles is the cause of all normal erections, and without this essential condition either direct or indirect excitement would have no action on the erectile tissues; habitual and acquired impotence, therefore, arises from the want of the normal stimulus in the vesicles, and is consequently, one of the most certain signs of the presence of diurnal pollutions.

I now proceed to consider the means by which the actual presence of semen in the urine, or under other circumstances, can be unequivocally demonstrated.

Chemical Analysis.—The analysis of animal matters is too complicated a process and too uncertain in its results to permit of its employment by practical men in distinguishing semen from mucus or prostatic fluid. The use of warm water applied to stains on the linen in order to favor the evaporation of the odoriferous particles cannot strictly be considered a chemical process, and the odor of semen passes off too rapidly to allow of its being always ascertained by our obtuse olfactory organs. It is, therefore, a distinctive character of little importance, whatever acuteness the sense of smell may acquire from long habit.

Microscopic Examination.—Since the discovery of the spermatozoa their presence in the seminal fluid has atttacted the attention of all who have sought means of distinguishing it from other fluids. Microscopic examination of the spermatozoa, however, not only requires an excellent instrument, but certain precautions which may be dispensed with in the investigation of coarser objects. As the spermatic animalcules can be only seen by means of transmitted light, it is necessary that the glass on which the fluid to be examined is placed should be of uniform thickness, and without bubbles or striæ. The fluid to be examined should be covered by another layer of extremely thin glass made on purpose, and not by portions of mica, which are seldom free from cracks, and never perfectly transparent. This thin layer of glass is indispensable in order as much as possible to diminish the thickness of the fluid, to render it perfectly uniform, to hinder evaporation and prevent the object glass from being soiled by it. A single drop of fluid suffices for a complete observation, a larger quantity always proving inconvenient. The little glass that covers the liquid must be firmly pressed down so as to spread it out, arrest the currents that take place in it, and drive out the air bubbles. Although the glasses should seem to touch each other, the spermatozoa move with perfect freedom in the space between them, so long as they preserve their energy and evaporation has not proceeded too far; should such be the case, however, a drop of tepid water favors and much prolongs their motions. However thin the layer of fluid may be, it is impossible to comprehend its whole thickness at once with a very high power, and it is, therefore, necessary to alter the focus

frequently in order to be sure that nothing escapes observation And this is especially important in examining a drop of fluid obtained from diurnal pollutions, because there are frequently only two or three spermatozoa contained in it. It is also necessary to change the position of the reflector frequently in order to vary the direction and intensity of the light. The spermatozoa are often exceedingly transparent in cases of disease, and a very bright perpendicular light is by no means the best for showing them. Varying the density of the fluid under examination, either by adding water or by permitting evaporation, is also often useful. The semen contains matters furnished by the seminal vesicles, the prostate and the urethra, and when the fluid is too thick these matters hide the animalcules. A drop of water applied to the edge of the covering-glass penetrates underneath it, and the spermatozoa are more isolated, at the same time that their contour is rendered more defined by the diminution in density of the fluid. On the other hand, the refractive power of the spermatozoa differs little from that of the fluid in which they are contained, and their thinnest portions are traversed by the light without affording any distinct images to the eye. In this case there are only seen very small ovoid brilliant globules terminated by a little point. As soon as the water begins to penetrate between the glasses, the rapid motion set up prevents the objects from being clearly distinguished; but as soon as rest has been re-established the tails of the animalcules appear, and their dimensions seem to have increased in consequence of the diminished density of the surrounding fluid; water suffices to produce this result. It is more sensible, however, when a small quantity of alcohol is added; but the forms of the animalcules are, after a time, altered by this agent; and it is, therefore, advisable to use water only when it is intended to keep the preparation.

Evaporation sometimes produces not less remarkable changes in the seminal fluid. I have frequently, in cases of spermatorrhœa, failed to perceive anything in the fluid under examination for half an hour, an hour, or more; then, suddenly, an animalcule has made its appearance; then a dozen, and then perhaps a hundred in the space of a few minutes. The following morning, when desiccation has become complete, there are no longer any traces of these animalcules, or, at all events, I have been only able to distinguish their tails, the other parts of them being fixed in the dried-up mucus. The absorption of a drop of water has restored the phenomena observed the night before.

These phenomena are easily explained: when the refractive power of the spermatozoa is the same as that of the circumambient liquid, the light traverses the whole in the same manner, and the mass appears homogeneous. But evaporation acts more rapidly on the liquid than on the organized bodies contained in it; and when the difference of density alters the refractive power the forms of the spermatozoa are momentarily defined because they have become more trans-

parent than the remainder of the fluid. When desiccation is complete, however, the animalcules again disappear, because the refractive powers of mucus and dried animalcules are again equal. The absorption of a small quantity of water reproduces the same phenomena, which may be repeated almost indefinitely, since the matter confined between the two layers of glass undergoes no other appreciable alteration.

In order to be enabled to discover spermatozoa quickly in cases of disease, it is necessary that they should be well studied in healthy cases. This may be accomplished in the following manner: After coitus there always remains a sufficient quantity of seminal fluid in the urethra to serve for precise and complete microscopical examination. This may be obtained by pressing the canal shortly after the act, and receiving the drop of fluid from the orifice of the glans on a plate of glass. In this drop of fluid thousands of animalcules may be seen, agitating themselves like so many tadpoles in a pool of stagnant water, only that the tails of the spermatozoa are relatively longer and thinner, and that the head presents a brilliant point near its insertion. Generally the number of these animalcules prevents them from being easily examined, and it becomes necessary to spread them out by introducing a small quantity of water, and pressing firmly down the thin glass that covers them; they are found most separated on the edges of the fluid. If the water added be of the temperature of the body their motions become free and lively, and continue so until cooling and evaporation affect them. By avoiding these two causes of disturbance, the motions of the spermatozoa may be kept up during several hours.

However long a time may have elapsed after coitus there are always spermatozoa in the urethra, provided they have not been washed away by the passage of urine. Although the point of the glans may be quite dry, and pressure along the whole length of the canal may not produce the least dampness, still on passing urine living animalcules may be obtained from the first drop which escapes. This may be received on the glass, and is perhaps the easiest and most natural mode of obtaining spermatozoa for microscopic examination.

It is evident that the same experiments may be applied in the case of nocturnal pollutions as well as in all other seminal discharges in whatever manner they may occur. But many errors may arise from commencing with cases of disease, for it is during perfect health that the spermatozoa are most active, and their development most complete, and they live longer after coitus than after any other kind of seminal discharge.

Having thus described the means by which my microscopic observations may be verified, I proceed to show their results.

Spermatozoa.—Out of thirty-three bodies which I have examined for spermatozoa, I only twice found these animalcules in the testicles. In one of these cases the patient died from the effects of a fall on the

day following it; in the other acute gastro-enteritis was the cause of death. The seminal fluid was most abundant, and contained the greatest number of animalcules in the former case. The other patients died of chronic diseases after protracted sufferings. One only among them died on the second day of acute peritonitis, but he was seventy-three years of age. In thirty-one of these patients the testicles were soft, pale, and as though withered. On section they presented a grayish aspect, and did not furnish any liquid; the structure was almost dry, and contained few bloodvessels; the secreting canals were easily separated one from another, and could be spread out under the microscope without breaking. They presented very brilliant granules, all of exactly the same appearance, about the size of the head of a spermatazoon, ten times smaller than corpuscles of blood or mucus, and differing from the latter by the constancy and regularity of their form. These brilliant bodies which occupied the place of the spermatozoa, are worthy of notice, because they offer considerable analogy to the appearances presented by the semen under certain circumstances.

In order to observe what is present in the secreting canals of the testicle it is necessary to spread out a portion of one of them under the microscope, after having examined it dry to allow a drop of water to penetrate between the two glasses, and to follow the changes which take place; then to press down the glass so as to flatten the parietes of the canal, rupture it, and press out a portion of its contents; lastly, these must be examined again when desiccation is complete, for the spermatozoa found in the canals are then best seen.

In the epididymis I have never found spermatozoa, except in the two cases in which they were also found in the testicles. In all the others, I met with these animalcules only in the vasa deferentia or seminal vesicles. There were no animalcules at all to be found in the patient who died at the age of seventy-three. It has always seemed to me that the animalcules were less numerous in proportion as the patients had suffered long; and in extreme cases I have generally found them only in the seminal vesicles. The fewer the spermatozoa the more difficult were they of detection on account of their extreme transparency. In some cases I have only suddenly discovered them after examining for an hour or two, the liquid having previously appeared quite homogeneous. The dimensions were the same as those of the best developed animalcules, but they were pale throughout their whole extent, and more transparent than the surrounding fluid. Complete desiccation often caused them to disappear altogether; but the same phenomena could be reproduced by the absorption of a small quantity of water.

In cases of phthisis, caries of the vertebræ, white swelling, &c., I have had great difficulty in distinguishing the animalcules, probably because these diseases do not cause death for a long time.

I have almost always found in the seminal vesicles, especially at the bottom of any depressions, a thick, grumous, brilliant matter,

varying in its aspect and color, but considerably resembling thick paste, and more or less transparent; with a high power the granules of this matter appear large, irregular, more or less opaque, and without any constant shape. They are evidently the products of the internal membrane of the vesicles, for they are found with similar characters in the accessory vesicles of the hedgehog, rat, &c., which never contain seminal animalcules, and do not communicate directly with the vasa deferentia, which, again, never contain any similar substance. This matter is, therefore, analogous to that secreted by the prostatic follicles, Cowper's glands, &c. Its functions are the same, and for many reasons it merits special attention.

The secretion of semen diminishes in all serious diseases, and seminal evacuations become very rare, especially towards the last. It is not, therefore, astonishing that the products of the mucous membrane predominate in such patients over those of the testicles, and that such mucus should become more consistent during its long residence in the depressions of the vesicles. Hence the difference observable between the semen obtained from the vesicles after death, and that which is passed by a healthy person. Nevertheless, after long-continued continence more or less large granules are often seen in the semen of a healthy person, and these are perfectly distinct from the fluid part. When the emissions are more frequent, granules of the same kind may be observed, but much smaller. These facts are important when applied to explain several symptoms of diurnal pollutions.

I have already stated that on causing the patients to make water in a bath, the semen passed may be easily recognized by means of its globules which whirl about in the middle of the cloud formed towards the close of micturition. From what we have just seen it is evident that these globules come from the internal membrane of the seminal vesicles. They may be wanting in very severe cases where the semen has no time to acquire consistence; but their presence leaves no doubt as to the existence of diurnal pollutions, because they can only be furnished by the seminal vesicles. On the other hand, I have invariably found spermatozoa in the urine of patients who observed this phenomenon in the bath. The same remarks hold good when applied to the globules which the urine deposits in certain cases of diurnal pollutions, and which have been compared by some to grains of bran, by others to millet seed, pearl barley, &c., according to their size. These globules are perceived as soon as the urine is passed: they are roundish, very soft, and do not give any sensation when squeezed between the finger and thumb; they cannot, therefore, be confounded with urinary salts, which are deposited only when the urine is cooled, have a crystalline form, and give the sensation of a hard body to the finger. The vesical mucus also is only deposited on cooling, and does not furnish brilliant granules. As to pus, its appearance is easily determined. I have found animalcules whenever these globules appeared in the urine; and hence

it is that I have pointed them out as certain signs of diurnal pollutions.

I have also noticed that in some cases the urine, when held against the light, presents in the middle of a flocculent cloud multitudes of quite characteristic *brilliant points*. These are smaller, and consequently lighter globules than those which in other patients fall to the bottom of the vessel. They are neither observed in the mucus of the bladder nor in the prostatic fluid, which alone present clouds analogous to those of diurnal pollutions. Such brilliant points also arise from the seminal vesicles, and their presence is, therefore, an indication that the urine contains semen. This I have often verified with the microscope. I should, however, warn those who wish to repeat my experiments, that it is not in the midst of the flocculent cloud that the zoosperms are to be sought, but at the bottom of the vessel, to which they soon fall on account of their greater specific gravity. The results of all my observations on the dead subject, therefore, convince me of the influence of serious and long-continued diseases on the functions of the spermatic organs. But it is not only in the morbid state that these experience great variations; remarkable differences may exist between healthy individuals not only in the quantity of semen secreted in a given time, but also in the number, appearance, and dimensions of the spermatozoa. In this respect, I have observed differences amounting to a third, and, in some cases, to half. The comparison is very easily established. When the semen is kept under a thin glass, as I have before described, it is not in danger of undergoing any changes, and may be always, by the addition of a drop of water, compared with a recent specimen.

Notwithstanding the facility with which nocturnal pollutions may be recognized, I have submitted the semen collected after them, by individuals in various conditions of health, to microscopic examination. At first, when the evacuations are still rare, and the semen preserves its ordinary characteristics, the animalcules do not present any remarkable circumstance in regard to their number, dimensions, &c.; but when the disease has reached a sufficient degree of gravity to affect the rest of the system, the semen becomes more liquid, and the spermatic animalcules less developed and less lively. Their number, however, does not as yet sensibly diminish; indeed, in some cases it seems increased. As the disorder advances, the erections diminish, the semen becomes more watery, and the animalcules are often a fourth or a third less than natural, and the tail is often distinguished with difficulty under a power of three hundred diameters. At a still later period the animalcules become fewer, and in two individuals in the last stage of the affection, the semen no longer contained animalcules, although it retained its characteristic smell. Examined with high powers and every proper precaution, I only found in this semen brilliant globules, all exactly alike, and about the same size as the head of a spermatozoon.

The microscopic examinations which I have made of semen passed

during efforts at stool give analogous results. When such discharges only take place accidentally and at long intervals, the semen is thick, whitish, impregnated with a powerful smell, and abundantly furnished with well-developed animalcules. I have sometimes even found a few alive after an hour or two. But when these discharges become so frequent or habitual as to constitute disease, they become less abundant and the semen loses its normal properties. The spermatozoa are generally smaller than in the healthy condition, and always less lively. I have some preparations in which they are only of half the ordinary size, and I have never been able to find a single living animalcule a few minutes after the fluid had been expelled. When the disease has become much aggravated, the spermatozoa become rare, and they are sometimes replaced by ovoid or spherical globules similar to those of which I have already spoken. In three patients in an extreme state of disease I found nothing else, although they passed as much as a dessertspoonful of semen at each stool. Such cases, however, are exceedingly rare.

In diurnal pollutions happening during the passage of urine the following means may be employed to show the presence of spermatozoa.

The urine should first be filtered in a conical filter, when, on account of their weight, the greater number of the spermatozoa will remain on the lowest part of the paper. By taking this portion, and turning it upside down in a watch-glass containing a few drops of water, the animalcules become detached from the paper by degrees, and fall to the bottom of the fluid in the glass. After twenty-four hours' maceration in this position, the paper may be taken away, and the spermatozoa may be readily obtained by using a drop from the bottom of the fluid in the watch-glass for examination. This mode of proceeding is a sure one, but it requires considerable time and trouble for its performance. I have already stated that the urine does not always contain spermatozoa in cases of diurnal pollutions; therefore, the urine of the same individual would perhaps require examination on many occasions before the certainty of their presence could be established, and few medical men in active practice have time to devote to such experiments. I for one should have long since given up treating these patients had I been obliged to repeat in every case such long and tiresome examinations. Ten days or a fortnight are sometimes passed without the appearance of spermatozoa in the urine, and hence all who are accustomed to microscopic researches will admit the indefinite amount of trouble and time required.

Fortunately, however, there is a more simple method by which such examinations may be conducted. It will be recollected that the semen always escapes either with the last drops of urine or immediately, or soon afterwards. By directing the patient, therefore, to compress the urethra immediately after micturating, and to receive the drop of fluid pressed out on a piece of glass, sufficient animalcules will be obtained from the walls of the urethra for microscopic obser-

vation. These being covered with a thin lamella of glass may be either at once placed under the microscope, or may be allowed to dry, and examined at a future time, a drop of water being previously added. This mode of examination is, therefore, easy for all practitioners who possess a good microscope, after they have accustomed themselves to the inspection of the spermatozoa in their natural state. The changes which I have mentioned as occurring in the semen must be borne in mind, however, and the animalcules must not be expected to appear either so large, so well defined, or so numerous as in cases where there is no disease.

Some interesting microscopic researches have been made on the stains of semen appearing on linen, but as these are too complicated for ordinary cases, and are chiefly of use in medico-legal investigations, I need not give any account of them here.

CHAPTER XII.

SYMPTOMS OF SPERMATORRHŒA.

General Symptoms.

Infecundity.—Impotency is an absolute cause of infecundity, because it prevents the conditions necessary to fecundation from taking place; but although the act of coitus may be accomplished, it does not follow that the person should always be able to perpetuate his species. Stricture of the urethra may prove an obstacle to the discharge of seminal fluid; or the fluid may be directed towards the bladder on the parietes of the urethra, by deviation of the orifices of the ejaculatory ducts. The secretion may be altered in its nature, it may only contain imperfect spermatozoa, &c. A man may, therefore, be unfruitful without being impotent. On the other hand, I have met with many patients suffering from diurnal pollutions who had children exactly resembling them, even during the duration of their disease. Indeed, I have seen several cases in which the disposition to involuntary discharges was hereditary, and they affected both father and son. The disease is, however, essentially irregular in its progress; it may continue long without doing serious injury to the health; long remissions may be experienced, or even a perfect cessation of the complaint for a longer or a shorter time; we may easily conceive, therefore, that in the first degree, or during one of the periods of remission, fecundation may take place. When the disease is further advanced, however, many causes concur to render coitus unfruitful. Ejaculation is weak and precipitate, so that the seminal fluid cannot be thrown into the cavity of the uterus; it is not sufficient, in order to fecundate, simply to spread the fluid over the vagina; it must be projected with sufficient force to pass through the orifice of the uterine neck. Besides, in these cases the erections, even when they permit sexual intercourse, are incomplete and of very short duration; emission takes place without energy and very soon; so that during such rapid acts the uterus and Fallopian tubes have not sufficient time for their office; the semen itself undergoes great changes, to which perhaps the loss of the fecundating power is chiefly attributable. Microscopic researches have elucidated this formerly obscure subject; I have discovered, for instance, that the

spermatozoa undergo changes similar to those of the fluid which serves as their vehicle; these changes are exceedingly important, and are owing to defective formation. Spermatozoa may be met with in a less thick and less opaque fluid than natural, for they are not produced by the same parts, or in the same manner; but when the secretion is perfectly thin and watery, the functions are so seriously affected that the animalcules are altered; they are less developed, less opaque, and less active than natural; indeed, they are so transparent that peculiar precautions are necessary in order to make sure of seeing them; their motions are weak, slow, and cease very soon; and they rapidly undergo decomposition. All these characteristics show how much their texture is relaxed, and how imperfectly they are organized.

It is evident that the least arrest of development in the spermatozoa must prove an insurmountable obstacle to fecundation, even if the only function of the animalcules be to carry the *liquor seminis* to the ovum. When, however, their imperfect development only arises from a too rapid formation, it may soon be obviated. It suffices that the involuntary discharges should cease for a few days only, in consequence of some accidental cause, or of one of the spontaneous changes of this extraordinary disease, in order for the desires to become more lively, the erections more energetic and prolonged, and for the function to be accomplished in a natural manner. Fecundation is, therefore, possible, as I have previously stated, during the whole duration of one of these intermissions.

This is not the case when the spermatozoa are malformed, rudimentary, more or less deprived of tail, &c., for these changes only take place when there is a serious alteration in the structure of the testicles. I have taken every opportunity of dissecting the testicles altered in these cases, and I have always found the secreting structures paler, drier, and denser than natural, and the cellular tissue more resisting, and with difficulty allowing the secreting ducts to be separated one from another. Sometimes half or two-thirds of the testicle were transformed into a fibrous or fibro-cartilaginous tissue, mixed in a few cases with tuberculous matter, causing the failure of the organs to experience the excitement necessary to carry the semen to its destination even when it passes the neck of the uterus. Nor is it especially in the epididymis. I have even seen traces of ossific deposit in the midst of cartilaginous indurations. These changes, caused by previous inflammation, perfectly explain why the development of the spermatozoa can no longer proceed normally.

Although in such cases the secretion of semen may be more or less diminished, pollutions may still be present if the seminal vesicles have shared the inflammation by which the testicles have been affected, as happens in most cases of orchitis arising from blennorrhagia. I have at present a patient who presents a remarkable example of both these effects arising from this cause: he is now forty-one years of age, and had blennorrhagia followed by inflammation of both testicles at

twenty-five. Soon after his recovery he married, but has never had children, although the act has been performed regularly if not frequently. He became subject to nocturnal and sometimes diurnal pollutions, which increased by degrees. His health became disordered, but coitus was still possible. The semen passed, although it presented its characteristic odor, never showed under the microscope other than very small and brilliant globules without any appearance of tail, but easily distinguishable from globules of mucus, the dimensions of which are five or six times larger. The epididymis of both sides is voluminous and irregular. One testicle is adherent to the skin of the scrotum, and the other appears smaller than natural.

Malformation of the spermatozoa, therefore, arises from deep-seated changes in the tissues of the testicles, changes which do not permit the animalcules to resume their normal form, and therefore render infecundity permanent.

To sum up, then. Involuntary seminal discharges may oppose fecundation previously to actually producing impotence, by diminishing the energy of all the phenomena that concur to the accomplishment of the act, and by preventing the complete development of the spermatozoa, as well as the elaboration of the fluid which acts as the vehicle for them.

These conditions may be rapidly altered by the simple diminution of the involuntary discharges, and fecundation may again become possible.

This cannot be the case when infecundity depends on malformation of the spermatozoa, such malformation arising from permanent alteration in the organs that supply them.

Fever.—Whatever may be its characters, fever can never be considered as a symptom of involuntary seminal discharges, such evacuations, however serious they may be, never producing febrile excitement. Patients suffering from spermatorrhœa, however, are not exempt from fevers arising from other causes; indeed, they become more liable, in consequence of their constitutions resisting such causes less directly. These fevers must therefore be considered as accidental complications, and treated as such.

Symptoms affecting the Digestive Organs.—At first, venereal excesses are generally accompanied with an increased appetite, from the necessity the economy experiences of making up its daily losses, and from the excitement of the genital organs. Masturbation often produces analogous effects; sometimes, too, voracity or boulimia results from it.

After a longer or shorter time, according to the power of the stomach, the patient's digestion becomes less easy, and after a time very laborious. In this condition, if the excesses or abuses cease, the disorder of the digestive organs is soon repaired, and all again becomes natural. This cannot take place when once involuntary discharges have supervened.

Still the patients continue to eat as usual, or even more than usual,

either because they wish to repair their strength by abundant and succulent food, or because they feel a real appetite. The sensation experienced in the latter case is not precisely that of common hunger; it is, rather a sense of gnawing and heat, referred to the epigastrium, or a kind of uneasiness or sinking which sometimes nearly causes faintness. A small quantity of food puts an end to this sensation, and soon afterwards disgust is felt. But the patients compel themselves to eat against their will, or they increase the number of their meals in proportion as the uneasiness in the stomach becomes more frequently repeated. By some means or other they generally take during the twenty-four hours more food than their stomachs are able to digest.

Almost all, too, seek the most spiced and most savory kinds of food, and take alcoholic drinks, coffee, &c., in order to favor the digestive process. But these dangerous auxiliaries cannot restore the original vigor to their digestive organs; they only beget excitement, not healthy strength. Hence, the illusions produced by this stimulating diet are not of long duration. Those who expected the greatest benefit soon find their digestion more difficult and painful; they have thus increased the irritation of the stomach.

A constant and remarkable increase in the involuntary discharges results as much from the effects such excitants produce on the whole economy, as from the special influence of the stomach on the spermatic organs, for there is a reciprocal action as usual.

In perfect health, excitement of the genital organs is soon followed by increased appetite; and, on the other hand, a succulent meal disposes to coitus long before any increased secretion of semen can result from it. The same relations exist when the functions are disordered, for, if abundant involuntary discharges provoke painful sensations in the stomach, attacks of indigestion equally increase these involuntary discharges. I have related a case in which three relapses occurred during convalescence from spermatorrhœa, simply from attacks of indigestion.

Various phenomena of considerable importance accompany these indigestions. The meal is not followed by that vague sense of comfort which attends reparation of the economy; on the contrary, a sense of weight is felt in the epigastrium, and produces a degree of uneasiness and of restlessness which induces the patient to change his position: the pulse is quickened, and sometimes beats violently; the face flushed; confusion of ideas follows, with noise in the ears and vertigo; and sometimes symptoms of cerebral congestion which may proceed so far as to induce a fear of apoplexy.

An increasing degree of torpidity succeeds this excitement in proportion as the disorder of the stomach becomes more fatiguing; hence the tendency to inactivity and sighing. Besides which, acid eructations, and an acrid burning heat at the top of the œsophagus, with a species of pyrosis, sufficiently point out how disordered is the digestive process.

When this badly formed chyme passes into the duodenum, it produces abnormal impressions which are transmitted to the liver and pancreas by their excretory ducts; hence the secretions of these glands are altered. The digestive process carried on in the small intestine is thus still more deranged than that in the stomach; hence arises evolutions of flatus, with its accompaniments, colic, griping, &c. After causing borborygmi, the flatus becomes collected in the stomach and large intestines from their greater size, and distends them fully on account of the laxity of their muscular coats. Frequently local spasmodic contractions, however, oppose the passage of the flatus, and these are produced by the irritation of the mucous membrane. The distension is most marked in the epigastric and hypochondriac regions, from the stomach and colon being situated in those localities. Hence, the pressure on the diaphragm and the difficulty of breathing, as well as the constant uneasiness which exists in the parts until the flatus has been expelled. Hence the necessity which the patients feel of passing the flatus as soon as possible, and the disorders to which they are subject when any circumstances compel them to oppose this desire.

The dislike such patients manifest for society is also explained by this circumstance. They feel the necessity of being alone after their meals, in order to be perfectly free to expel the flatus without shame.

Independently, too, of these daily inconveniences, such patients are occasionally exposed to very severe attacks of colic. After a considerable collection of flatus in the intestines, a kind of cramp seizes on the cardiac and pyloric extremities of the stomach, and the ileo-cæcal valve, or on some other part of the intestine, and prevents any passage just as much as internal strangulation. The distension increases rapidly, and with it local pain and difficulty of breathing. The heart's action becomes rapid and irregular; the patients throw off their clothes; the least pressure on the abdomen is insupportable; they feel as though their bowels were torn or dragged; abundant perspiration covers their faces, and indeed their whole bodies. In the midst of this torture, however, a low grumbling shows that the flatus is making a passage, the spasmodic contraction becoming relaxed. The pain passes off by degrees, and the attack generally ends in the expulsion of large quantities of flatus.

When such violent attacks only continue an hour or so, no bad effects remain; but when the attacks are of longer duration they are followed by general debility during several days, with a yellowish skin and more marked derangement of the stomach, with a notable increase in the diurnal pollutions.

It is self-evident that the frequent return of these colics must affect the whole system. Thus the patients dread what they call their "crisis" or "attacks;" and as they are attributable sometimes to cold and sometimes to the effects of moral emotion, the patients are careful to avoid these causes. Hence their lives are passed in

a series of trifling cares, of which their friends cannot understand the necessity.

Sometimes, too, such patients suffer from spasms of the œsophagus, which suddenly prevent deglutition, especially when very hot or very cold drinks are taken. A complete obstacle is thus sometimes put to the passage of any matter, fluid or solid, during several minutes, just as though a knot had been tied in the œsophagus, and generally at its cardiac extremity.

There is not only, therefore, diminution of the digestive powers, but they are at the same time disordered. The organs are not only weaker, they are also more easily deranged. The symptoms vary much in different individuals, and in the same individual on different days. Notwithstanding the patients' endeavors to discover the causes of these variations, the most important one generally escapes them; for it is almost always the occurrence of a diurnal pollution that increases their digestive disorder, and suddenly alters their characters and conduct.

At length the more intelligent of these patients perceive that they eat too much; that certain kinds of food and drink do not suit them; and by degrees they impose on themselves a more and more severe regimen. They begin by giving up food of high flavor, such as game, &c., then nourishing food as meat; afterwards lighter kinds, as vegetables; and at length they become reduced to a milk diet only. As regards fluids: at first they renounce spirits, coffee, and tea; afterwards wine; and at length are reduced to drink water. I have met with several patients who only took gum, milk, and sugar, and one of these had lived on such food two years when he consulted me. By this rigorous self-denial they escape the indigestion, &c., which too nutritive food produces in them, but they are exposed to a sense of sinking in the stomach, brought on frequently by hunger, and they are also frequently annoyed by flatus. In these cases it is no longer during the progress of digestion that the flatus is developed, but, on the contrary, after the stomach has continued a long time empty. The ingestion of a small quantity of food soon relieves.

Other not less important changes take place at the lower extremity of the digestive canal. Incomplete digestion brings to the intestines badly formed chyme, which acts irritatingly on the mucous surfaces, and increases their secretion, and hence arise liquid and unnatural stools—a kind of transient diarrhœa, which returns with every slight imprudence. The diarrhœa increasing on each occasion may become permanently established, and after a time present the ordinary chronic symptoms. MM. Fournier and Begin[1] state that they have seen the same result from excessive masturbation.

Diarrhœa kept up by ulcerations in the intestines becomes altogether an idiopathic disease, the indications of which are peculiar

[1] Dictionnaire des Sciences Médicales. Art. Masturbation.

and proportionably urgent, because the inflammation of the rectum increases the diurnal pollutions by its action on the seminal vesicles: hence two debilitating diseases arise and rapidly increase the wasting of the body. But such cases are rare, and are only noticed in persons who do not check their voracious appetites. These are few.

After numerous alternations of irritability and sluggishness of the intestines, constipation becomes permanently established, and grows more and more obstinate; or, at all events, only ceases for short periods to give place to diarrhœa after some error of diet. Constipation, therefore, almost always attends old cases of involuntary seminal discharge, and contributes to maintain the pollutions.

The influence of this constipation is still more injurious than that of the stomach disorder, and hence the patients soon discover that there is a constant relation between the act of defecation and all they suffer from. They are perfectly aware that with soft, easy, and regular stools their strength returns, and their activity increases, their sensations are more lively, and their ideas clearer. Experience soon shows them the bad effects of long constipation; they are debilitated after laborious attempts at defecation. They are, however, for the most part ignorant that abundant diurnal pollutions result, although the constant repetition of the same phenomena at length fixes their attention on the importance of defecation, and that function absorbs all their attention. Hence they are constantly occupied in seeking laxative food, slightly aperient medicines, enemata, &c., and frequently speak of these things from habit, and without considering the effects of such conversation on others. The further we advance, then, the more we find that these general symptoms of involuntary seminal discharges are those which have been generally described as hypochondriasis. It is evident, also, that, according to the predominance of certain symptoms, our profession have usually been in the habit of diagnosing pyrosis, disorder of the liver, nervousness, chronic gastritis, or gastro-enteritis, &c., in these cases. There is considerable correctness in these diagnoses; but the futility of the treatment shows that the cause is very frequently unascertained.

Nutrition.—The whole economy necessarily soon feels the effects of serious digestive disorder; for the condition most essential to nutrition is good digestion. The phenomena which follow meals in such cases show clearly enough that digestion is incomplete; absorption can, therefore, obtain only little reparative matter from a mixture of useless or even injurious material: hence the structures of the body necessarily lose substance, and the functions languish. Not only does the *embonpoint* diminish, but also the energy and activity of all the organs; for it is necessary that all, in order to act well, should constantly receive a supply of rich blood.

Still, however, it is far from an invariable rule that patients suffering from involuntary seminal discharges should be emaciated, or

that they should all have a yellow or leaden appearance, or sunken hollow eyes. Many even preserve their *embonpoint*, fresh color, and healthful appearance, although they may be impotent, weak, and troubled with considerable disorders; and although they may even contemplate suicide. These are the patients who are considered as *malades imaginaires*, whose friends wish to marry them against their will, in order to draw them out of their isolation and melancholy. The constant persecution of their friends and relations increases the unhappiness of such patients by recalling to their recollection the bitter truth which they are unwilling to confess. Often have I heard these patients complain—"O that I were thin and yellow! that I had the appearance of a sick person! I should then be pitied and permitted to follow my own inclinations."

Whence arise such apparent anomalies? From congenital predisposition. The digestive organs of some individuals are sufficiently strong to resist the influence of involuntary discharges, which on the other hand, seriously disorder all their other functions. There are others again whose assimilative powers are so active that the strictest diet is necessary in order to prevent extreme corpulency; others, too, who are of marked sanguineous temperament, never lose the redness of their checks and the size of their muscles.

Animal Heat.—As soon as the digestion becomes deranged and the *embonpoint* decreases, the patients become more sensible to the influence of cold. They soon find that they must clothe themselves more warmly, keep out of draughts, and use increased precautions of every kind, in order to prevent pains in the limbs, catarrhal affections, &c. But being very warmly clothed they are unable to take any active exercise without being covered with perspiration, which comes on very rapidly. On the other hand, again, warmth during the night exposes them to the occurrence of pollutions. They are, therefore, continually endeavoring to reconcile these difficulties, and the importance they attach to trifling circumstances appears ridiculous to an uninterested spectator.

It is evident, then, that the weakening of the body and its incomplete repair, by means of badly formed matter, renders such patients more easily affected by the action of external agencies. Being debilitated they are more exposed to disease than other people, and the complaints that affect them are less quickly cured, and, indeed, often pass into a chronic state.

To the diminution of the nutritive powers must be attributed the early loss of hair which many of such patients experience, and which equally follows all diseases capable of producing serious disorder of the economy.

The voice too is much affected by every prolonged action capable of debilitating the economy; and it is not, therefore, remarkable that it should often lose its power and quality of tone in these patients. But the voice is not only low and husky; it presents a degree of uncertainty of tone which doubtless arises from the agitation

the patients constantly experience. The least emotion, too, makes them stammer.

Respiration.—Not only while running or ascending a hill or stairs, but even on taking very slight exercise, patients affected with spermatorrhœa become out of breath; sometimes, even, they feel oppressed breathing during absolute quiescence; they frequently sigh also. These symptoms, however, are by no means always well marked. The same thing occurs with regard to the respiratory as in all the other systems. Variations take place in accordance with the constitution of the individual. These phenomena are produced in the following manner:

The muscles which perform the function of respiration, participating in the general debility of the system, contract less energetically and less frequently than natural; the respirations, therefore, become shorter and less frequent; hence the necessary changes in the blood are not properly performed, and there is defective equilibrium between the respiration and circulation, with habitual sense of uneasiness and oppression in the chest. Hence arises the necessity for deep voluntary inspirations or sighs, to re-establish this equilibrium occasionally, and to fill the extreme pulmonary vesicles with air. The patients are apt to call these sighs involuntary, because they are forced to make them without knowing why. On the other hand, again, being deeply afflicted at their condition, and incessantly occupied in seeking its cause, the patients sometimes suspend the motions of the thorax, and this habit increases their habitual oppression. Lastly, it is necessary to take into account the influence of the pulmonic nervous system. It is not probable that the pulmonary nerves should escape the generally debilitating influence of involuntary discharges. Dr. Deslandes indeed thinks that the nervous asthma may be produced by masturbation and venereal excesses, inasmuch as these attacks only seem to him to be aggravations of their ordinary symptoms. This opinion is strongly supported by what I have seen in many patients. The effects of exercise are the same in these as in all other cases of extreme debility.

Patients suffering from spermatorrhœa often experience other symptoms of which it is necessary to be aware. Sometimes they have a predisposition to pulmonary catarrh, with coryza, loss of voice, &c.; in other cases there is a constant dry cough; in others, again, fixed or wandering pains in the thorax; and in a few cases a sudden pain seizes on the heart or diaphragm, and for a minute or two causes great agony. Most of the patients whose respiratory apparatus is thus disordered believe themselves the subjects of phthisis. The symptoms, however, only differ in situation from the other numerous irritations and pains which successively attack all parts of their bodies.

Circulation.—The disorders of the circulating system in these cases may give rise to errors of much importance. I have seen more than

thirty of these patients who had long been treated for disease of the heart, of which there did not exist the least traces. The symptoms which had increased after every bleeding disappeared as soon as the involuntary discharges were arrested. It is indisputable that abuse, venereal excesses, and involuntary discharges often excite more or less alarming palpitations; but can we attribute the origin of organic diseases of the heart to such causes?

Even when an organic lesion of the heart or large vessels does occur in a patient who has practised masturbation, or committed venereal excesses, is it necessary that the disease be referred to these causes alone? Certainly not; for among the immense number of those who are exposed to the debilitating action of these causes it is unreasonable to expect that none shall be found with cardiac disease. I admit, however, that the momentarily increased rapidity of the circulation may aggravate organic diseases already existing; but certainly the diseases themselves would be much more frequent if they could be brought on by such common causes.

The functional derangement of the circulation is, however, sometimes so alarming and long-continued that it may be easily mistaken for an idiopathic disease; but these symptoms are more common in children than in adults, and in adults than in persons of mature age —a circumstance which alone is sufficient to show that the symptoms do not arise from organic lesion of the heart or large vessels. The same remarks apply to involuntary seminal discharges.

Five of my patients had never committed any abuse or remarkable excess. One of them fell into the sea in very cold weather; another was exposed to cold in helping to extinguish a fire; a third had used constant horse exercise; and the two others had only suffered from blennorrhagia, yet all five experienced such palpitations of the heart that their attendants had not doubted the existence of an organic lesion. This palpitation, however, was purely nervous, and could not even be attributed to the perturbation of the circulatory system during voluntary seminal discharges.

It is to the debility and disorder of the system, and especially to the disorder of the nervous system, that these symptoms must be referred. As a proof of this there is the fact that they may be produced by any other debilitating causes; whilst they are never observed in robust individuals who take even the most violent exercise.

It may be supposed that nervous palpitations would be distinguished with difficulty from organic diseases of the heart; such is not the case, however. In organic diseases of the heart the face is habitually injected, the lips and tongue are violet-colored from the obstruction to the venous circulation. Nothing similar occurs in nervous palpitation. If the cheeks become injected occasionally, they are red, and the injection soon passes off, the face resuming its natural tint afterwards. In either hypertrophy or dilatation the pulsations are always proportioned in strength and frequency to the

motions of the patient, because the obstruction to the circulation, whatever may be its seat or nature, is permanent; whilst the quantity of blood driven towards the heart increases in proportion to the muscular efforts. The primary cause of such palpitations being therefore in constant action, the secondary one must always produce effects in proportion to its intensity.

Nervous palpitations are far from following the same course. It is true that the least motion often increases them to an alarming extent, but this is by no means either constant or in proportion to the muscular efforts. At one time active and long-continued exercise may produce no more effects than in a healthy individual; whilst at another, sudden and violent disorder may come on, even when the body is in a state of repose, either from the sight of an unexpected object, from a sudden noise, or from the passage through the mind of an involuntary idea.

We see, therefore, that a superficial examination is sufficient to point out the difference between organic and functional diseases of the heart. Physical exploration is of course more certain.

INNERVATION.

Motility.—The weakness of patients suffering from involuntary seminal discharges does not arise from their loss of flesh only. Many of them possess *embonpoint*, healthy appearance, and even voluminous muscles, although quite unable to bear active and prolonged exercise. Debility always precedes the loss of flesh; it is invariable and marked; but at the same time disappears very quickly. When the patients have passed a few days in succession, without suffering from pollutions, they manifest rapid increase of strength and activity: a single discharge again reducing them to their debilitated condition. The weakness of their muscles, therefore, depends on a cause distinct from atrophy; it arises from flaccidity. Let us consider how this weakness is produced.

Masturbation is generally commenced before puberty, and the female sex is not exempt from it. In these cases, therefore, seminal emission cannot occur. Nevertheless, functional disorders of the spinal cord may arise, similar to those produced by passive discharges.

I have related at page 149 the case of a boy, eight years of age, whose lower extremities were bent and drawn together, and in a state of paralysis, or rather of contraction, which prevented their use. This state ceased entirely a few days after masturbation had been completely prevented, the cure not being assisted by any other external or internal treatment. I have met with several such cases in children before the age of puberty, and I should add that in most of them the arms were pressed against the body, the forearms bent on the arms and crossed on the breast, the fingers stiff, &c.

On the other hand, again, I have seen patients from thirty to forty-

five years of age who had fallen into a similar condition from diurnal pollutions. Almost all had had leeches, cupping-glasses, and issues not only on the loins, but along the whole length of the vertebral column: all had found bad results from these means; whilst the cessation of seminal discharges was immediately followed by free use of the extremities.

The most passive pollutions act, therefore, on the nervous system, just as the most convulsive voluptuous sensations not followed by seminal emissions; and the disordered powers of the lower extremities no more depend on the existence of organic disease of the spinal cord, than palpitations depend on organic disease of the heart. There are, however, many intermediate shades between this extreme condition and ordinary cases. On the other hand, there is not only muscular debility in such extreme cases; there are also stiffness and involuntary contraction of the muscles. It is not only in the lower extremities, too, that the symptoms are manifested, but throughout the whole muscular system.

In many cases, there is more irregularity and disorder than actual weakness in the muscular system, and hence many such patients suffer from involuntary trembling and uncertainty, with a loss of precision in their motions that renders them awkward. Any slightly continued action induces trembling, to control which they have no power. These tremblings resemble the mercurial palsy of gilders, or the delirium tremens of drunkards. Hence, many authors believe with reason that masturbation and venereal excesses are two of the most frequent causes of chorea. Epilepsy, even, may be induced—the same phenomena becoming more violent, but less continuous. Epilepsy is brought on much more frequently by masturbation than by venereal excesses, probably for the following reason. Venereal excesses generally take place later in life than masturbation, consequently the constitution is stronger. Cases of epilepsy, too, are more frequent after masturbation, in proportion to the youth of the parties. The same thing holds good with regard to all the other nervous symptoms produced by masturbation, and, indeed, with all nervous symptoms, whatever may have been their cause. Here we again see the great importance of taking the state of the system into consideration in all these cases, in order to appreciate the different results that may arise.

Sensation.—There are other nervous symptoms which seem the counterpart of those happening in the muscular system. I have met with two patients in whom the hands were insensible, and the hands only: in these cases, accidental burns took place without causing pain; but the motions were perfectly free. Other patients that I have seen, experienced a diminution of touch only; a layer of gauze seeming to be interposed between the object and the fingers. In other cases, one side of the chest or abdomen was more or less deprived of sensation; or perhaps a circumscribed portion of the skin either on the trunk or extremities. This anæsthesia changes its position and character frequently—quite enough to show that it does

not arise from any organic lesion of the spinal cord or nerves. Other patients experience disorders of sensation, varying greatly in their character and seat, not only in different individuals, but in the same person at different times. Sometimes there is a sensation of local heat or burning; at others, a kind of current which seems as if caused by the air, by water, or by electricity; or there may be a feeling of bruises, cold, or pressure, affecting the back and loins.

Hippocrates described another sensation which I expected to find very frequently. I allude to the feeling of ants running along the vertebral column. I expected to find this symptom very common in cases of spermatorrhœa, but I have hardly met with it in one case out of twenty. Nervous pains, often confounded with wandering rheumatism on account of their uncertain seat, are met with much more frequently. They differ from rheumatism in not being caused by cold or damp, and in not being especially seated in the joints. The patients generally suffer most from these pains on rising in the morning. They generally follow the course of a nerve, and sometimes resemble electric shocks. These characteristics are sufficient to distinguish such pains from rheumatism.

The loins are especially the seat of these pains. They are not so acute as those that arise from lumbago or a violent muscular effort, but they continue longer. Some of my patients had been teased by them for many years, almost continuously. Their seat is not in the muscles, for the motions of the spinal column are not affected; they are not caused by the kidneys, for they do not pass in the course of the ureters; the testicles are not retracted, and the urine is not purulent,—symptoms by which affections of the kidneys accompanying spermatorrhœa may be easily distinguished. It seems, therefore, that these pains must be especially referred to the nerves supplying the lumbar region.

It is difficult to doubt the existence of a special sympathy between the genital organs and the spinal cord, when we take into consideration the influence of flagellation, urtication, &c., applied on the loins, the frequent nocturnal pollutions excited by heat of this region, and the opposite effects of cold. On the other hand, again, this influence is reciprocal, for it is after abundant pollutions that the pains in question occur or increase, and it is of this region that patients complain who have committed excessive abuse or venereal intercourse, or who have suffered several pollutions in one night.

SENSES.

Taste.—The changes experienced by these patients in the organs of taste correspond with those that are going on in the digestive organs. In some, the appetite is disordered from the first; and when the disease has made considerable progress, the mouth is often clammy, with a bitter, salt, or earthy taste. Food and drink appear less sapid, and do not give any agreeable sensation. Under these

circumstances, the patients generally restrict themselves spontaneously to a vegetable diet, or even to milk.

Smell.—I have paid little attention to the alterations of this function in these patients; but I have heard many complain of a notable change in their power of appreciating odors, and even of an entire loss of the sense of smell.

Hearing.—The sense of hearing suffers more changes than the preceding. In general, like the others, it loses its acuteness, and this loss sometimes approaches a state of deafness. These symptoms vary, too, according to the individuals affected, and the different degrees and oscillations of the disease, and even sometimes from day to day, without appreciable cause.

Some patients, again, seem to possess an extreme sensibility of hearing—the least noise irritates them, especially if continued so that they cannot put a stop to it. It seems, however, that this symptom must be referred to the change that has taken place in the character of the patients. It is not because the organ has become more acutely sensible that it is offended, for these patients do not hear better than other people, and the most harmonious sounds produce just the same feeling of impatience when slightly prolonged.

Another annoyance felt by such patients results from the different noises they have in their ears. In some there is a constant whistling; in others, a sullen rumbling like the distant roll of the drum; in others, again, the noise resembles that of a waterfall, mill, &c. Some patients hear many of these noises at the same time. Deafness or difficulty of hearing accompanies these sounds. In proportion, therefore, as the normal functions of the auditory apparatus become weak, its pathological susceptibility augments.

Sight.—The first change produced by involuntary seminal discharges is a diminished brilliancy of the eyes. These organs soon lose their brilliant, piercing expression, and appear dull, although they may not yet be either sunken, or surrounded by dark circles. There is always more or less marked dilatation of the pupils under these circumstances, and this probably conduces to give the eyes their singular appearance.

To the want of expression there is also joined a timidity or appearance of shame, especially in such as practise masturbation. Their eyes never meet those of another with confidence; they are turned away hastily, and after wandering about, are at length directed to the ground. There is in this uncertainty of the organs of vision something analogous to the trembling of the voice, hesitation of speech, stuttering produced by emotion, and instability of the lower extremities, habitual agitation of the hands, palpitation, &c.,—all common symptoms in these cases. Importance attaches to these circumstances, because we frequently meet with patients who wish to conceal bad habits, besides which, most of those who suffer from diurnal pollutions are not aware of their existence.

In order that the eyes should become sunken and hollow, emacia-

tion must have made considerable progress, and this emaciation may depend on various causes. On the other hand, the eyes may be surrounded with dark circles in consequence of recent abuse or excesses, although the health may not be disordered; fatigue and want of sleep induce the same results. The conjunctiva is sometimes disposed to become injected from slight causes in these patients, but this is not a very constant symptom. Most of them present a dull and wandering eye, with a vacant expression, and these symptoms increase with the disease, and follow all its oscillations. Sometimes, too, the patients complain of involuntary contraction of the muscles of the eye; now and then there is spasmodic trembling of the upper lid; at other times, the orbiculares and corrugatores superciliorum contract spasmodically; at other times, again, the muscles of the eyeball enter into disordered action, and produce strabismus. These symptoms are especially observed in nervous patients who lead a sedentary life, and use their eyes much.

At the same time that the previously described symptoms show themselves, the patient's vision becomes disordered; first at varying intervals; afterwards, continuously. The sight becomes progressively weaker; small objects are defined with less clearness, and seem to shake, probably from want of precision in the contraction of the recti muscles. The patients are unable to fix their eyes on minute objects without soon experiencing fatigue, headache, vertigo, and congestion of the head. After reading for a short time, the lines seem to oscillate, and the words become confused. More or less marked diplopia is momentarily established—probably arising from divergence of the visual axes caused by unequal contraction of the motor muscles. Other patients, again, see spots, cobwebs, or flying points, which are constantly in motion before their eyes; then suddenly, they only see a portion of the objects looked at; perhaps all on the left or right side, or all the upper or lower half, or sometimes the centre or circumference; the remainder disappearing completely for several minutes, half an hour, or perhaps an hour.

Both eyes are rarely affected in this way at the same time; when this happens, however, the disorder of vision is almost as serious as if complete blindness were momentarily established.

These nervous disorders are frequently accompanied with cephalalgia, vertigo, noise in the ears, coldness of the extremities, vomiting, &c., and sometimes syncope occurs. The patients are naturally much alarmed at these accidents, although they do not last long, and the practitioners consulted seldom fail to diagnose congestion of the brain, and to practise abstraction of blood. This error arises from certain symptoms being regarded singly; if the accompanying phenomena were taken into account, and especially the general state of the economy, it would become evident that all the symptoms resemble one another, and that they all depend on the nervous system; if, therefore, the origin of the nervous disorder

were not discovered, at least the symptoms would not be aggravated by the abstraction of the blood.

Independently of these momentary and partial attacks of paralysis of the retina, this organ by degrees loses its sensibility, the pupil at the same time becoming dilated. Small and delicate objects are distinguished less clearly, and slightly continued attention brings fatigue. This weakening of the sight is one of the most constant effects of masturbation, venereal excesses, and involuntary discharges; it follows the loss of brightness in the eye and of firmness in the expression; and it is one of the most certain signs of abuse.

The disorder of the sight, like all the other general symptoms, varies in different individuals, and at different periods of the disease. In the worst cases complete blindness may be established. Of this I have recently seen a very remarkable example. Amaurosis brought on by masturbation or venereal excesses has long been recognized by writers on diseases of the eye, and if they have omitted to mention the amaurosis arising from involuntary seminal discharges, the explanation must be referred to their ignorance of the occurrence of such discharges.

It has been generally admitted by writers on the eye, that amaurosis caused by masturbation, or venereal excesses, is very difficult of cure; the reverse obtains. Amaurosis is always a very obstinate disease when its cause is unknown. If the functions of the optic nerves are impaired by cerebral disease, by serous effusion, tumors, disease of the meninges, or of the bones of the head, it is evident that the organs cannot be readily restored to their normal condition, even when an exact knowledge has been obtained of the seat and nature of the disease. Unfortunately numerous amauroses are due to causes of this nature. But when the amaurosis arises from an easily discoverable cause and one easily removed, the results are different. Thus, I have on two occasions seen almost complete blindness disappear by degrees, after the relief of diurnal pollutions, which kept it up. Nocturnal pollutions alone do not produce such marked effects, because they are far from being so serious; but they often cause considerable weakening of sight. In cases of this nature I have always seen the ocular functions restored after the cure of involuntary discharges; and I have obtained similar results in cases which arose from masturbation and venereal excesses by inducing the patients to alter their habits.

On the other hand, other patients experience very different symptoms. Some are painfully affected by any bright light, whether natural or artificial. Some even are unable to bear any light more brilliant than twilight. Notwithstanding the use of colored glasses, shades, &c., they are obliged to avoid midday; and sometimes even to deprive themselves of artificial light. The retina will not even bear the light of a bright fire. This photophobia probably arises from the increased dilatation of the pupil, observable in most of these patients. Dilatation of the pupil is an important symptom in

such cases, because it affords a means of diagnosis between this kind of photophobia, and that which arises from irritation of the retina—irritation always causing extreme contraction of the pupillary opening.

To conclude, then. Among the changes observed in the organs of vision, those that are attributable to masturbation, venereal excesses, or involuntary seminal discharges, consist in a diminished activity, with disorder of the functions, defective harmony of action, &c. Sometimes weakness predominates, sometimes disorder, according to the temperament or idiosyncrasy of the patient; but their coexistence is not always easily made out. Both depend on the nervous system.

ENCEPHALON.

Sleep and Waking.—The opposite conditions of sleep and waking are marked in proportion as the health is perfect. Sleep is long and sound, after active and continued exercise. Hence the robust individual, who undergoes great fatigue, rests long and well. The first effect of prolonged inaction is to render the sleep lighter and less long. Whilst, on the other hand, broken and disturbed sleep disinclines the person to activity on the following day.

This effect is very remarkable in persons debilitated by masturbation, venereal excesses, or involuntary seminal discharges. They sleep little and badly during the night, and habitually pass the day in a state of somnolence and torpor. There is good reason to suspect abuse in a child who remains motionless in a corner whilst his companions enjoy their noisy sports; who sighs over his lessons and sleeps over his books. This sign is a strong one, and easily discoverable; sleep during the night may be easily simulated. I have recently seen a child of seven years of age, who practised masturbation and passed five months without sleeping during the night, without being discovered. Venereal excesses produce the same results, but in this case the truth is easily ascertained.

The sleep of patients suffering from spermatorrhœa is generally light, broken, and unrefreshing. They get up more fatigued than they went to bed. Hence, they go to bed late and get up with unwillingness, even when they are unable to obtain sleep in the morning. Their sleep is unrefreshing because it is continually broken by nightmare and frightful dreams, which increase as the disease advances. Painful sensations arise in the stomach, and intestines, liver, kidneys, or bladder, the functions of which are deranged; palpitations and sense of suffocation are felt—the functional disorder of the respiratory and circulating systems coming on as during waking.

At a still more advanced period of the disease, sleep leaves the patient entirely. They often pass a whole night in agitation without being able to find a comfortable posture; they get up and lie down again, walk about, or roll on their beds; at one moment their bodies and temples are on fire, at the next they are chilly, and covered with cold sweat. During these long nights they constantly dwell on sad

thoughts, and are especially tempted to commit suicide. Such disturbed nights must produce the worst consequences on the cerebral functions, for sleep alone could put an end to the nervous debility and restore its activity to the brain. Hence the loss of sleep is the chief cause of the torpor and somnolency observable in these patients during the day.

Cephalalgia.—Patients suffering from involuntary seminal discharges generally experience heaviness in the head and sense of compression of the brain, as if the organ were swollen; others, on the other hand, complain of a feeling of void in the head. To these sensations dull pains succeed, and these are seldom fixed.

Such symptoms are often attributed to accidental causes, the patients being for the most part unconscious of their true origin. Some patients, too, suffer from fixed and almost continual pain in a certain spot. I have generally found that the supra-orbital region is complained of in these cases. As the disease progresses, these symptoms become more severe, and are conjoined with vertigo, noise in the ears, flushing, heat of the head, disorder in the ideas, stammering, &c., and hence very often structural disease of the brain is suspected, especially if the cephalalgia comes on habitually in the same region. I have met with many cases in which this happened, and which had been treated for years by distinguished practitioners without benefit.

Cranial Congestion.—Although patients suffering from spermatorrhœa are generally pale, they are exposed to attacks of cerebral congestion, generally slight and of short duration, but sometimes very alarming. At first these attacks are limited to flushed face, brought on by constipation, difficult digestion, the collection of flatus in the intestinal canal, &c., at other times, by the heat of a room, acute emotion, sudden disorder of the circulation, or momentary difficulty of breathing. When the health is deranged, constipation considerably increases the flow of blood to the head, and constipation is one of the most common symptoms of the disorder of which I am treating. Apparently trifling causes produce serious effects in these cases, owing to the increased weakness and susceptibility of the organs. In the latter stages of the disease, the congestion may be carried so far that the whole head appears swollen, of a dark red color and burning heat.

Such attacks of congestion are not confined to the skin; everything concurs to show that the same phenomena takes place in the very substance of the brain. There are present at the same time vertigo, dazzling of sight, noise in the ears, and a sense of internal pulsation, with great anxiety, agitation, and uneasiness, and, in some cases, the intellectual faculties are deranged. When the congestion is severe, the patients do not recognize any one; they know not where they are or what they do; but they want to change their posture, to breathe the fresh air, and especially to walk, although their legs can scarcely support them, and if not closely watched,

they are liable to fall. In a few cases the patients become quite insensible, and fall into a condition exactly resembling apoplexy.

The medical man, called during one of these alarming attacks, is at first struck with congestion of the face and the increased rapidity of the pulse. He is told of frequent giddiness experienced by the patients, of embarrassed speech, and momentary stuttering, of weakness of the limbs, and even of frequent falls, of constant headache, &c. He naturally, therefore, concludes that the case before him is one presenting imminent danger of apoplexy.

During these attacks, the brain is indeed the seat of congestion, as well as the face, and the medical man called is not deceived on this point. His error consists in not recognizing the cause of the congestion, in not foreseeing its short duration, in exaggerating its consequences, and especially in treating it by the most fatal means. In fact, these attacks of congestion are brought on by the debilitating discharges; they are alarming in proportion to the patient's weakness; they never terminate in cerebral hemorrhage; and no treatment can be worse than abstraction of blood.

It seems astonishing that debility should produce congestions, which are generally looked on as the results of plethora; but on careful examination it will be seen that important points of difference exist between them. Besides this, it is by no means remarkable to see similar phenomena produced by opposite causes.

It often happens in the commencement of cerebral affections, that a copious abstraction of blood is followed by sudden congestion of the head with convulsions. No one doubts that plethora frequently produces palpitation of the heart, sense of suffocation, &c., yet we have just seen that the same results may be caused by an opposite state. The same remarks apply to the dizziness, noise in the ears, partial and momentary paralysis of the retina, photophobia, &c.

These attacks of congestion become more frequent in proportion as the weakness progresses, but they are generally of short duration, because they depend rather on the irritability of the circulating system, than on a too great impulse given to the blood, or overfulness of the vessels. There is not, therefore, the same danger of capillary hemorrhage as in ordinary congestion, and still less of any considerable effusion taking place.

An attack of apoplexy may cause death in a plethoric individual without producing effusion, the vessels of the brain being sufficiently distended to hinder the functions of the organ. When hypertrophy of the heart is not brought on by some obstruction to the circulation situated near the commencement of the aorta, the impulse of the blood may be sufficiently violent to cause extravasation in the extreme vessels; and when the latter are diseased, a less powerful impulse may cause a rupture in any point of their coats, followed by a considerable clot. Nothing of this kind exists in persons suffering from spermatorrhœa, and hence congestion does not produce any of these effects, although the attacks may take place frequently, and

become more alarming in proportion as the disease advances. When the patients die, it is rather in consequence of a slow wearing out than from the immediate attack; they generally expire in a kind of syncope, after all the congestive phenomena have passed off—not the least trace of them being found in the brain or its membranes.

It is evident that these attacks differ greatly in their indications from other congestions of the brain. Abstraction of blood may prove fatal, and, unfortunately, this is the first idea that presents itself. The practitioner called for the first time to a patient with such an attack, must take into consideration the general appearance of the system, the state of the strength, the embonpoint, and especially the condition of the circulation. The pulse is generally hurried and irregular, but never full, distended, or resistant. Slight pressure on the artery arrests the pulsation altogether; indeed, it can hardly be felt, unless the finger barely touches the skin. With such a pulse there can be no danger of cerebral hemorrhage, and the abstraction of blood would be extremely injurious if not fatal. The pulse, therefore, is the chief guide in such cases.

Alteration of Character.—In general, the moral susceptibility increases with the progress of physical weakness. But those patients who are naturally hasty, become the most impatient and irritable. They are restless, exacting, unjust; trifling circumstances sour and irritate them, drawing from them complaints and reproaches. The least delay in complying with their demands, or a slight awkwardness in waiting upon them, throws them into a fury.

I have seen such patients sometimes roll themselves on the earth in furious and prolonged agitation, when unable to obtain what they desired. These violent scenes of nervous excitement happen especially after abundant or frequent pollutions. As soon as convalescence commences, a rapid change takes place. The predominance of such symptoms undoubtedly arises in a considerable degree from the patient's natural impatience; but they increase or diminish in a remarkable manner, according to their strength; that is to say, according to the frequency of the involuntary discharges. When spermatorrhœa commences after marriage it produces an unexpected change in the character of the husband, which contributes even more than impotence to domestic unhappiness. Frequent marks of ill humor, bitter words, and violent discussions, soon succeed indifference—contrasting strongly with the conduct before the commencement of the disease, and consequently producing a highly unfavorable impression.

Most of these patients, too, experience a profound sense of languor, discouragement, and melancholy, giving a peculiar stamp to their character, with which all observers have been struck. The commonness of these symptoms, the importance that has always been attached to them, and the discussions to which they have given rise, require special attention; otherwise they ought not to be considered separately from the other functional disorders of which I have

already treated. But they have always been considered as a special malady, or idiopathic affection: I mean hypochondriasis.

Hypochondriasis.—The patients of whom I am at present speaking are continually beset by bitter regrets, sombre thoughts, and horrible presentiments. They feel a void in all their affections; nothing interests them; everything fatigues and annoys them; existence weighs them down without any other apparent cause than a deep disgust for everything which can make life pleasant. This vague and instinctive feeling, this *tædium vitæ*, which they are not able to explain to themselves, follows them everywhere and constantly tempts them to commit suicide. Nevertheless these same persons are most occupied about their health, and dread the greatest misfortunes. I need not reconsider the minute care they bestow on their digestion, the state of their bowels, &c., and I shall only add a few words to what I have already said concerning their varied and continued fears.

During the night they fancy they see thieves and murderers everywhere; when travelling they fear being upset, falling down precipices, being drowned, &c.; those who are in business fancy themselves ruined, or on the point of being so—the clearest and most rigorous calculations failing to reassure them—at all events their fears soon return, even if once convinced. Land proprietors, whose immense incomes are imperishable, are nevertheless haunted by the fear of dying of hunger. It seems at first difficult to reconcile such constant cares for self-preservation, with disgust of life, and inclination to suicide. This contradiction would in fact be inexplicable if it arose from reason or will. But the two contrary impulses which govern these patients are equally instinctive, and depend on the same disease. They are not opposed in reality, for the derangement of all the functions, and the cares, wants, and constant apprehensions arising from it, contribute greatly to the dislike of life and to the desire to put an end to such great physical and moral sufferings.

It is evident that these impulses are independent of reason, because they reappear with equal force, whenever the patients experience a relapse, although they may know perfectly well that their former fears were ill-founded, and their disgust of life arose entirely from the presence of involuntary seminal discharges. They admit even that it is natural to attribute the reappearance of such ideas to the return of their former complaint, but at the same time they believe themselves threatened by other dangers and under more unfavorable circumstances; and above all things they regard their disorder as incurable, because it has returned. In a word, past experience fails to convince them, if ever they fall a second time under the influence of the disease.

I have seen such relapses last only a few days, and take place for the fortieth or fiftieth time, and nevertheless the same sadness, discouragement, and despair, have returned on each occasion. Sometimes two or three nocturnal pollutions occurring in a short space of

time suffice to work a complete change in the character of the patient. But, on the other hand, spermatorrhœa never pursues a uniform and continuous course. The discharges diminish, or cease entirely for a short time, without the patient being able to explain the cause of such variations. During these intermissions a rapid improvement takes place in all the functions—especially in the digestion; a general feeling of comfort and vigor is experienced. The patients believe themselves cured, or on the point of being so, and the joy they experience is manifested with extreme vivacity, in proportion as their temperaments are lively.

The next day these appearances of happiness may again give way to melancholy and despair without the possibility of any person's divining the cause of so sudden and complete a change—effects which are mostly produced by the occurrence of diurnal pollutions—generally unperceived by the patients.

As the disease makes progress, the periods of remission become rarer and shorter; still there are always times when the patients are better, and times when they are much worse, following the accidental diminution and increase of the involuntary discharges. Hence the inequality of temper, the strange changes of determination, the variability of inclinations, conduct, and affections, which make the characters of these patients an incomprehensible enigma.

By recollecting what I have already stated respecting the constant and minute attention such patients are obliged to pay to their food, drink, clothing, &c., to the state of their digestion, their alvine discharges, and their urine; to all the changes of temperature, moisture, and electricity; by taking into consideration all the symptoms that are referred to the liver, the intestines, the stomach, the spleen; the annoyance of flatus; the palpitations and oppression of the chest; it will become evident that the reunion of all these symptoms constitutes the most perfect description of what is called hypochondriasis.

Memory.—Patients suffering from spermatorrhœa, like old people, by degrees lose their memory for facts, dates, numbers, and even words; and this greatly increases their repugnance to conversation. After beginning a sentence they often forget what they wished to say, or are unable to find the particular expression they desire; they become nervous and begin to stutter, as if the articulation of sounds were difficult. This difficulty of articulation, however, really does exist in the advanced stages of the complaint; the tongue then sharing in the disorder of the other parts of the muscular system, and the irregularity of its motions being increased by the want of precision in the ideas.

These patients also forget their promises, arrangements, and engagements, in fact everything which ought to be of chief interest to them, just like individuals in a state of demency.

This forgetfulness, however, does not exclusively arise from loss of memory; the carelessness of the patients, and their constant

preoccupations, are an important cause of it. The concentration of their thoughts on their health renders them indifferent to other things, and when they neglect the most important matters, it is frequently because they do not feel interested; for the same reason, too, they do not understand what is said to them, and do not consider their actions. It seldom happens, then, that loss of memory is the only cause of all the irregularities these patients commit.

Masturbation, even before puberty, produces exactly the same effects as spermatorrhœa; the same forgetfulness and neglect result from it, and there is especially great difficulty in retaining even the most simple lessons, notwithstanding the power of the memory for words at that age.

Intellect.—The intellectual faculties differ greatly in different individuals, not only from difference of education, but also from primary development. The results of spermatorrhœa, therefore, vary with these varying conditions; generally speaking, congenital deficiencies chiefly appear. In all classes of society there are, naturally, powerful intellects like strong constitutions; such advantages, whether they receive all the development of which the individuals are susceptible or not, are maintained better under all circumstances than those which have been acquired by education and exercise.

Age also must be taken into consideration. The effects of involuntary seminal discharges are the more injurious in proportion as the patients are further removed from that period of strength and energy during which the constitution possesses all its natural vigor. Hence it arises that the most rapid and serious intellectual changes take place at the beginning and towards the close of life. I have seen children, previously very intelligent, almost suddenly fall into a state of idiocy, the cause of which was little suspected on account of their early age, the other functions not suffering proportionately. When a child, after having afforded evidence of strong intellect and memory, experiences from day to day more difficulty in retaining what he is taught, we may rest assured that this does not arise from indisposition or from idleness, as it is often supposed. On the other hand, the slow but progressive derangement of his health, his constantly increasing loss of activity and application, arise from the same cause. The intellectual faculties are simply the first to feel disorder, and show it more than the others.

Of course I do not here refer to idle or dull children, who have never been able to keep pace with their companions; I speak of such as show at first the most happy qualities, after a time relax their endeavors more and more without evident cause, and overthrow the hopes of their instructors. In such cases, diminished aptness for learning ought to be held quite sufficient evidence to induce inquiry and careful watching.

At a later period venereal excesses may suddenly cut short, in a brilliant career, those who have escaped the dangers of masturbation. All such unexpected reverses are easily explained by those

who are aware of the influence of the genital system over the intellectual faculties. Correct information would clearly show why some children cease to carry off the prizes of their class; and why at a later period, some young men fail in studying the law, medicine, or the sciences, after having successfully commenced such studies.

Nevertheless these first failures would be only momentary if they were not afterwards kept up by the occurrence of involuntary discharges; most of the patients succeed in correcting themselves, although perhaps only when they are no longer able to continue their habits; after which they are almost invariably ignorant of the cause that prevents the return of their former intellectual energy. On the other hand, again, involuntary seminal discharges do not always arise from masturbation or venereal excesses; they require particular attention therefore on all accounts.

I have already spoken of congenital weakness of the genital organs, and the disposition to involuntary discharges arising therefrom; I have mentioned, too, that intellectual excitement of all kinds, when carried too far, irritates and weakens such organs. Hence it is clear that literary men, artists, *savans*, &c., by giving themselves up too ardently to the study which interests them, are exposed to involuntary discharges, however little they may be liable to them from other causes. Active cerebral excitement at first produces increased activity in the sexual organs, especially if a sitting position be long maintained—a slight increase of virility resulting. Long-continued application, however, added to want of exercise, &c., weakens all the functions, commencing with the least energetic. The erections diminish and disappear, which seems natural enough when the absorption of the thoughts is taken into consideration; but after a short time mental application becomes less easy and more fatiguing, and its results are not so satisfactory.

In this condition exercise and relaxation may re-establish the cerebral functions; but after a time these means only produce slight improvement. All those notions of advancement, which had sustained the powers under intense study, must be abandoned, and give place to the constant care of health, which deteriorates daily.

What has taken place in these cases? Involuntary discharges are established, or have notably increased in frequency. These discharges keep up the weakness of the previously overworked brain, and oppose the re-establishment of its functions, notwithstanding the most constant hygienic care. Such patients are generally in the prime of life, and completely absorbed by their studies, when they first feel their intellectual powers rapidly decline. The absence of all apparent symptoms on the part of the genital organs prevents the patients from there seeking the cause of the disorder; they only regard it as the effect of an overworked nervous system, which, in a few instances, is actually the case. Under these circumstances, however, a short respite from study, combined with exercise, restores the patient for a time; but he relapses after further application, and these means

are of no service; involuntary discharges are now established, and alone oppose the patient's recovery. The nocturnal pollutions diminish, but the symptoms increase—diurnal ones have commenced, and become daily more frequent, and consequently more injurious.

Insanity.—Many patients had been treated in lunatic asylums before they came under my care. In these cases the disorder of the intellectual, moral, and affective faculties varied from severe hypochondriasis to violent mania. Strange hallucinations, together with inclination to suicide, temptation to commit murder, and violent fits of rage, were common. For these reasons the patients had been placed in asylums, and treated like ordinary madmen; but in all the cases that have come under my notice, the mental derangement followed the variations of the involuntary seminal discharges in all respects.

Mania, however, is the least common of all disorders of the brain, produced by spermatorrhœa. The chronic form of derangement is much more frequent. This disorder corresponds in a remarkable manner with that described by Pinel as *melancholia;* by Dr. Rush as *tristimania* or *hypochondriasis*, and by Esquirol as *lypomania.* In all cases of this disorder the distinctive characters are—an irresistible sadness, melancholy and depression of spirits, fondness for silence and solitude, with thoughts constantly engaged in imagining dreadful events about to happen; universal distrust, often carried as far as the most savage misanthropy; extreme timidity of character; a series of hallucinations, generally bearing on plots against life or imaginary persecutions; and lastly, above all, a profound disgust of life; and, in consequence, an instinctive and continual impulse to suicide.

Such are the symptoms given by all authors as characterizing this particular class of mental diseases. I need scarcely remark that they coincide exactly with those of patients suffering from spermatorrhœa. We must, therefore, admit, that spermatorrhœa remarkably favors the development of lypomania. I confine myself to asserting that the development of lypomania is favored by spermatorrhœa, because it is necessary to admit that a primary disposition to cerebral disorder must be present in these cases. Without this we should not be able to explain why, in certain cases, the patients escape all disorder of the cerebral functions; why, in other cases, these disorders present infinite varieties of degree; and why the same symptoms come on under other circumstances. We must, therefore, only define spermatorrhœa to be a determining cause of lypomania.

The influence of involuntary discharges is, however, so powerful and direct, that reason is soon re-established as soon as they are arrested; whilst other modes of treatment are of little or no efficacy.

Pinel and Esquirol remarked the influence of masturbation and venereal excesses in causing melancholia or lypomania. Dr. Deslandes extends his observations to all kinds of mental derangement; and, among other facts, he calls to the support of his arguments the statistics of asylums for the insane. Out of 256 individuals admitted into the asylum of Charenton, during the years 1826, '27, '28, there

were 44 men whose insanity was attributable to masturbation or venereal excesses; whilst only three women owed their derangement to similar causes. Dr. Holst, too, has given similar information, derived from the insane in the kingdom of Norway. Dr. Deslandes, however, remarks that this cannot be regarded as an exact relative proportion, on account of the objections women would have to affording such information. Esquirol thinks, too, that masturbation is more frequently concealed among females than among males.

Although the observers, of whom I have just spoken, have mentioned the influence of abuses or excesses in causing insanity, they have completely mistaken the cause which afterwards keeps up the mental disorder. In asylums venereal excesses cannot continue, and sure means of preventing masturbation are at hand; it even happens most frequently that both have ceased a long time without the least improvement in the symptoms being observed, because they are kept up by diurnal pollutions, as I have already shown. None of the authors referred to have, however, mentioned these; indeed they are not even hinted at in any work on insanity.

It is perhaps to the presence of such pollutions that we must attribute the relative paucity of cures in the male—for all who have made statistical researches on insanity, assert that in all countries, and under all kinds of treatment, there are fewer recoveries among men than among women.

But all mental affections do not consist of *disorder* of the intellectual, moral, or affective faculties; there may be also debility, and this may be the predominating phenomenon, or may exist alone. Dementia is the worst degree of this affection, just as mania is the most severe degree of insanity. Incurable cases of vesania terminate in dementia; but it has long been known that dementia is not always preceded by mania or delirium, and that it may even reach the last degree of severity without being complicated with any disorder of the kind. Such cases then only differ from senile dementia by the youth of the patients; and this early debility may make rapid progress, constituting acute dementia.

On comparing the descriptions which have been given of the different kinds of dementia with the symptoms of patients suffering from spermatorrhœa, it is impossible not to be struck with their similarity. What is called simple dementia really presents no difference from what is observed in the last stages of spermatorrhœa. In both cases there is invariably a progressive loss of the memory of facts, dates, words, &c., with loss of imagination, power, intellect, and determination.

We have just seen that many observers have admitted the influence of masturbation and venereal excesses in the production of mania and lypomania. Dr. Deslandes believes that these causes also frequently bring on dementia. I am strongly of his opinion, because the loss of their reason removes from the insane as well as from the idiot the strongest check the passions possess. Esquirol

very judiciously observes, that masturbation is the greatest obstacle to the cure of the insane on account of the stupid, brutish condition into which the habit throws them. From this it is evident that diurnal pollutions must still more favor and hasten dementia, because they act much more energetically and without encountering any check. Persons addicted to masturbation are watched and mechanically guarded; but diurnal pollutions are not even suspected, much less guarded against. They are on the contrary, favored by certain circumstances affecting the insane. Sexual intercourse is denied them; they are condemned to inaction, or, at all events, are unable to obtain regular and active exercise; they frequently suffer from prolonged constipation, &c. These causes are sufficient to bring on involuntary discharges even in cases where there had been no previous bad habits, or venereal excesses; still more, then, must they increase spermatorrhœa, when once set up by previous irregularities.

These reasons lead me to conclude that dementia is frequently caused by diurnal pollutions; and this conclusion seems more strongly confirmed by the debility of the muscular system; for dementia bears the same relation to paralysis that delirium does to epilepsy.

General and Incomplete Paralysis of the Insane.—This generally accompanies and follows the same course as dementia; both are phenomena of the same nature, and both arise from weakness of the cerebral organs. General and incomplete paralysis, first noticed by Pinel, and studied with much attention by Esquirol, has since been the object of special research by MM. Delaye, Bayle, Calmiel, and Foville. The descriptions of all these authors agree remarkably with the symptoms observed in the last stage of spermatorrhœa.

At first there is only observed slight embarrassment of the tongue, with stiffness in all the motions—a general awkwardness attended with more or less trembling. After a time certain letters or words are not distinctly articulated. There is still more stiffness than weakness in the limbs; and yet a more remarkable symptom observed in these patients, until extreme weakness prevents it, is their constant desire for walking or motion. Dr. Foville, after noticing this, adds, "One of my patients, when first attacked by this complication, would not remain in the same place; he walked from morning till night with extreme rapidity, and seemed compelled to this constant exertion more by a mechanical impulse than by a voluntary determination."[1]

The same author also notices another symptom of general paralysis of the insane, which I have described as frequently occurring in cases of spermatorrhœa. "In the course of this disorder I have frequently observed attacks of cerebral congestion followed by convulsions or coma; these lasted several hours, and were frequently repeated during several days. After such attacks the intellectual debility and the disorder in the motions, the progress of which is

[1] See Dictionnaire de Médecine et de Chirurgie Pratiques, art. Alienation Mentale.

generally equal, become more marked. In many patients intervals of variable duration, during which the disease made no progress, were interrupted by these attacks."

I have quoted these passages literally, in order to show how far the symptoms, which I have described as belonging to spermatorrhœa, resemble those which have been noticed by the best observers of the insane. On the other hand, all authors admit that such debility of the muscular system does not exclusively belong to insanity, and that it occasionally precedes for some time the disorder of the intellectual faculties.

Lastly, all who have paid attention to the general paralysis of the insane, have been struck with the great difference in the number of the two sexes attacked by this serious symptom. In a statistical return referring to 334 cases of insanity, Dr. Foville remarks that out of 31 cases of paralysis, 22 were men and only 9 women. Reports presented by various other observers give nearly similar proportions, notwithstanding differences of climate, manners, &c. Prof. Rech has stated the disproportion to be even more considerable in the lunatic asylum at Montpellier. So remarkable and constant a difference cannot arise from any accidental cause, for the number of insane females surpasses that of males. It seems to me, therefore, that the great frequency of general paralysis in the male, should be attributed to the presence of diurnal pollutions.

I have just stated that in the asylum at Charenton, 44 males owed their insanity to masturbation, or venereal excesses, whilst only three women were similarly situated; and I have also noticed the greater frequency of recoveries in females than in males. It is impossible not to be impressed with the harmony that exists between these three important facts, constantly and generally observed, and to which no cause has hitherto been assigned.

Alterations in the structure of the brain are indeed sometimes found in cases of general paralysis of the insane, but even those who have laid most stress on them do not agree as to their importance. I have not found such alterations in patients dying from spermatorrhœa who were affected by the same muscular weakness. Besides, these alterations do not explain why the general paralysis of the insane should affect males in so much greater proportion than females.

I conclude, therefore, that among cases of incomplete paralysis of the insane, there are a certain number depending on diurnal pollutions, or which are aggravated by this disease, as I have already stated with regard to dementia.

Dementia and general paralysis of the insane have been generally regarded as certain signs of the incurability of the insanity, even when only slight embarrassment in the pronunciation, hesitation in the motions, or trembling of the limbs existed. Nevertheless, similar symptoms have always disappeared in patients suffering from spermatorrhœa as soon as the diurnal pollutions were arrested. This

is a subject, therefore, which demands the earnest attention of practitioners who have opportunities of studying it.

General Character of the Symptoms.—Notwitstanding the number and variety of the effects produced by spermatorrhœa, it is evident that all arise from changes in the *functions* of the different organs; and by comparing these changes one with another, the same characters of debility and disturbance are strikingly seen throughout. If disorder only appear to be present in certain cases, a little attention will show that it is accompanied by weakness also.

Involuntary seminal discharges therefore act essentially by producing debility. We must also admit that these discharges excite a powerful and rapid influence over the nervous system; hence they have always been justly considered *enervating*. We are thus able to explain the numerous and varied symptoms resulting from spermatorrhœa, as well as their resemblance to the symptoms produced by all other debilitating causes.

Effects of Masturbation on Children and Females.—In children, even at a very early age, masturbation produces the same effects as diurnal pollutions; only that the spasmodic symptoms are generally more marked than those of paralysis. This arises from the predominating power of the nervous system at this early age; for the same tendency is evinced in all the diseases of children, and even in their slight indispositions. On the other hand, however, cases more or less marked, of paralysis, weakness of sight, &c., are not rare; and loss of memory, of intellect and of the effective faculties, are frequently met with, and may reach complete brutishness.

This unfortunate passion produces exactly the same effects in the female sex at all ages;—the relative frequency of spasmodic phenomena arising from the greater nervous susceptibility of the female. On the other hand, the general and local weakness, occasional in the female, also resemble paralysis. I have recently seen a case of amaurosis, arising from masturbation, in a female thirty-six years of age, who confessed the vice when leaving the hospital, after having submitted to issues, setons, moxas, &c.

In these numerous cases, therefore, seminal discharges can have no influence in producing, or keeping up the disease, although the symptoms are the same as those caused by spermatorrhœa.

After having long reflected on these facts, I am convinced that the effects produced by seminal discharges may be brought on by any other debilitating cause, whose action on the economy is rapid and important; and that of all such causes those which have their seat in the genital organs are the most enervating, and consequently the fittest to produce debility and functional disorder.

Progress of the Symptoms.—In examining the effects produced by spermetarrhœa, I have for obvious reasons generally supposed that the disease progresses regularly and continuously; such is not the case, however; the symptoms seldom present any uniform progress during the course of the disease; nothing, indeed, can be more

irregular, even in the most severe cases, which might even be considered continuous when compared with others. Among these variations some may be considered of daily occurrence, and these are not well marked; others again happen less often, but last longer, and are most important. Numerous causes produce these irregularities in the progress of the disease; variations of temperature, hygrometric influences, atmospheric pressure, electrical tension, varieties of food, state of the bowels, and numerous other trifling circumstances produce extraordinary effects on persons debilitated by involuntary seminal discharges: every observing practitioner will note these; I need not, therefore, enter further on their consideration.

Spontaneous Recovery.—Many diseases, when left to themselves, work their own cure, provided only they be not exasperated by the imprudence of the patients. This is not the case with spermatorrhœa—chiefly, perhaps, because the effects produced by the disease itself are favorable to the increase of the involuntary discharges. The natural tendency of this disease to become aggravated, as the result of its own effects, frequently leads to fatal termination. The patients under these circumstances generally expire in one of the attacks of syncope that follow the congestion of the brain, of which I have already spoken. In this way, also, such of the insane who have fallen into a state of dementia, generally expire. Death, however, in cases of spermatorrhœa, is much more frequently caused by some acute, or chronic *accidental* complication, which absorbs all the attention of the attendants on account of its being more evident and better known. The system is unable to resist such complications on account of its previous debility. I have in this manner recently seen a student, who was debilitated by severe diurnal pollutions, carried off by phthisis after only two months' illness. In such cases, unfortunately, the spermatorrhœa is generally unsuspected.

CHAPTER XIII.

TREATMENT OF SPERMATORRHŒA.

Pollutions arising from Direct Causes.

In the treatment of involuntary seminal discharges, it is of less consequence to seek their primary than to discover their maintaining cause. For instance, pollutions may have been primarily excited by masturbation or venereal excesses, and afterwards be kept up by affections of the skin, hæmorrhoids, &c. In such cases it is evident that the practitioner must treat the existing cause. Involuntary discharges may either arise from actual debility, or relaxation of the spermatic organs, or from a state of irritation, or chronic inflammation of the parts, after having been first produced by very different remote causes; in treating such cases, then, the remote causes are not to be considered, while too much importance cannot be attached to the actual condition which keeps up the disease. It is this *actual* condition of these spermatic organs that must be altered in order to obtain a cure.

This point must never be lost sight of in considering the means to be employed for the treatment of spermatorrhœa. The remedies are numerous, and of very opposite classes, requiring considerable experience and skill in their adaptation to the temperament or idiosyncrasy of each patient, as well as to the different stages of the disease.

I shall arrange these remedies in different groups, according to the indications to be fulfilled—beginning by considering those pollutions whose causes act most directly.

Pollutions arising from Ascarides.—The most constant symptom experienced in these cases is an insupportable itching at the anus. The parts on examination present no signs of eruption, but the mucous membrane lining the sphincter is red, injected, and covered with thick mucus, sometimes mixed with blood. There are also numerous little red points, which, as well as the itching, arise from the pricking produced by the tails of the worms. Sometimes patients, annoyed at the constant itching, introduce the finger into the anus, detach some ascarides, and bring them away under the nail.

The sensations experienced are not the same at all times; they are generally much more severe at certain parts of the day, appa-

rently depending on the times of taking food;—the itching notably increasing about four or five hours after dinner. The stools are generally passed easily, are soft, very fetid, and covered with a large quantity of thick, ropy mucus, often filled with blood.

Diarrhœa frequently occurs, constipation under these circumstances being very rare.

In these cases, therefore, the pollutions are, as I have before said, not caused by pressure on the seminal vesicles, but by their spasmodic contraction produced by the irritation of the surrounding parts. The pollution generally occurs while the patient is occupied in adjusting his dress; it takes place suddenly, and is ordinarily preceded by two or three spasmodic contractions of the rectum.

Darting pains from the base of the penis to the extremity of the glans, are also frequently felt in these cases: these pains bear considerable analogy to those caused by the presence of stone in the bladder, the patients elongating the prepuce for relief in the same manner as in that disease. These pains are most likely caused by the ascarides pricking that portion of the rectum which covers the prostate.

Ascarides always inhabit the lower portion of the large intestine, and may, therefore, be attacked by direct means—the most simple of all, without exception, being injections of water. When thrown up at a sufficiently low temperature, water kills these worms, or at least stupefies them, and when injected in considerable quantity, so as to be returned with some force, they are frequently passed even while alive. The injections may be commenced at a temperature of 75° Fahr., and may afterwards be reduced to 70° or even 60° of the same scale. It is important to throw up as much water as possible, because by this means the worms furthest from the anus may be reached, and those which are adherent to the walls of the intestine may be detached. Ascending douches are very useful in these cases—their action being that of a powerful and long-continued enema syringe.

These injections should especially be used in the evening, five or six hours after the last full meal, because this is the time when the itching at the anus caused by the worms is chiefly felt; besides which, cold injections administered at this period are of use to the patients for other reasons. They render the worms which remain less lively, cool the irritated intestine, diminish the erections, and place the patients in the most favorable condition to obtain that sound sleep of which they are greatly in need.

Cold water is, perhaps, the least active injection we can employ, since it has no action except that derived from its low temperature; but on this account alone it is often preferable to injections that act chemically. The latter are always more or less styptic, acrid, or irritant, and cannot destroy the ascarides without acting on the mucous membrane of the intestine, which is already irritated and frequently even inflamed; it is, therefore, prudent to begin by copious

injections of water, which should at first even be used at a moderate temperature, as a very cold injection, when the intestine is unaccustomed to it, may produce a very injurious irritating effect. When the mucous membrane of the intestine has in some degree recovered its tone, salt and water injections may be used—the quantity of salt being gradually increased from one to three tablespoonfuls to the quart of water. Two or three of these injections should be administered in rapid succession, or, better still, should be retained so as to carry the fluid as high up the intestine as possible; care must, however, be taken that the solution does not contain too much salt, which would irritate the mucous membrane.

Decoctions made from plants of the genus *artemisia* are very useful as injections in these cases; some of them, however, are somewhat irritating to the mucous membrane. The class *Labiata* are less irritant, but their vermifuge power is less also. Whatever be the injection employed, care must be taken that it be not too concentrated. When this is the case, the intestine may become irritated, and this irritation may extend to the bladder, producing very annoying symptoms, and rendering narcotic and emollient injections and baths necessary.

A small quantity of the *unguentum hydrargyri mitius* introduced into the intestine, often puts an immediate stop to the annoyance produced by ascarides; the itching returns, however, the worms in the immediate neighborhood of the anus being alone affected by this remedy. The bichloride of mercury in very diluted solution is also an active remedy, but it requires great care and circumspection in its use.

All purgative enemata destroy ascarides, but at the same time irritate the mucous membrane. Oily injections are, however, unirritating, and consequently very useful. Camphorated solutions have been recommended; but although their action on the ascarides is very prompt, I think there are sufficient reasons to contraindicate their employment.

In very young children baths may be employed containing an infusion of one of the genus *artemisia*. I have even frequently seen these followed by the expulsion of *lumbrici*, when no other means had been employed.

It seldom happens, however, that injections alone suffice for the entire removal of ascarides, some of which often inhabit the upper parts of the large intestines, and are consequently unaffected; it is therefore generally necessary to administer vermifuge remedies by the mouth. Calomel has always appeared to me to be the most efficacious of these: when the stomach is much disordered it is best to give from two to four grains of calomel at bedtime; and this may be followed by a moderate dose of castor oil taken early in the morning.

At the same time that these remedial agents are employed, means must be taken to improve the general health, and especially the

state of the digestive organs. It must be recollected that the presence of worms is a sure sign of deficient energy in the intestinal tube; and this is generally conjoined with constitutional debility, and is only to be remedied by fortifying the whole system.

Pollutions excited by Cutaneous Eruptions.—Eruptions occur at the margin of the anus, causing insupportable itching, with abundant ichorous discharge, and excoriation of the skin and mucous membrane lining the sphincter ani. Sometimes the affection extends more deeply in the intestine, and then an increased secretion of mucus takes place. The irritation set up under these circumstances excites spasmodic contractions of the seminal vesicles, and consequently, pollutions, especially those which occur during defecation.

Other eruptions occur on the prepuce (herpes preputialis). These consist of furfuraceous patches, little pointed pimples, or phlyctenoid swellings resembling the effects of stinging by nettles; or again in more or less lively erysipelatous redness. These different eruptions are generally attended by swelling of the prepuce, with hardening or infiltration of the loose cellular tissue of the part, and increased secretion of the sebaceous matter, with intolerable itching. This sebaceous secretion often becomes acrid enough to excoriate the glans and internal surface of the prepuce. The patient cannot keep his fingers from the parts, which again grow more disordered in proportion to his attempts to obtain relief from the itching. Sometimes, too, a degree of salacity is present, which has no relation whatever with the patient's real powers. Eruptions occurring on the skin of the penis, scrotum, perineum, groins, pubes, and the insides of the thighs, may produce nearly the same effects.

Sometimes urethral discharges just as profuse and painful as those caused by blennorrhagic virus occur in these cases; and these may be followed by inflammation of the testicles or bladder, or even nephritis.

The eruptions may also suddenly leave the genital organs and commence in some other part of the body; and when this happens, the pollutions generally cease for the time, to return again with the return of the disease to its old seat.

In the treatment of these cases it is always necessary to begin by using baths of either the natural or artificial sulphuretted waters. Care must be taken that these baths be neither too strong nor too hot; artificial sulphuretted baths should at first only contain a small proportion of sulphuret of potassium, and their strength and temperature may be gradually increased. The natural waters are frequently of too high a temperature for these excitable subjects; from 80° to 90° Fahr. is generally quite sufficiently warm for the first trials.

After the natural sulphuretted waters have been used as baths for some little time, they may be taken internally and employed as douches on the perineum and loins, and as enemata, or as ascending douches into the rectum. The direct action of douches on the cuta-

neous tissues is very important; in consequence of the percussion, the water stimulates the skin much more than when simply used in baths. I have often seen eruptions that have long withstood the remedial action of sulphuretted waters taken internally, with the simultaneous use of baths, cured in a few days by douching the affected part.

In eruptions about the anus, we have no remedy equal to ascending douches, especially where the disease extends to the mucous membrane of the gut—this structure being acted on as well as the skin of the anus. Injections into the bladder by means of a double catheter are useful in some cases of chronic discharge from the lining membrane of that organ; but here great care is necessary, and the stream should be rather continuous than powerful.

Sometimes the immediate effect of sulphuretted waters is to produce a degree of excitement that increases the involuntary discharges. The final results are, however, almost sure to be favorable.

Occasionally, again, good effects are experienced at first, but afterwards disappear: new attacks of urethral irritation come on accompanied with discharge, &c., as before, and referable to contagion I have known such relapses occur four or five times, notwithstanding the annual use of sulphuretted waters and other treatment.

In such cases it becomes necessary to remove the condition of the mucous membrane that keeps up the irritation; and this result can only be permanently obtained by cauterization.

On the other hand, again, the use of sulphuretted waters is often highly advantageous in cases that do not depend on cutaneous disease—those that are due to a too great susceptibility of the genital organs for instance. The mildest class of waters should be chosen under such circumstances, and great circumspection is necessary in their employment.

In all cases in which the sulphuretted waters are employed, care must be taken to warn the patient against the injurious modes of life so frequent among the society frequenting mineral springs.

Pollutions arising from Altered or Increased Secretions from the Sebaceous Glands.—The sebaceous matter of the prepuce and glans is sometimes very abundant in quantity and remarkably acrid, especially in individuals subject to cutaneous eruptions. In other cases it may be retained by great length of the prepuce, or narrowness of the preputial orifice. Under such circumstances, the irritation of the glans penis may bring on very serious nocturnal and diurnal pollutions.

Whenever the prepuce is too long or its orifice too narrow, it is indispensable to commence the treatment by its removal. This in many cases suffices; others, however, require astringent lotions, sulphuretted baths, lotions containing a small proportion of spirit, &c. Simple division of the prepuce does not suffice in these cases; indeed, for reasons well known to surgeons of the present day, its entire removal is generally to be preferred. Where the preputial

orifice is very narrow, and the part itself so scanty as to be firmly applied over the glans, this can only be accomplished by first slitting up the organ and afterward removing the flaps thus made. The operation being a familiar one, further details are unnecessary.

Pollutions depending on Stricture of the Urethra.—Spermatorrhœa may either be brought on by strictures of the urethra, or being brought on by some other of the various causes, may be kept up by this disease. In both cases the most urgent indication is the same. The involuntary discharges cannot be removed without first removing the obstacle to the free discharge of urine.

Various means have been employed for this purpose, some of which are specially suited to particular cases.

In an immense majority of cases, dilatation properly applied, is all that is required; and again, dilatation may be employed by two different methods, the comparative merits of which I must hastily glance at.

Formerly, strictures were always treated by dilatation continued over a period of two or three months, and this alone was supposed to preserve the patients from the danger of a relapse. This dilatation was generally performed by means of gum-elastic catheters retained in the passage. Chronic vesical catarrhs very frequently resulted—continuing after the removal of the instrument; and the mucous membrane of the urethra was generally much altered in structure, becoming fungoid and injected. The pressure of the extremity of the catheter on the walls of the bladder, too, often had dangerous results; and more than once the vesical coats have been perforated—becoming softened by inflammation—and effusion of urine into the peritoneal cavity has taken place, of course followed by speedy death.

Abscesses in the prostate, also, have frequently formed, and either discharged into the bladder, or rectum, or, producing hard swelling in the perineum, been promptly opened by the surgical attendant. The serious results of these abscesses are well known to all practical men.

Inflammation of the testicle, too, is a frequent attendant on the slow dilatation of strictures; and even when this does not take place, the mucous membrane of the prostate is generally thickened and altered in structure—the ejaculatory canals and vasa deferentia participating in the morbid action.

Inflammation is frequently set up in the corpus spongiosum and cellular tissue surrounding it; and this may either go on to suppuration, and if not opened early, ultimately form urinary fistula, or, the inflammation becoming chronic, one of the hard tumors found in such cases may result.

By rapidly dilating the stricture, these inconveniences are avoided. A metallic catheter should always be employed, because it is more easily directed and the surgeon is better able to feel the progress he makes. When the stricture is situated in front of the scrotum, however, a straight instrument may be used. Whenever the contraction

is passed, the instrument should be retained during seven or eight hours, after which a gum-elastic catheter of the same size may be substituted. The stricture is thus compressed, and the gorged cellular tissue subsides, so that after three or four hours more the instrument becomes loose and may be easily replaced by one of a size larger. If, however, the instrument be not loose in the passage at the expiration of this period, it should be left a few hours longer. By proceeding in this manner every four hours within two days, the largest catheter the urethra will contain, may be easily passed into the stricture—each new introduction of a larger instrument being easier and less painful than the preceding. As a rule, strictures which are not very narrow or resistant, are cured without relapse by this simple proceeding, but old, resistant, and lengthy strictures again contract. After a certain time, the patients perceive a diminution in the stream of urine, and when this takes place slowly and without evident cause, dilatation must again be had recourse to, commencing by the introduction of the largest catheter which will pass the contraction. Sometimes, however, the stream of urine becomes suddenly diminished after excesses of any kind, horse exercise, &c., and under these circumstances, baths should be used, with emollients, to remove the accidental irritation. Where it is necessary to have recourse a second time to mechanical dilatation, perfect results are generally obtained in half a day, or at most in twenty-four hours, the stricture not having been permitted to attain its former degree of contraction. The patient may now be instructed to pass the instrument for himself, and recommended to have recourse to the method of rapid dilatation whenever the same indications present themselves. The periods of contraction of the stricture become more and more distant, and even in the most refractory cases, perhaps, do not recur for years.

The plan of rapid dilatation possesses, therefore, all the advantages of the slow process, without its inconveniences.

Cases of traumatic stricture, such as those caused by a fall on the perineum, &c., are exceptions to this rule. The long-continued presence of a catheter is indispensable in these cases; indeed, they are difficult of cure by any means.

There are some cases of stricture, however, in which, notwithstanding the numerous advantages of rapid dilatation, it must give way to other means. When the stricture is situated at the orifice of the glans, dilatation cannot be had recourse to without causing extreme pain, besides which the contraction readily returns. Incising the stricture in the direction of the frænum, is a much simpler and more rapid means of cure. The union of the wound must be prevented by passing daily, for a week or so, the extremity of a large bougie just into the canal. The lips of the wound being prevented from uniting, cicatrize separately, and there is no danger of a return of the contraction. Even when the stricture is situated two or three lines within the orifice, incision with a straight probe-pointed bistoury may be had recourse to with advantage.

There are also some annular strictures which, from their elasticity, return rapidly to their former degree of contraction, as soon as the dilating instrument is removed. These strictures should be scarified in different parts of their circumference, by a bistouri cachée adapted for the purpose,[1] and afterwards full-sized instruments should be introduced daily for an hour or two.

Some strictures bleed from very slight causes, and others, again, are extremely sensitive. In both these cases dilatation is objectionable—indeed, in certain cases of irritable stricture, the patients are unable to submit to it on account of the agony produced, frequently followed by fever, rigors, &c. In these cases cauterization of the irritable surface with the nitrate of silver is the only means by which a prompt and permanent cure can be obtained.

Lastly, there are impediments to the discharge of urine situated externally to the mucous membrane. These consist of little tumors developed in the spongy tissue of the urethra, or even still more, superficially; these tumors can only be dispersed by external incision. A large catheter should be passed into the urethra, so as to cause the tumor to project beneath the skin, which should then be freely divided with a straight bistoury; the cellular tissue and tumor are in their turns to be treated in the same manner. The tumor afterwards suppurates and disappears completely.

Pollutions arising from Hæmorrhoids.—Hæmorrhoids may cause involuntary seminal discharges in two ways—by the irritation they excite—and by acting as mechanical impediments to defecation.

In the first case the tumors become swollen and painful, and the irritation extends to the prostate and neck of the bladder. Vegetable and milk diet should be used in these cases, with warm baths, cold and opiate enemata, and emollient poultices when the tumors become prolapsed and painful. In this state, too, much and immediate relief may be obtained by puncturing the most distended tumors with a lancet; the swelling goes down, the pain is relieved, and often the

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[1] The instrument to be used for this purpose should not be constructed on the principle of a lancet-shaped stilet. In pushing forward the pointed extremity of such an instrument it is almost impossible to be assured of the direction in which the incision is made; besides which the elasticity of the stricture will allow it to give way before the point of the instrument, however well set, when the thrusting motion alone is depended on to produce the required effect. In all cases, too, for which this operation is suited, it is possible to dilate the stricture by means of a somewhat conical instrument. It is far better, therefore, that the bistouri cachée should be sheathed in the substance of a solid sound, and made to project slightly by means of a screw, after the instrument has been passed entirely through the stricture, the incisions or notches in which may thus be made while withdrawing the instrument, and with a proper cutting motion. For strictures in front of the perineum, a straight instrument may be used, and this will have the advantage of being turned round in the urethra so as to notch several parts of the stricture. For strictures nearer the bladder several instruments will be required, if it be necessary to incise more than one aspect of the stricture. In all cases the projection of the bistouri cachée should be regulated by means of a screw, so that the exact depth to which the incision will extend, may be known by a single glance at the handle of the instrument. [H. J. McD.]

hæmorrhoid withers away and becomes completely obliterated. The practice of applying leeches to these tumors cannot be too much reprobated. The leech-bites increase the irritation, and it is evident that the effect desired, viz., that of emptying the tumor of its contents, cannot be accomplished by these creatures, their bite not being sufficiently deep to extend through the coats of the tumor.

When the hæmorrhoids are sufficiently large and numerous to impede defecation, they must be unhesitatingly removed—especially when they become hard and begin to degenerate. Care must be taken in operating for the removal of these tumors when internal to the sphincter, to cauterize the bleeding surface with the heated iron, after each stroke of the knife.[1] There is no occasion to form a deep slough—it is simply necessary to close the orifices of the bleeding vessels. For this purpose the small olive-shaped cauterizing irons are the most convenient.

Pollutions caused by Cicatrices in the Neighborhood of the Anus.—Accidental cicatrices in the neighborhood of the anus, or within the rectum, may cause very serious pollutions on account of the obstacle they present to free defecation. It is evident that these pollutions can only be relieved by incising such cicatrices, and preventing the union of the incisions by introducing an instrument capable of dilating the part to the full dimensions of the rectum.

Pollutions caused by Fissure of the Anus.—I need not repeat what I have already said respecting the different modes by means of which anal fissures may cause pollutions. The action is precisely the same as that of hæmorrhoids.

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[1] When hæmorrhoids are situated within the sphincter ani, their removal by the knife is dangerous with any amount of caution. It is far better, by directing the patient to strain as at stool, to cause the tumors to project beyond the sphincter, and then to transfix them through the base with a fixed needle carrying a double ligature. An unarmed needle may be passed *underneath* the first, and the ligatures tied on each side, *underneath* the second needle. This proceeding causes little pain when the portions strangulated consist only of mucous membrane; should, however, a portion of skin be included, the suffering is generally intense—ample reason for avoiding the application of a ligature when the piles are external. The strangulated portions seldom give any further trouble, and unless the stools be carefully examined, even the ligatures are generally discharged unnoticed.

The ligatures for this purpose should consist of fine, smooth, even, and very strong whip-cord. Silk, however often doubled, will seldom bear the force required to draw the ligature tight, and, besides, this repeated doubling makes a thick cord which does not so perfectly strangulate the tumor. In external hæmorrhoids, when recent and inflamed, the practice of puncturing with a lancet cannot be too strongly recommended. The hemorrhage that takes place relieves the congestion of the hæmorrhoidal veins as well as the irritation of the neighboring parts, and by gently pressing the tumor, if it have not already disappeared on the following day, a small clot will generally be discharged, after which the pile will for the most part shrink up and give no further trouble. When, however, external piles are of long standing, they should be freely removed by the knife. Smart hemorrhage sometimes follows, continuing for a few minutes; no danger is to be apprehended from this, as it soon ceases spontaneously, or at all events, may be immediately arrested by light pressure with a compress of lint. [H. J. McD.]

The indication to be fulfilled is of course to obtain a cure of the fissure, and this is only to be accomplished in severe cases by dividing the sphincter ani.[1] This operation must be performed towards the side opposite to that on which the fissure is situated.[2] With regard to the treatment after the operation I must remark, that I consider the plan of stuffing the wound with charpie injurious and inconvenient; great irritation often results from it, and frequently hemorrhage is kept up, which would otherwise speedily cease. The wounds heal just as perfectly without this dressing, and I have lately given up its use in all cases where division of the sphincter ani is required.[3]

There are some cases of anal fissure which apparently depend on a syphilitic taint. These are readily cured by the introduction of a small suppository containing mild mercurial ointment.[4]

Pollutions produced by Constipation.—Constipation is sometimes the cause of spermatorrhœa; but it is much more frequently one of the results of the disease; at all events, costiveness is almost always an accompaniment of it. In all cases it is undoubtedly of importance to relieve the constipation, even when it is not the primary cause of the disease. Both surgeons and patients, however, have for the most part fallen into a strange error in considering that to cure the pollutions it is sufficient to procure free evacuations of the bowels.

Diurnal pollutions, indeed, which are simply accidental, disappear as soon as the momentary costiveness causing them has been relieved; but in such cases spermatorrhœa has not become a confirmed disease, and the health is not seriously disordered.

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[1] The free application of the nitrate of silver in substance will relieve many cases of fissure of the anus, even when very severe. The application gives sharp momentary pain, but this soon passes off, and great relief is immediately afterwards experienced. [H. J. McD.]

[2] When the fissure is not situated in the anterior portion of the anus—the direction of the urethra—this operation may be performed by simply dividing the parts through the fissure. The irritable surface is thus converted into a simple wound, which inflames, suppurates, and generally heals without further trouble.

In all cases of fissure of the anus, as well as in cases of hæmorrhoids—indeed, in all affections of the lower bowel—too much attention cannot be paid to the state of the digestive organs and liver. It must be recollected that disorder of these viscera is by far the most frequent cause of rectal disease, and that without first removing such cause no local treatment can be permanently successful. [H. J. McD.]

[3] There can be no doubt as to the propriety of avoiding the filthy dressings still too often used, and the abominable practice of stuffing up wounds made by operation on the lower bowel. In all cases when any dressing is required, a narrow strip of lint, dipped in a little tepid water, suffices. In the after treatment of divided sphincter ani, an aromatic lotion—the red wash of the University College Hospital—consisting of about a scruple of sulphate of zinc, four drachms of spirits of rosemary, one drachm of compound tincture of lavander, and ten ounces of water—is generally the only application necessary. [H. J. McD.]

[4] The origin of such fissures from a syphilitic taint, I cannot but consider very doubtful. Certainly the local application of the mild mercurial ointment would, according to the generally received notions of constitutional syphilis, be of very little efficacy in curing a secondary sore. [H. J. McD.]

On the other hand, I have met with cases in which diurnal pollutions brought on by old standing and obstinate costiveness, continued after the bowels had been restored to their normal action. Case nineteen is a striking example of this.

The means generally employed to relieve constipation are so well known, that I need not consider them separately. Ascending douches are in my opinion by far the most efficacious and useful in all cases.[1] Purgatives on the other hand are injurious, however administered and of whatever nature they may be; laxatives, such as castor oil, magnesia, &c., are less injurious, but these possess the notable inconvenience of adding to the gastric disorder. Saline purgatives, such as sulphate of soda and magnesia, irritate the mucous membrane of the alimentary canal, which is generally very easily affected in these cases. Aloetic purgatives have, in addition to this, the great objection that they act chiefly on the lower intestines, especially the rectum.

I have formerly stated that active purges may excite pollutions in persons previously free from them, from the facility with which spasmodic contractions of the rectum extend to the seminal vesicles; and I have shown that pollutions brought on in this way may continue after the action of the exciting cause has passed away, so that a serious case of spermatorrhœa may remain, the progress of which afterwards becomes independent. It is, therefore, evident enough that the abuse of purgatives may seriously increase previously existing involuntary discharges, which were more the cause than the effect of the constipation.

On the other hand, most of these patients are in the constant habit of swallowing purgatives, not only because they are obstinately costive, but also because, from the remotest records of medical science, it has been laid down as a rule that hypochondriacs cannot be too much purged—most persons affected with spermatorrhœa, as I have before said, being more or less hypochondriacal. The profession cannot, therefore, be too much on their guard against yielding to the solicitations of such patients, who, perhaps, only complain, or complain chiefly of constipation.

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[1] The power of the douche bath in relieving constipation, has been very generally overlooked in this country. Ascending douches directed against the anus seem, from the experience I have at present had of their use, likely to be a very valuable remedy in cases of deficient action of the colon and rectum. The temperature of the douche should be from 80° to 90° Fahr., and it should be continued about ten minutes. The direction of the spout may be varied, and the water thrown on the abdominal parietes, with very good effect. [H. J. McD.]

CHAPTER XIV.

TREATMENT OF SPERMATORRHŒA.

Pollutions caused by Relaxation and Debility.

INVOLUNTARY seminal discharges arising from general atony and following serious acute diseases are very rare. The same indications are presented as in other prolonged convalescences. To the general means proper to restore the strength may, however, be added such special ones as act chiefly on the genital system; such are Spa water mixed with generous wines, most of the gum resins, canella bark, highly seasoned dishes, game, &c.

Pollutions are much too frequently attributed to debility of the genital organs; nevertheless in certain cases such local atony may either originate or keep up spermatorrhœa, which then frequently yields to the simple administration of general or special tonics. Debility may continue also after other causes have ceased to operate; the same indication is to be fulfilled when this is the case.

This simple atonic condition is to be suspected when there are no symptoms of local irritation—especially in such as have suffered during infancy from incontinence of urine, in those whose genital organs are not perfectly developed, or whose temperaments are markedly lymphatic. When the scrotum is pendulous and œdematous, and the veins of the spermatic cords are varicose, with the glans penis pale at its orifice, and urethral canal little sensitive to catheterism, there can be no doubt of the presence of atony.

The effects produced by atmospheric changes give us important information on this head. We may be convinced that pollutions arise from atony when they are increased during mild and damp weather, while, on the other hand, they decrease during dry winds, with sharp cold. These opposite effects show clearly enough that tonics are indicated.

Galvanism may be employed very advantageously in torpidity of the genital organs; the shocks should especially be passed between the loins and pubes and afterwards between the loins and perineum. After each sitting the patients experience a feeling of strength and warmth in the pelvis, which constantly increases; the bladder and rectum contract more energetically, and the constipation ceases. It

is evident enough that galvanism would be injurious in cases where there is the least irritation.

Cantharides are constantly ordered by charlatans in cases of impotence. I have never met with a single patient who did not regret this treatment and suffer from it. The remedy is one which should never be administered to persons suffering from spermatorrhœa.

Phosphorus, which has been recommended in these cases, falls under the same denunciation.

The ergot of rye has recently been recommended in cases of spermatorrheœa, and from experiments I have instituted, I am inclined to think that it will prove of much service in pollutions arising from atony. The dose should be from four to twenty grains, night and morning, and the best method of administration is by suspending the freshly powdered ergot in a glass of water.

Cold, fresh, and salt water bathing have been so generally recommended in cases of involuntary seminal discharges, that I feel it necessary to insist strongly against their indiscriminate employment. Bad results arise from them when there is either great constitutional debility, or too great susceptibility of the genital organs. Of these different classes of patients, the one is compelled to give up bathing because sufficient reaction does not take place, and the other because the involuntary discharges are considerably increased. The abstraction of heat can never directly augment animal strength and activity. The tonic effect resulting from cold bathing is, therefore, due to the vigorous reaction that follows, and it is the duty of the medical man to consider the constitution of each individual in order that the bath may be employed with the most suitable effect in each particular case. My experience has taught me that the ordinary mode of cold bathing is chiefly useful in cases of masturbation, or of venereal excesses; in these cases, too, the exercise of swimming may be advantageously added. Cold bathing is also useful in recent cases of nocturnal pollution, but care must be taken, provided debility have made even slight progress, not to permit more than sudden immersion into the water; and even this must be left off when reaction is slow in taking place. When diurnal pollutions have commenced I consider cold bathing highly injurious. If it be necessary to stimulate the cutaneous surface in such cases, other and more direct means must be had recourse to. We may, for instance, employ warm aromatic baths—especially in patients who suffered from incontinence of urine during childhood.

In all cases care should be taken to employ active friction on the skin when the patients leave the bath; after which flannel should be immediately put on.

In some cases, cold applications or lotions to the genital organs are borne when general bathing would be injurious, on account of the amount of heat abstracted from the large surface exposed. Analogous but more powerful effects are produced by friction with ice, &c., applied over the same parts; or a small quantity of pounded ice,

inclosed in a bladder, may be allowed to melt on the loins, or perineum. These means have been especially recommended before going to bed, for patients who suffer from nocturnal pollutions: their effects, however, often exceed what is required, and at best are very uncertain; sometimes, too, disagreeable irritation of the urinary organs follows.

Cold douches on the lumbar and sacral regions are more certain in their action, on account of the shock produced. I have frequently employed these douches with success—extending their application to the perineum. They have appeared still more useful when alternated with sulphuretted waters employed as hot as possible in the same manner. Reaction is much more rapidly established after these means.

The first application of the douches should not exceed five minutes in duration. The skin will be found very red, and a feeling of heat and vigor in the parts will take place, even before this short douching is ended: a very powerful tonic result may be expected as regards the genital organs, and for this reason the duration and force of the douches must only be increased after carefully watching their effects for several days. After this, if not contraindicated, the number and duration of the cold douches may be increased.

I have seen these alternated douches produce a state of priapism, even in persons who were perfectly impotent on the previous day. The medical attendant must, therefore, be cautious during their employment that he does not overstimulate his patient.

Cold drinks are generally useful and seldom injurious in these cases. They take the place of spirits, &c., from which the patients are generally obliged rigorously to abstain. Ice and iced drinks have of course the most powerful action, but are not proper in all cases. When the stomach is very irritable the use of ice soon causes pain and tenderness of the epigastrium, with heat of skin, red tongue, and quick pulse—indeed, all the symptoms of more or less severe gastritis. In other cases, again, the use of ice causes troublesome erections, followed by weight in the prostate, and frequent discharge of urine, sometimes with diminution of the stream, and redness at the orifice of the glans penis; sometimes, too, mucous discharge from the urethra is set up, and even vesical catarrh has occurred in more than one case in my practice. It is evident, therefore, that in order to use ice, or iced drinks, with success, the digestive and genito-urinary organs must not be in an irritable state. The season of the year, too, must be considered; in summer reaction is rapid, and the heat abstracted by the use of ice is soon compensated; in winter, on the contrary, there is a constant struggle on the part of the system to maintain the animal heat, and it is evident that the administration of substances calculated to abstract heat must be injurious.

In the internal administration of ice, we may without inconvenience consult the taste of the patient. A spoonful may be given

several times a day, pounded with sugar, or little portions of ice may be sucked; the common ices of the pastry cooks may be used, or, better still, iced milk may be administered. In all cases it is proper to begin by small quantities at a time, and the action of the remedy must be carefully watched.

Ferruginous waters have been very generally recommended in cases of debility of the genital organs. Such debility, however, when regarded as the sole cause of involuntary discharges, is very rare; or, at least, it rarely exists alone; and hence it happens that waters containing iron so frequently fail, although in a few cases they produce remarkable effects. In these cases, too, attention to the state of the digestive organs is necessary.

Of the natural ferruginous waters, that of Spa is the most employed. Of all mineral waters, however, those containing the oxide of iron are the most common, besides which they are easily manufactured artificially, and the artificial waters are quite as good as the natural—indeed, in some cases they are better, because a larger quantity of carbonic acid may be forced into them. Some of the natural mineral springs are sufficiently warm to be used as baths, and this is a very useful mode of administration when the stomach of the patient is irritable.

Spa water may be taken in cases of atony, mixed with wine at meals, and with milk, or sugar and water, during the rest of the day. It is probably the best and most agreeable mode of administering iron; but the common forge water may be substituted for it without inconvenience; or, better still, a solution of lactate of iron. Indeed, all ferruginous preparations may be used in atonic cases, care being taken at the same time to regulate the bowels, and to watch the general effects of the remedy.

Tonic or astringent bitters may also be employed in cases of spermatorrhœa, decidedly depending on an atonic condition of the genital organs, and may sometimes be advantageously combined with preparations of iron. These remedies have one great inconvenience, viz., their tendency to bring on constipation.

Numerous general and special excitants are contained in the materia medica. Almost all the labiate and umbelliferous plants possess high stimulating properties, and they have accordingly been strongly recommended in cases of impotence—which, it will be remembered, was formerly always supposed to rise from atony of the ejaculatory ducts. From my experience, however, even when involuntary seminal discharges are caused by debility of the spermatic organs, excitants are more frequently injurious than useful.

The oleo-resins, such as copaiba, turpentine, &c., are more useful in cases of debility, accompanied with abnormal sensibility of the genito-urinary mucous membrane. These remedies should be commenced in small doses, which should be increased very slowly. But notwithstanding these precautions, the oleo-resins often disorder the digestive organs, and prove repugnant to many patients. Of these

remedies, copaiba is, perhaps, to be preferred. It may be given mixed with magnesia, or in gelatine capsules, one only of which at first should be taken at bedtime, increasing the dose according to the effects observed. Tar-water, too, may be given in doses of one or two tablespoonfuls mixed with water, three or four times a day.

Nervous Susceptibility.—There are certain cases of involuntary seminal discharges which seem to arise from the action of the nerves of the genital organs, rather than from debility or irritation. This disposition, however rare, merits particular mention, because it presents special indications. The genital organs sometimes possess such a high degree of susceptibility that the least touch produces extraordinary sensations in them. Very slight friction suffices to cause incomplete erections with seminal emissions. Catheterism gives intolerable pain, even at the orifice of the urethra, although there is no redness perceptible; painful dragging sensations are felt in the testicles and spermatic cords, as well as along the penis; darting pains, with pulsation and sense of spasmodic contraction come on frequently without evident cause, in the perineum towards the neck of the bladder—probably in the seminal vesicles, because involuntary emissions often result without erection, or lascivious ideas, and notwithstanding efforts made to prevent them. These phenomena are especially observed in irritable individuals, who have shown from infancy a degree of morbid sensibility, and whose first seminal discharges were caused by unnatural excitement—especially by irritability of temper, or lively emotions. In such patients spermatorrhœa becomes much aggravated in stormy weather: cold baths, applications of ice, &c., are injurious, and tonics, internally administered, do not succeed better in these cases. Sedatives and narcotics may be employed with the best effects; preparations of opium should be commenced in very small doses, however, on account of the tendency to headache, and the nausea they produce, as well as their increasing the patient's constipation. I have more than once seen such patients experience all the bad effects of an overdose of opium from the exhibition of an enema, consisting of a decoction made from a single poppy-head.

It might be supposed that camphor would be especially useful in these cases, on account of its particular action on the nervous system. I have rarely obtained good effects from it, however, and such of my patients of this particular class who took it in large doses, experienced nausea, headache, and very painful agitation; in some even an increased seminal discharge took place. Nevertheless, camphor generally diminishes erections arising from a state of irritation; unfortunately its effects are very uncertain, and hitherto no rules have been laid down by which to predicate its actions. On one point, however, I am satisfied; it is, that camphor should never be given in large doses to these patients, as bad effects are almost invariably produced. I generally recommend five or six grains only at first in the course of the day.

Counter-irritation on the perineum and thighs may be sometimes advantageously employed to relieve the spasmodic contractions that cause diurnal pollutions; but the use of cantharides for this purpose must be avoided.

The introduction of a catheter into the bladder possesses the advantage of putting a stop at once to the nervous phenomena of which the genital organs are the seat, and also of lessening the increased sensibility of the urethral mucous membrane. A moderate sized gum-elastic catheter should be at first employed; the introduction should be performed slowly, stopping from time to time, both to allow the pain to pass off and to get rid of the spasm of the passage. This spasm frequently lasts more than a minute, and during this time all attempts at passing the instrument on must be absolutely abstained from. Some patients suffer such pain during the passage of the instrument, that the whole body becomes agitated, and covered by cold sweat, and it is precisely in these cases that the cathether produces the most marked and lasting effects; when the suffering is very acute, however, we should not persist in reaching the bladder the first time of using an instrument.

At first the instrument should not be retained more than an hour, and in many cases it is necessary to withdraw it earlier; at all events, it should always be removed as soon as its presence excites new spasms. It is remarkable, that notwithstanding the severe pain caused by its introduction, the patients invariably experience a sense of comfort immediately after its removal; this is owing to the relief of the painful sensations which they previously felt in the genital organs—sensations which were by no means acute, but very disagreeable on account of the constant anxiety they caused.

The effects of the first introduction must be completely allowed to pass off before having recourse to the instrument a second time; a day or two should even be allowed to elapse after the passage of urine has ceased to be painful, before again using the catheter. Generally from five to ten days would be a proper interval, varying with the peculiarities of the case. And now the period of removing the catheter may be left to the discretion of the patient, always advising him to retain it as long as possible, or until very violent spasms commence—which happens generally in these cases in from one to two hours.

The swelling which follows the introduction of the catheter necessarily extends to the orifices of the ejaculatory ducts, and thus lessens the disposition to diurnal pollutions. The disordered nervous action is also modified by the presence of the instrument, and the sensibility of the urethra returns by degrees to its normal condition. The catheter does not simply dull, by its continued presence, the morbid sensibility of the part; it produces at first momentary excitement, accompanied by swelling, and followed by a permanent tonic effect. Hence the introduction of the instrument may be advantageously applied in cases of atony.

Some patients, however, are so excitable, that they cannot bring

themselves to submit to the pain caused by passing the catheter; others, again are unwilling to await the tardy results that follow this plan of treatment, which is necessarily lingering, on account of the time required to elapse between each introduction of the instrument. In these cases, therefore, other means must be had recourse to.

Acupuncture acts with much promptitude and energy on the nerves of the perineum and neighboring parts. It should be performed in the following manner:

The needles should be as fine as possible, and long enough to penetrate nearly into the bladder; they should be tempered by heating until they change color, so that there may be no danger of their breaking, and a large head of sealing-wax should be formed for them, so that they may be easily managed; a little oily matter should be rubbed over them before using.

After having caused the patient to make water, the first of these needles is to pass through the raphé of the perineum, midway between the root of the scrotum and the margin of the anus; the point must be kept in the direction of the median line, so as to traverse the inferior lobe of the prostate, nearly as far as the neck of the bladder. The second is next to be introduced between the first and the margin of the anus, its point being directed in the same manner; and the third may be inserted in front of the first, the point being directed obliquely towards the lower part of the neck of the bladder. By this means the prostate would be traversed in the course taken by the ejaculatory ducts in their course to meet at the verumontanum. It is difficult, therefore, for the ducts to escape being acted on by the needles, even supposing they should not be actually punctured.

I allow the needles to remain at least one hour, and at most three; they may be retained longer, however, for the only inconvenience they occasion arises from their requiring perfect immobility. The extraction is generally painful.

The patients experience, immediately after the removal of the needles, a sense of comfort and suppleness, which extends from the perineum to the neighboring parts, and probably depends on the disappearance of the painful sensations previously suffered; and remarkable improvement in all the phenomena caused by disordered innervation in the genital organs usually results; sometimes, indeed, such disorders do not reappear.

The influence exercised by acupuncture over the involuntary discharges, is by no means so constant. These seldom yield completely after the disappearance of the nervous symptoms, although I have seen a few cases in which the pollutions ceased after a single application.

I have also several times used acupuncture of the spermatic cord, and even of the testicle, with advantage, in cases of neuralgia in these parts, taking care to pass the needle between the epididymis and body of the testicle. In one case the pain ceased after four

repetitions of the operation, and I have since learned that the patient married a few months after leaving the hospital. Neuralgia of the spermatic cords and testicles is not always accompanied with spermatorrhœa; but, as may be supposed, the disorders are very frequently connected. In all these cases, the first indication to be fulfilled is the same.

Acupuncture has unfortunately lately fallen into disrepute; at one time it was sadly abused, being recommended in all classes of local pain, whatever its nature or cause: hence the present neglect into which it has fallen. Of course discrimination is required in its use; but in cases of spermatorrhœa arising entirely from nervous disorder (which, indeed, are not common), its effects are as prompt and durable as beneficial.

Pollutions arising from Habit.—To the cases I have just been considering as suitable for acupuncture, must be added those in which pollutions are kept up by habit. Not only must these cases be referred to the influence of the nervous system, but similar means of treatment are applicable in both. I have obtained good effects from catheterism and acupuncture, in patients whose genital organs were not very excitable, but in whom the disorder was of very long standing, or arose from old and long-continued abuse or venereal excesses.

It is very probable that the spasms of the seminal vesicles were kept up in these cases by the influence exercised on all organs, and particularly on those of generation, by the periodical repetition of the same acts.

Catheterism and acupuncture should, therefore, be employed in these cases, when there is no more evident indication to fulfil.

Pollutions caused by Sleeping on the Back.—There is still another phenomenon which appears to me to arise from nervous influence, I mean the effect produced by heat of the loins during sleep. Amongst such as are affected with nocturnal pollutions, the greater number only suffer from these accidents when lying on the back. These cases are not generally very serious, and they may be relieved by the following simple means:

The bed should be very hard, and a piece of leather or oiled silk should be placed between the blanket and sheet. If this do not succeed, it will be proper to apply a sheet of lead over the loins, and better still to adapt to the centre of this sheet a perpendicular piece of light wood, so that the body never can remain on the back however sound the sleep may be. The sheet of lead may be fixed to a linen girdle and tied in front; and it is evident, that for the patient to lie on his back, he must rest equally balanced on the edge of the wood fixed to the centre of the leaden plate. The use of lead prevents the loins from being overheated by the presence of the apparatus, which might happen if some metallic substance were not used.

I have always found this simple apparatus successful in nocturnal pollutions caused by heat of the loins during sleep.

CHAPTER XV.

TREATMENT OF SPERMATORRHŒA.

Pollutions caused by Irritation or Chronic Inflammation.

In by far the greater number of cases, the involuntary seminal discharges are kept up by a state of irritation of the spermatic organs; and this irritation may present various degrees of severity, varying from simple excitement to well-marked inflammatory action. Nocturnal pollutions brought on by simple excitement of the genital organs, are not in general either lasting or serious; these discharges, therefore, as I have before stated, only merit attention on account of their tendency to become habitual.

Irritation of the genital organs generally shows itself by more or less vivid redness at the extremity of the glans penis, by abundant secretion and frequent discharge of urine, by acute sensibility in the prostatic portion of the urethra, and by a sense of weight and discomfort in the perineum and rectum.

In chronic inflammation the prostate is, besides, sensible to pressure and perhaps swollen, which may be easily ascertained by an examination per rectum. The patients suffer from mucous urethral discharge, generally the sequel of old blennorrhagia, and which becomes aggravated from very trifling causes. The testicles are often morbidly sensitive, painful, and perhaps swollen.

Spring is unfavorable to all patients whose involuntary discharges arise from hypersthenia; dry and cold weather is equally injurious; in general they feel better in warm damp seasons. Cold lotions, cold bathing, tonics, and excitants, are all equally hurtful. Momentary benefit may, however, occasionally arise from these means, and this happens because debility generally accompanies the irritation of chronic inflammation; but such momentary benefit is rapidly followed by marked increase of the bad symptoms. It is often difficult to distinguish chronic inflammation from irritation, and the indications to be fulfilled are the same in both states; therefore I shall consider their treatment together.

Hippocrates recommended that at first the whole surface of the body should be fomented, that lavements should be given, and after a time tepid baths used. The moderns, on the other hand, have with one accord recommended cold bathing in all cases of spermatorrhœa, and this has arisen from their constantly and falsely at-

tributing the disorder to atony of the genital organs. The temperature of the bath should be that most pleasant to the feelings of the patient: too high a temperature causes agitation; too low, on the other hand, increases instead of relieving, local irritation. Emollient baths, containing vegetable decoctions, are indicated when the skin is dry, irritable, or covered with eruptions; but with the exception of these cases, they are not more useful than baths of plain water. The advice of Hippocrates relative to the diet and general regimen of such patients, harmonizes with the employment of these emollient means. After having prepared the stomach by a mild emetic, he recommends skim milk as a beverage, ass's milk, and during forty days cow's milk. "So long as this milk diet shall continue," he adds, "administer barley water in the evening, and forbid all solid food; afterwards give soft food in small quantities at first, and fatten the patient as much as possible." This fluid regimen is certainly the fittest to assist the baths, fomentations, &c., in calming the irritation of the genital organs, by favoring abundant secretion of unstimulating urine. It has also the advantage of furnishing the digestive organs with nutriment suited to their weakened powers.

The stomach must not be over-fatigued with the use of milk, however, and in order to prevent this, different means may be employed. At first new milk may be given, as soon as possible after it has been drawn, and this may be varied by changing from goat's milk to ass's milk, and from the milk of cows to that of sheep. Afterwards the milk may be boiled, or given cold, or iced; sugar may be added to it, or jam, water, and sugar. If acid eructations follow its use, a few grains of magnesia may be mixed with it, or two or three spoonfuls of Spa-water, or, better still, of lime-water. A few drops of rum may be added to it to give flavor, or a laurel leaf, or a sprig of fennel may be allowed to infuse in it while it cools. Tea and coffee must not be given with the milk, on account of their injurious action on the nervous system, but chocolate may be used in small quantities. The stomach is generally so capricious in these cases, that a milk diet could not be long submitted to unless it were constantly modified. As, therefore, it is the most suitable diet in severe cases, care must be taken to vary it frequently.

The *soft* food, recommended by Hippocrates to follow milk diet, should consist of decoctions made from barley, beans, &c., or of the dried juices of feculent vegetables. Of all feculent roots the potato is the best suited to follow the use of strict milk diet in these cases. The most simple mode of its preparation is the best. The potato is easily digested, and besides, it modifies the secretion of urine. Strawberries possess a similar property, and very soon relieve irritation of the bladder and urethra. There are some patients whose urine is quite transparent, but who, nevertheless cannot retain it long; they suffer from pain and heat in the neck of the bladder and prostate, together with darting pains in the same region, but without any symptoms indicative of inflammation. This particular kind of irrita-

tion is difficult to relieve by pharmaceutical means, but it often yields readily enough to the abundant use of strawberries; raspberries and cherries produce somewhat similar, but much less active, effects.

The advice given by Hippocrates, "to fatten the patient as much as possible," is by no means opposed to the diet I have recommended, for it is well known, that matters containing sugar and fecula in abundance, favor the formation of fat.

Hippocrates adds, that wine should be abstained from during a year, and I have frequently had opportunities of remarking the wisdom of this advice. Many patients, indeed, grow abstemious as the result of their own experience. The prohibition of wine should include all other fermented liquors, as well as tea and coffee—indeed, all exciting drinks. But there are cases of spermatorrhœa, arising from irritation, in which wine may be allowed, and in these cases it may be advantageously taken iced, or mixed with an alkaline, or carbonated water.

In cases of well-established spermatorrhœa, all excitement of the genital organs increases the pollutions; the patients must, therefore, not only abstain from coitus, but from everything which may excite venereal desires, or lascivious ideas. Still, however, when convalescence is advancing, very moderate sexual intercourse is necessary to relieve the overfilled seminal vesicles, and to prevent them from again falling into a habit of involuntary contraction.

Fatigue is hurtful to patients whose pollutions arise from irritation, but moderate exercise is beneficial. Excessive mental exertion is also to be avoided. In the milder cases of involuntary discharge, caused by irritation, the introduction of a catheter may be sufficient, as in cases of morbid sensibility, to modify the condition of the mucous membrane.[1] The remedy in the severer cases I have still to consider; I mean cauterization of the mucous membrane of the prostatic portion of the urethra, by means of the nitrate of silver.

Cauterization.—This operation is especially indicated in cases of chronic inflammation, or irritation of the urethra; its results may be considered certain when involuntary discharges follow a common clap, or non-contagious gleet. I have also found it successful in many cases where atony or relaxation seemed to predominate, and in a few cases of marked nervous disorder, and congenital predisposition. In the latter cases, however, the benefit derived from cauterization has seldom proved permanent, though I believe that by changing the condition of the tissues, the foundation has been laid for the successful use of other means.

Before proceeding to cauterization it is indispensably necessary to introduce a catheter, for the double purpose of taking the exact length of the urethra, and of completely emptying the bladder. On slowly withdrawing the instrument, during the escape of urine, the stream is arrested as soon as the eyes of the catheter enter the canal, and re-

[1] I have successfully treated a mild case in this manner. [H. J. McD.]

commences when they are again pushed into the bladder. The penis being then moderately stretched, the thumb and forefinger should be applied to the instrument at the point of the glans. When the catheter is withdrawn, the distance between the finger and thumb and its eyes, gives the exact length of the urethra, and this must be immediately marked on the *porte-caustique*, the eyes of the catheter being applied to its olivary extremity, and the position of the fingers indicated by fixing a little slider on the stem of the instrument. When the *porte-caustique* has penetrated so far into the urethra, that this slider touches the point of the glans—the penis being exactly in the same state of elongation in which it was when the catheter was introduced—it is clear that its olivary extremity will be in precisely the spot previously occupied by the eyes of the catheter, when the length of the canal was taken; that is to say, at the commencement of the neck of the bladder—a position which it is highly important to the operator to be assured of.

The bladder must be completely emptied, in order that no urine may penetrate into the tube of the *porte-caustique*, and that none may enter the urethra during cauterization. When the caustic is wetted by the urine, it acts much less energetically than if it were dry, and its action extends to parts where it was not required. The inflammation set up may, under these circumstances, be insufficient to fulfil the desired object, although, at the same time, extremely painful on account of its extent.

I need not describe the instrument I use for the purpose of cauterizing the urethra, as it is pretty well known to the profession. I must, however, point out a few of the faults of those sold, by even the best instrument makers, as my instrument. The enlargement terminating the cuvette, is generally too round and too small. It closes the end of the tube like a stopper, and hence it often happens that the mucous membrane forcibly embracing the cuvette during cauterization, becomes pinched on closing the instrument, and perhaps portions of the membrane may be torn away on withdrawing it. By giving the extremity of the instrument greater volume, and an elongated olivary form, this accident is rendered quite impossible.

The diameter of this olivary body should considerably exceed that of the tube of the instrument, because, although the operator may judge when he is near the neck of the bladder, by the nearness of the slider on the stem of the instrument to the point of the glans, still it is proper that he should have a distinct sensation when the neck of the bladder is reached. The passage of the enlarged extremity of the instrument through the sphincter of the bladder gives this sensation very distinctly; then on gently withdrawing the instrument, a slight resistance is felt to the re-entrance of the bulb into the urethra, and the operator may be certain that the cuvette containing the caustic is in its proper position.

The cuvette and the stem which supports it, should be formed of a single piece of metal, because any soldering is soon destroyed by

the caustic. It is not, however, indispensable that the cuvette should be made of platinum. I have used the same silver instrument for several years without its being worn by the action of the caustic.

Very often the cavity in the cuvette intended to hold the caustic is carefully polished; when this is done, the caustic does not adhere firmly to its sides, and there is danger of its escaping. The inner surface of this cavity should, on the contrary, be as rough as possible.

The nitrate of silver must be melted into the cuvette by means of a spirit lamp, so that it may present, when cold, a smooth and even surface. So long as it continues rough, so as to project beyond the level of the sides of the cuvette, the projecting portions are apt to be broken off in closing the instrument, and to fall out when it is again opened.

The patient should lie down during cauterization; either standing or sitting he is less fixed, and is more apt to move his pelvis suddenly—an inconvenience which it is important to avoid; the operator, too, is less at his ease, and less certain as to his proceedings.

As the olivary extremity of the instrument approaches the neck of the bladder, the irritability of the passage increases, and the patient's agitation often becomes so great as to inconvenience the operator. The instrument should now be allowed to pass on by its own gravity, attention being paid to detect the moment when the olivary body passes the neck of the bladder: as soon as this happens, the instrument should be gently withdrawn—so as to bring its olivary extremity slightly within the neck of the bladder—and firmly held in that situation, while the outer tube is a little drawn back, and the cuvette *very rapidly* passed over the inferior surface of the prostate, by slightly turning the stem attached to it; the instrument should then be *instantly* closed and slowly withdrawn from the urethra.

In this manner the nitrate of silver reaches the prostate quite dry in the situation where the ejaculatory ducts open. Their orifices must, therefore, be cauterized sufficiently to produce a considerable modification in the state of the tissues. No other parts are touched; and hence the inflammation set up is at once both acute and circumscribed.

It must be remembered that cauterization is practised in these cases, in order to bring on a lasting change in the condition of the tissues, by means of active inflammation, and not for the purpose of causing loss of substance; and hence it is not necessary to produce a slough. The action of the nitrate of silver should be just as rapid as in cauterizing the conjunctiva in chronic inflammation, ulceration of the cornea, &c. There is the same intention in both these different cases, and the result obtained is of the same nature.

It is now twenty years since I first commenced the practice of cauterizing the prostate in cases of ancient gleet, which had resisted all other kinds of treatment; very soon afterwards I applied the

same powerful means to the treatment of involuntary seminal discharges. Since that time I have performed the operation almost daily, and I have never seen, in my own practice, any of the violent effects, such as retention of urine, hemorrhage, long-continued violent pain, narrowing of the passage, &c., described by some operators as supervening. Indeed, I should almost doubt the accuracy of these descriptions, had I not been consulted in one or two cases in which the symptoms had been set up. Such ill effects result from the injurious and absurd practice of some surgeons of cauterizing the urethra during a fixed period of time, watch in hand. The time required to glance at the second-hand is more than sufficient for applying the caustic.

During the first days subsequent to cauterization, baths, enemata, and diluents should be prescribed, with milk and vegetable diet, so as to dilute the urine as much as possible. All fatigue should be abstained from, and exposure to cold rigorously avoided. For two or three days micturition is frequent, painful, and accompanied with the escape of a few drops of blood. But these symptoms soon pass off, provided no imprudence be committed. I have, however, known the pain continue ten days or more, in patients who committed errors of diet, or fatigued themselves too early, or who exposed themselves to cold or damp.

These imprudences are not only injurious by hindering the rapid termination of the inflammatory process; they may also compromise its results, which depend principally on the facility with which resolution takes place. So long as the inflammatory stage continues, the involuntary discharges are increased rather than diminished in frequency, and sensible improvement only appears when resolution takes place. It is seldom that we can judge of the amount of benefit derived until the twelfth or fifteenth day, or sometimes longer, especially if a return of the inflammation should take place, when perhaps the patient thinks himself freed from all restraint. He must be especially warned against indulging his sexual desires, although energetic erections are sure to occur. Some unreflecting practitioners have had recourse to a second cauterization, immediately that the severe inflammatory symptoms of the first are dissipated, and sometimes have performed the operation five or six times following, expecting that the involuntary discharges would be arrested by such means. Indeed, I have seen several patients who had been cauterized every eight days, or even oftener, for a month or two, without other results than obstinate irritation and stabbing pain in the neck of the bladder, with contraction of the urethra.

It must be remembered, that it is wholly for the consecutive results that cauterization is performed, and that these results depend on a change which takes place in the condition of the tissues. The curative action can, therefore, only show itself after the complete resolution of the acute inflammation set up by the nitrate of silver. This seldom takes place until the eighth day, and as many more

days are necessary before the required change is effected. I have seen patients in whom a month and more has been required, because the inflammation was prolonged by accidental causes. In such patients improvement commenced late, its progress was slow, and the cure was not perfect until six weeks or two months after the operation.

In no case can we expect to find the curative effects of cauterization manifested earlier than a fortnight at soonest, and a month must be allowed to elapse before judging of them definitely. It is, therefore, absurd to attempt to set up, a second time, the inflammatory process, before the first has had opportunity to produce its effects. When cauterization is about to effect a cure, it soon becomes evident by the rapid diminution of the involuntary discharges, and the steady progress of the convalescence. It is sufficient afterwards to remove the circumstances that might occasion a relapse, and all the functions will soon be re-established. Exercise should be increased with the return of strength, in order to confirm the recovery.

One operation suffices in such a case; indeed, the operation should not be repeated, even although the patient, in hope of accelerating his recovery, may be anxious for it. Hygienic care, travelling, and sulphuretted waters will do the rest. A second cauterization should only be practised when accidental causes have prevented the first from producing its effects, and when a second application of the caustic fails to complete the cure, it is probable that a third will have no better success; other means, therefore, should be had recourse to.

When cauterization only gives momentary relief too, it should not be repeated, for a second and third would have no better chances of success than the first. Further investigation into the causes that keep up the pollutions, must be undertaken. Very often, causes previously unsuspected, are discovered, the proper treatment for which, of course, must be employed.

In conclusion, I may simply record my opinion, that two-thirds of the cases of spermatorrhœa would be beyond the reach of medical assistance, were it not for the beneficial effects produced by the application of nitrate of silver to the prostatic portion of the urethra.

Action of the Nitrate of Silver.—There is scarcely a tyro in surgery who has not seen the nitrate of silver in substance, applied to fungous, irritable, and bleeding ulcers; and all well know, that the pain caused by the application soon ceases; that the granulations assume a more healthy aspect, and that the discharge becomes more creamy, and the sore shows a disposition to heal. It is not by destroying the fungous and bleeding surface that this improvement is effected, but by giving tone to the vessels of the part. In affections of the skin, the nitrate also renders much service; but it is in chronic ophthalmia, perhaps, that the rapidity of its effects is especially seen. Before cauterization, the conjunctival mucous membrane is injected, painful, thickened, fungoid, sometimes rough and granular. The follicles of the lids furnish an abundant secretion of matter, and the

secretion of the lachrymal glands is much increased, and their products modified, so that the discharge of tears over the cheek frequently causes ulceration.

Immediately after the application of the nitrate of silver these symptoms are exasperated; the tears, especially, flow in much greater abundance. But soon the pain lessens, and the lachrymal discharge becomes arrested; on the following day the injection of the eyes becomes less evident, and for several days resolution continues its progress, leaving the conjunctiva much paler than it was before.

The same results take place in ulcerations of the cornea.

In these cases, the nitrate of silver is merely drawn lightly and rapidly over the diseased surface, its action not being sufficiently continued to produce a slough.

Precisely the same phenomena occur in the prostatic portion of the urethra, the action of the nitrate of silver being of limited duration.

In leucorrhœa too, which frequently depends on ulceration of the neck of the uterus, cauterization with the nitrate of silver possesses undoubted advantages over all other modes of treatment. The neck of the uterus is red, fungoid, swollen, and more acutely sensitive than natural; there are often excoriations varying in extent, the surfaces of which, when wiped with lint, generally bleed.

In leucorrhœa which owes its origin to a chronic inflammation, *sui generis*, of the lining of the vagina, attended by insupportable pruritis, and accompanied with abundant thick acrid, yellow discharge, the nitrate of silver is often of much service. The mucous membrane is not only red and injected, but frequently also, rough and granular, and while general means are at the same time employed. the application of the caustic affords a very speedy mode of relief from many of the more distressing symptoms.

In cases of leucorrhœa too, which depend on lymphatic scrofulous habit—in atonic cases in fact—the nitrate of silver will often arrest the discharge, and thus remove a very serious cause of debility, while other means are taken for the permanent improvement of the system generally.

Chronic Vesical Catarrh.—During more than fifteen years I have employed cauterization with much success in cases of chronic inflammation of the bladder. At first, like many other practitioners, I dreaded the effects of such an agent on the mucous membrane, constantly bathed by the urine, and I was frequently prevented from having recourse to it by the terrible obstinacy of the disease. Since that time, however, I have found cauterization cure nine-tenths of the vesical catarrhs that have come under my care, many of which, too, had resisted various scientific treatment for years. The cases which cauterization failed in curing completely were much improved by it. Cauterization should, however, only be used in uncomplicated cases: where there is suspicion of suppuration in the kidneys, or of abscess

in the prostate, opening into the bladder, this treatment is contra-indicated. Generally a single cauterization suffices, but I have occasionally been obliged to repeat the operation three or four times.

The bladder should be emptied as completely as possible, and the same instrument should be used as in cauterizing the prostate, except that it should be furnished with a convex cuvette. It is sufficient to pass the caustic rapidly to the right and the left, once only, to obtain the desired result; it is better to be obliged to repeat the operation than to excite too much inflammation.

After the operation, frequent baths must be used, with emollient enemata, abundant diluents and rest. The inflammation passes off very rapidly, and I have not met with one case in thirty, in which abstraction of blood has been necessary.

When cauterization does not succeed in perfecting the cure, it invariably so alters the condition of the mucous membrane that the means previously employed unsuccessfully may be used with every prospect of success—I refer to the natural and artificial sulphuretted waters, tar-water, and the turpentines—especially copaiba.

Deviation of the Orifices of the Ejaculatory Canals.—I have stated that the cauterization should be very rapid, and confined to the surface of the prostate, in spermatorrhœa arising from irritation. There are, however, cases in which involuntary discharges are complicated with deviation of the orifices of the ejaculatory canals, and this deviation requires a slight alteration in the mode of operating. It is no longer necessary simply to modify the condition of the mucous membrane; it is required to bring forward the verumontanum, which is turned backwards. For this purpose it is necessary to produce a very small slough in front of the orifices. Instead of the ordinary cuvette of the porte-caustique, therefore, the instrument should be solid; but about fourteen lines from its olivary extremity, there should be a little excavation about large enough to hold a grain of linseed. This is to be filled with the nitrate of silver in the same manner as before; and when the olivary extremity of the instrument is situated at the neck of the bladder, the tube is to be drawn back, and the caustic allowed to dissolve entirely, in front of the verumontanum. A little slough results, and the cicatrix that succeeds it is generally sufficient to draw forwards the orifices of the ejaculatory ducts.

CHAPTER XVI.

TREATMENT OF SPERMATORRHŒA.

Convalescence.

In recent and simple cases of involuntary seminal discharges, re-establishment takes place promptly and rapidly; all the organs successively resume their normal functions, without requiring any further treatment on the part of the surgeon. But after severe cases the progress from disease to health is never so simple or rapid. The constitution, having been seriously weakened, requires much time and attention for its repair. Besides this, habit, which possesses considerable influence over all organs, tends unceasingly to cause a relapse in cases of spermatorrhœa that have been of long duration. It is, therefore, slowly and with prudence that the patient should return to his ordinary diet and mode of life; and there are certain hygienic precautions which in some cases must be continued long after the perfect re-establishment of health.

In proportion as the energy of the digestive organs returns, more nourishing food is required, and the patients can no longer bear the strict diet which was highly beneficial at first. The patients are also impelled by the desire of increasing their strength; but for this purpose it is better to permit an increased quantity of light food, with greater frequency of meals, than to allow, too early, a return to heavy diet that may disorder the digestive organs, and thus endanger a relapse. From vegetable diet, the patient should proceed to fish and white meats, before having recourse to more stimulating food.

Of course, exception must be made here, of those patients who are troubled with ascarides, and in whom tonic and stimulating diet is required on account of their pollutions arising from atony.

During convalescence from spermatorrhœa, arising from irritation, a warm and damp climate agrees best, but on the other hand, when

the disorder arises from atony or from lymphatic constitution, a dry and pure air is required.

When the strength is so far re-established that the effects of cold are no longer to be dreaded, cold bathing is very useful provided the season be favorable: when reaction takes place vigorously, the loss of the economy caused by it diminishes the secretion of semen. At first the bath should consist of one plunge only, and if the atmospheric temperature be low, two or three days should be permitted to elapse between the baths. The length of time the patient continues in the water, should be very gradually and carefully increased.

Exercise should be taken in proportion to the return of strength, not only to increase the strength, but also in order that the products of digestion may be as much as possible employed in the repair of waste. This is the best means to prevent such materials from proving an undue stimulus to the spermatic organs. Travelling is highly useful after spermatorrhœa has been cured; but in order that the best results should be derived from it, the patient should travel on foot. Carriage exercise favors constipation, and excites the genital organs, and horse exercise possesses both these inconveniences in a still higher degree.

I have more than once stated that the seminal secretion is never completely arrested in man except after long and severe illnesses. The pollutions will therefore return, provided absolute continence be persevered in. Such pollutions may occur so rarely as not to exert any injurious influence on the health; but they may increase by simple habit, or by the action of irresistible accidental circumstances. In order that involuntary seminal discharges, therefore, should cease entirely, it becomes necessary that they should be replaced by normal voluntary emissions. The regular exercise of the organs, too, can alone restore to them their proper energy. This is the case with all the organs of the body, and the generative are by no means an exception to the general rule. In order, therefore, that the return to health may be durable, regular sexual intercourse must be established. The question now arises: when ought such intercourse to be permitted? The answer is: when continued continence has become so painful as to bring on actual fatigue of the generative organs, and when no further progress is observed in the development of their energy. There is then danger that the organs may lose power and fall into a state of debility from too long inaction.

The surgeon is now consulted by the patient and his friends as to the propriety of his marrying; and this is one of the most difficult questions to decide. Marriage ought not to be contracted until the fullest proofs of a perfect and permanent return to health has been given. The responsibility of sacrificing the happiness of the female is to be considered seriously, as well as the possibility of a relapse

occurring to the patient, from comparatively unrestrained indulgence during the first months of marriage. On this subject, however, I think that no decided rules can be laid down; the matter must be left to the judgment of the surgeon, after he has carefully considered all the circumstances affecting each particular case.

THE END.

ON DISEASES

OF THE

VESICULÆ SEMINALES:

AND

THEIR ASSOCIATED ORGANS.

WITH SPECIAL REFERENCE TO THE

MORBID SECRETIONS OF THE PROSTATIC AND URETHRAL MUCOUS MEMBRANE.

BY

MARRIS WILSON, M.D.

PREFACE.

THE reluctance shown by the medical profession to enter upon the consideration of the affections described in the following pages is gradually passing away; but the effect of the want of attention to these important subjects by those qualified to undertake their examination, which has hitherto existed, is shown in the meagre information with regard to the true nature and pathology of the diseases which we at present possess.

Several of the works which have been written on the subject are directed almost exclusively to the treatment of the symptoms of the disease, without giving attention to the condition of the structures whence those symptoms proceed, and without considering the necessity of making the functions of the affected organs a part of the investigation of their diseases.

The ground which I have selected has proved to be unbroken in many points, more particularly in that having reference to a system of classification. A method of arranging the various and contradictory symptoms of spermatorrhœa has been much wanted, and that which I now advance, if not entirely adopted, will, I hope, nevertheless, lead to a better understanding of the subject.

If my views differ in some degree from the observations

of others, it is not that I have any intention of putting forward special theories; but that the facts and suggestions expressed in these pages have risen forcibly and convincingly to my mind, while contemplating the symptoms presented by individual cases.

In submitting the following pages to publication, I have been guided by the desire to enlarge our knowledge of the different varieties of this distressing disease. Whether that object has been gained must be left to the judgment of those into whose hands this treatise may fall, and who may feel inclined to interpret the phenomena of spermatorrhœa by the illustrations which it contains.

I have thought it undesirable to lengthen this work by the publication of the cases from which my opinions as to the nature of spermatorrhœa have been deduced. But at some future time, I may resolve to give those cases to the profession, either in full or in abstract, founded on a careful analysis, as may appear best suited to convey information, when the opportunity and inducement occur.

55 Upper Charlotte Street, Fitzroy Square,
January, 1856.

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ON SPERMATORRHŒA.

CHAPTER I.

INTRODUCTORY REMARKS.

In mentally weighing the relative dependence of the various pathological phenomena or symptoms, which attend upon a case of spermatorrhœa, I have found it often difficult to account satisfactorily for the opposite conditions which presented themselves during the progress of the disease. It frequently happened that the existing symptoms manifested but little proportion to the real and assignable cause; and that the cause, when discovered, might not unreasonably be looked upon as insufficient for the production of so extensive and so important a sequence of morbid symptoms.

With the view, therefore, of being able to comprehend fully the series of unexpected effects of an ascertained cause which accompany this disease, I have considered it expedient to examine, step by step, the phenomena which present themselves during its gradual development; such phenomena being proved to depend on pathological alterations in the structures involved in the production and continuance of the disease. These effects are usually presented to the medical man only after a certain duration, and when in consequence of their prolonged continuance they may be taken to have acquired an existence separate from, and independent of, their original and primary cause.

The plan I propose to follow in investigating the subject of spermatorrhœa, is, to take a short review of the functions belonging to the generative system; to compare these functions as they exist in health with their state in disease; to examine microscopically, the physical condition of the secreted fluids; and to ascertain as far as possible the relative chemical dependencies of the generative secretions. A rigorous adherence to this plan of weighing the observations furnished by the disease, will lead us, by degrees, to a complete understanding of the intricate web of phenomena by which it is surrounded, and elucidate with clearness its pathology, causes, and symptoms. We shall thus be prepared to enter upon the difficult field of treatment, with the assurance of correct views as a guide to prospective success.

The disease depends for its more essential features, on the nature of the secretion of the generative organs; the relative amount of that secretion; its qualities; and the state, whether of irritation or otherwise, of the organs concerned in its production. We therefore perceive clearly the importance of the symptons we have to consider and investigate.

The cure of spermatorrhœa is rendered difficult in proportion to the number of the organs, or parts of organs, involved in disease. Irregularities of secretion of the different organs, and excess in the relative proportions of such secretions, constitute distinct forms of spermatorrhœa, irrespective altogether of actual organic changes in the structures themselves.

The semen in its healthy state is a compound fluid, and its component parts bear a determinate proportion to each other. These component parts are collected from different points to constitute a mass, the varying qualities and bulk of which thus become the evidence of the pathological conditions of the genital structures. Diseases of these structures do not affect the general health in a like degree, because the difference of their influence in exhausting the vital power is modified by the relative amount of excitement that each structure exerts over the nervous system.

The importance of considering the subject in this way, struck me forcibly, while studying the progress of spermatorrhœa in a case where the removal of the most important of the organs of generation —the testicles—failed in curing the disease. This circumstance first led me to the supposition of the actual independence and separate action of the different portions of the apparatus, and the investigations I have since made, with the view of elucidating this particular point, have fully confirmed me in the opinion. The case throughout affords an illustration of the views I entertain, and taking it as my text, the confusion of having to refer to isolated portions of several other cases will be avoided. For this reason, therefore, independent of the real interest attached to the case, I hope to be excused for entering fully into its detail.

A gentleman of imaginative and excitable temperament, educated for the medical profession, became the victim of self-abuse, brought on by bad example at school. The practice was indulged in from time to time until the age of twenty, and resulted in the production of a permanent and continuous discharge of seminal fluid from the urethra, attended with frequent spasmodic emissions. While in this state, he fell into the hands of an irregular practitioner, who, acting on the empirical and mischievous notion that if one drug did not succeed another might, dosed him with every possible kind of nostrum. The result of this course, as might be expected, was a severe aggravation of the disease. He became the patient successively of three or four medical men, without experiencing any relief, and then placed himself under the treatment of an eminent surgeon, who advised exercise, to the neglect of all

effective remedial treatment. Exercise as a curative medicine, proved equally abortive, with ill-timed and ill-suited pharmaceutical remedies, and he again sought surgical aid, this time selecting a gentleman of high standing in the profession, who recommended marriage as the only panacea left.

Finding the methods of treatment hitherto suggested had invariably a tendency to aggravate rather than to relieve his symptoms, the idea of a complete eradication of his disease, by the removal of the supposed source of the morbid phenomena—namely, the testicles—occurred to his mind. After a good deal of persuasion, he induced Sir Astley Cooper to undertake this operation, and the left testicle was accordingly removed. The patient was, however, deceived in his hope, and in a letter to me he says, "After the cessation of the inflammatory action, the disease did not appear to be in the least altered by the operation."

Being disappointed as to the result of this heroic method of treatment, he submitted, under another surgeon, to the hardly less severe operation of cauterization of the urethra; this was repeated several times. The employment of the caustic plan was not followed by any useful results, nor by any alleviation of his symptoms.

Keeping his mind constantly directed to the subject, this gentleman became persuaded in the idea, that by sacrificing the remaining testicle, he would certainly be relieved from a malady most irksome to him, and ill-requiting the advantages of a questionable virility. Much opposition was offered to this proposal by the surgeon whom he consulted, but without changing his determination, and his urgent request was complied with, under my observation, in 1853. It was imagined that this operation must necessarily prove successful, and for a few weeks, during the time that the irritation occasioned by the wound remained, it appeared to be so. After that time the spermatorrhœa reappeared, apparently with the same degree of activity as before; erections and emissions, both nocturnal and diurnal, returned, but the ejected fluid was evidently less in quantity, and altered in its quality. The patient's health now became more impaired than it had heretofore been; he experienced great debility, suffered very much from depression of spirits, and his mind lost its capability of concentration. He also began to give up hope; but always fertile in imagination, he conceived the notion that the true seat of the disease must have been mistaken, and judging from certain sensations which he now experienced that it was, to a great extent, if not entirely referable, not to the testicles, as he had heretofore imagined, but to the prostate gland.

On this supposition it was proposed to establish one or more issues in the perineum; a fold of skin, midway between the anus and commencement of the scrotum, was pinched up, and transfixed by a bistoury, and a piece of potassa fusa introduced into the wound, and lodged beneath the skin. The effect of this proceeding was the formation of a slough, half an inch square, and about the same

in depth. The slough separated in ten or twelve days, discharged freely for a time, and in a few weeks was completely healed. The patient experienced so much benefit from this plan, that three months later he was desirous of having the operation repeated. An incision was made as before, but rather deeper, and posterior to the former on the left side of the raphe. The local effect was more extensive, but, as in the previous instance, no untoward symptoms resulted. A few weeks subsequently, a similar issue was made, to the right of the raphe. The operations were almost painless, being performed under the partial influence of chloroform.

It is now nearly twelve months since the last issue was entirely healed, and the condition of the patient is thus far satisfactory. He has gained flesh and strength; he feels light and active; enjoys exercise; considers his mind better qualified for occupation than has been the case for several years past; has recovered the color of his cheeks, and presents altogether a fresh and healthy appearance. He still has erections occasionally in the night, and sometimes in the morning. Distinct emissions continue to take place, but at long intervals, the fluid being considerably less in quantity, thin and transparent, and presenting no admixture of the usual milky secretion of the prostate gland. During the whole of the time subsequent to the formation of the first issue, he has pursued no medical treatment, except that requisite to prepare him for the operations; therefore, to the latter alone must be attributed his improvement.

This curious, and, in many points of view, very interesting case, furnishes a means of distinguishing the separate functions of the generative organs, of studying the influence of their morbid actions on the general system, of diagnosing with a certain accuracy the situation and degree of the irritation which accompanies the disease, and the relative dependence on each other of the various structures involved. Whatever amount of excessive action may have disturbed the functions of the genital organs, was not diminished by taking away the supposed cause, but was rather concentrated with increased intensity in the vesiculæ seminales after the removal of the testicles. And the disease, instead of being checked, became, as it were, perpetuated by the continuance of the irritation; the vesiculæ seminales being, and becoming still more, a source of derivation of the continued and exhausting discharges. Judging from the results of the removal of the testicles, it is evident, also, that they could not have been the primary seat of the disease, and that the erections and emissions arose, not from the presence of seminal fluid in them, but from over-activity in the vesiculæ seminales, as is evidenced in the return and continuance of the disease, after the cessation of the counter-irritation following the operations.

Erection is shown by this case to be, not necessarily the result of the presence of seminal fluid in the testicles, but to be even independent of those organs. Congestion of the vessels of the penis, and consequent erection, may arise from several different causes,

morbid or natural, and entirely independent of the functions of the generative system. In eunuchs these phenomena are exemplified, though the functional power of the testicles has never been present. Erection, and a kind of modified emission, take place in them, in the same manner as in the patient whose case I have just narrated. The vesiculæ are subjected to the spasmodic contraction which ejects their contents under the influence of excitement, and this, as in the normal condition of the organs, is accompanied by a certain amount of erection and sensation. The quality of virility is alone lost. Questions might arise, to which these known facts would supply an answer of considerable importance; for example, that the existence of erection and emission is no proof that a disease affecting the testicles is not therefore of a malignant character.

It is with a conviction of the necessity for a more complete individualization and classification of the symptoms of spermatorrhœa that I have given my attention to the elucidation of the subject. I have endeavored as far as possible to make out the relative dependence of the numerous phenomena exhibited by the symptoms of the disease, and to show that the mere cursory examination and treatment of a few of its prominent symptoms will hardly be likely to lead to an alleviation of the disease, and will do little towards establishing a scientific foundation for supporting a correct principle of cure.

CHAPTER II.

COMPOSITION OF THE SEMEN, FUNCTIONAL, CHEMICAL, AND MICROSCOPICAL.

The seminal fluid, or semen, when poured out from the urethra, is a semi-opaque, starch-like, compound fluid; sometimes yellowish, like cream, and at other times of a greenish-white tint. It is made up of the secretions of the testicles, vesiculæ seminales, prostate gland, and Cowper's glands, and mucus of the urethra, the latter being, as a component principle, merely accidental; floating in it are also to be found a greater or less number of epithelial scales. The chief bulk of the seminal mass consists of transparent ovoid bodies, more dense than the fluid that surrounds them. These bodies are the production of the vesiculæ seminales, receiving their form from the sacculi of those organs, in which they are moulded during the progress of gradual inspissation.

In a healthy condition the secretions derived from these separate organs bear a relative proportion to each other; that of the vesiculæ seminales amounting to about four-sevenths of the whole; that of the testicles and vasa deferentia to about one-seventh; and the

remainder consisting of the products of the prostate gland, Cowper's glands, and mucous membrane of the urethra. The average quantity of semen expelled at each emission is about half an ounce, but this quantity, as well as the relative proportions of its composition is not always the same; both depend very much on the perfection of healthy action of the various parts whence they are derived.

I deduce these proportions, not only from the manifest differences of quantity in the component parts of the fluid, but also from the diminution of the secretion occasioned by the removal of the testicles, and destruction of the other organs. The proportions are liable to variation from the circumstance, that irritation may arise in one or more of the structures without affecting the others; and as such irritation would cause an increased secretion of a particular kind, it is evident that the composition of the fluid must undergo a corresponding alteration. The quantity also varies considerably with the constitution of the individual—in one being abundant, in others below the average, though neither state is incompatible with vigorous health. In certain diseased states, also, there is a largely increased secretion, depending simply upon irritable action. On the other hand, there may be a diminution of secretion, arising from an atonic condition of the organs, and amounting to almost complete suppression.

The chemical composition of the seminal fluid, as ascertained by Vauquelin, consists, according to his latest analysis, of:

Water, ...	90 parts.
Mucus, ...	6 "
Phosphate of lime, . . .	3 "
Phosphate of soda, . . .	1 "
	100

When healthy semen is first emitted it has a neutral reaction, which appears to be due to the presence of the prostatic fluid, holding in suspension and solution a large quantity of the phosphates of lime and soda. While the fluid continues warm, the salts are partially retained in solution; but on cooling, and with slight concentration, crystals of the compound phosphate make their appearance, either in the form of long, transparent, colorless prisms, thick in the middle, and tapering slightly to either extremity, or springing in abundance from a central point, and assuming the stellate form. The milky appearance of the secretion arises from the presence of minute granules, which float about in the fluid in vast numbers, and remain suspended in it by virtue of its viscidity. These granules are more or less abundant in different states of health, and relatively to the activity of function of the prostate gland, and consist of phosphate of lime without any addition of the salt of soda, on which the greater transparency and solubility of the crystals depend. The purpose of this large production of the granular phos-

phate of lime is, I believe, to sustain the neutral reagency of the fluid.

The ducts, or so-called cells of the prostate gland, being filled by the genito-urinary mucous membrane, have been considered as furnishing a secretion identical with that membrane, and therefore unnecessary to fecundity. The unsoundness of this opinion is evident when applied to the other glands of the body, inasmuch as the lining membranes of all glandular organs are simple inversions, variously ramified, of the same mucous membrane, but the secretions of the various glands differ very materially from those of the parent and adjacent mucous membrane. Glands have a peculiar secretion accommodated to their situation and purpose; and the purpose assignable to the secretion of the prostate gland, although not of an essentially fecundating nature, is one, of effecting a condition necessary to the fecundating action of the seminal fluid. The secretion of the mucous membrane of the urethra is usually acid, but at times an alkaline reagency predominates, arising from a peculiar pathological condition of that membrane. When either the acid or alkaline action is in excess, a deterioration of the qualities of the fecundating fluid is likely to happen, which deterioration, by destroying the spermatozoa, will at the same time very probably destroy its fertilizing quality. Conditions of excessive acid and alkaline secretion have been shown to be not uncommon in the mucous membrane of the vagina and uterus, and to these conditions sterility is no doubt often to be ascribed.

The mucus secreted by the prostate gland is charged with more or less of the phosphates of lime and soda, and it is secreted and poured out in a situation where the peculiar properties of its neutralizing salts are likely to be made available for an immediate use. I cannot, therefore, believe that this secretion is purposeless in reference to fertilization, or that it merely supplies an additional portion of mucus; nor in that situation the salts are simply the excretion of effete matter. Fer these reasons, then, it appears to me, that the special office it has to perform is that of counteracting the injurious effects likely to arise from the presence of the abnormal acid and alkaline conditions of the secretion of that portion of the mucous membrane appropriated for the reception and conveyance of the seminal fluid. Thus, though not actually taking a primary and direct part in the act of fecundation, it nevertheless serves a secondary office so important, as to make that function depend very materially on its presence.

In a diseased atonic state of the prostate gland, the action of the organ is insufficient to expel the secreted salts, and thence arises a tendency to the formation of calculi in its cellules, marking a peculiar condition of the mucous membrane.

The secretion of the vesiculæ seminales is mucilaginous and transparent, containing ovoid bodies of pure condensed mucus, floating in a small quantity of the same mucous substance in a more fluid

state. When mingled with the mass of the semen, these bodies float on account of their less specific gravity. Their state of condensation alters, however, when the secretion is allowed to stand exposed to the air for a few hours; the ovoid bodies slowly dissolve and the resulting fluid diffuses itself equally through the mass of the semen, the denser matters subsiding gradually to the bottom.

A consideration of function in relation with the fact of this gradual solution offers an interesting suggestion. It would appear as if the vesiculæ were intended to supply a fluid of light specific gravity, by which the vitality and freedom of the spermatozoa may be longer sustained in their altered situation, and their presence rendered more effective in the process of impregnation. A continuous resolution of the condensed mucus is thus made to afford a means of preserving, during a much longer time than would otherwise be the case, a relative condition of media favorable, if not indeed necessary, to the proper accomplishment of impregnation.

It is a general belief that the fluid of the testicles is continually secreted, and that when the tubuli become overcharged, the excess is conveyed along the vas deferens, and passing thence by a retrograde current into the vesiculæ seminales, remains accumulated there until removed by emission. There can be no doubt that the tubuli are capable of a certain degree of expansion, and that they are able to accommodate themselves to the amount of secretion produced at any time during a healthy condition of the organs. There does not appear to be a necessity for supposing an accumulation of seminal fluid beyond an amount sufficient for the nutrition and elimination of the spermatozoa. The circumstances favorable to its production, and requiring its presence, are such as to cause an amount of activity sufficient for the immediate secretion of as much seminal fluid as is demanded for the occasion, in the same way that obtains for the secretion of other glands. Again, the secretions of the vesiculæ and testicles are materially different in qualities and appearance, which could not be the case were they intermingled in the vesiculæ seminales in the manner supposed.

The distinguishing character of the testicular fluid is the presence of the spermatozoa. A carefully conducted search has never enabled me to detect spermatozoa in the vesicular mucus; neither does the latter present the milky appearance which the secretion of the testicles possess. I am satisfied, therefore, that the opinion of the vesiculæ being receptacles for a superabundant secretion from the testicle is erroneous. The great nervous excitability of the testicles, placed as they are under the immediate domination of the brain, enables them to effect their secretion at the instant required, that is to say, immediately before and during the act of coition, and to produce their proper contribution of impregnating fluid. The only appearance of accumulation is that observed in the vesiculæ—namely, in the amount of condensation which takes place in the mucus while it remains in them. This is certainly evident in an

alteration of density, but it results, not from excessive accumulation of the secretion, but from the inspissation always going on by exosmosis of its more fluid portion.

It has also been supposed that there is a constant and natural oozing away of the seminal fluid secreted in excess, but I consider this idea quite as improbable as the former. In cases where this loss of secretion has been observed, it has undoubtedly been the result of morbid action. Again, the fallacy of supposing accumulation of testicular fluid in the vesiculæ is analogically demonstrated in the instance of the elephant, and some other animals, by the separation of the two sets of organs, which are placed in such different positions that no communication whatever can subsist between them.

The function of the testicles is the secretion of a slightly opaque, whitish mucus, which fills up the tubuli of the testis, the vasa efferentia, epididymis and vas deferens, and is the actual fertilizing fluid *par excellence*, requiring only conveyance to the ovule of the female ovarium to accomplish fecundation. Of the ultimate destination of this fluid, and its mode of action, our knowledge is limited to a few facts. We know, for example, that fecundation cannot take place in the female without it, and judging from analogy probably without its actual contact with the ovum; that a suspension of its production in the male causes an arrest in the capability of procreation, and that the removal of the testes effectually takes away that power. Beyond these known phenomena we enter for our explanations upon the domain of metaphysics.

Floating in the mucus contained in the tubuli seminiferi are to be found the spermatozoa. The spermatozoa are the distinguishing element of this secretion, and determine its identity. They exist in more or less abundance, and as on them depends the accomplishment of fecundation, so they become the proof of the conditions of health in the generative organs. They are not present in the seminal tubes before puberty, and they diminish with the failing powers of age, attending most intimately on the period of virility. Under some forms of disease they also disappear, and their absence is characterized by impotence.

If there be few of these animalcules existing in a large mass of fluid submitted to microscopical examination, the demonstration of their presence is difficult, a circumstance which may probably have led some observers to doubt their existence. But when brought under the eye they are easily seen, and with a comparatively low magnifying power. Donné, in speaking of some of their characteristic peculiarities, has drawn a distinction between them and the infusoria (sometimes found in the urine), on which he has based a suggestion of importance, in relation with their discovery in that fluid in cases of suspected spermatorrhæa. After remarking on the facility with which the infusoria are destroyed, he mentions the remarkable power of resistance to different sources of destruction possessed by the spermatozoa, as is illustrated by the preservation of

their form after boiling, and their remaing uninjured in putrid urine for an indefinite length of time.

The internal structure of these beings has not yet been detected on account of their minuteness, but their outline is well defined. The form of the body is an oblong cylinder, swelling slightly in the middle. From the anterior part of this body projects a slight eminence, which appears from its situation to be the head. The tail is of great length, being at least ten times that of the body, and tapers to a very acute point, the place of its junction with the body being well marked. Whilst swimming about in the fluid, which they do with great vigor, the tail is thrown into waves, and the body is made to advance by a spiral motion. They turn readily out of the way of any obstruction, but they have not the backward motion of vibriones. The nature of the cause and existence of these curious beings is involved in considerable mystery, and the mode of their propagation in the seminal tubes is not easy to explain. The source of their nourishment, for without nourishment they could not live, raises a highly interesting question. That they have independent existence there can be no doubt, and that their lives may be sustained under suitable circumstances, away from the situation of their first production, there is abundance of evidence. They have been found alive in the uterus and Fallopian tubes twenty days after ejection, and yet their nourishment must be derived from the vital fluid, and probably therefore by its constant destruction.

Jourdan, speaking of the parasites of the human body, and the spermatozoa have an existence analogous at least to that of such parasites, says, "In fact, as infusory animalcules appear wherever conditions favorable to their development are present, the same takes place in living man. The most important of these conditions seems to be a degree, however feeble, of decomposition, such as is observed in a normal state in the excretions, or as a pathological phenomenon in some of the liquids of the body." (*Encyclopedie Anatomique*, tome ix, p. 395.)

Henlé conceives spermatozoa to be possessed of an extraordinary amount of vitality, for he states that he has seen motion taking place in tails separated and lying apart from their bodies. I have often seen separated tails, but I never detected in them any appearance of motion. Wagner noticed (*Elements of Special Physiology*) "on one or two occasions, the caudal end of the body to be double, bifid, or forked, and once, too, the body appeared to be double, as in a bicephalous monster." This latter occurrence I have also seen, and I felt at the time inclined to refer it to that mode of propagation, known as *gemmation*, so general among the polypes and infusoria. In the single instance in which I observed this phenomenon, the two bodies were connected together at the seat of the junction of the body and tail. The younger, which was slightly the smaller, was joined to the elder by a very short footstalk, and appeared to be ready to separate. To this circumstance, namely, generation

by gemmation, as well as the fact of finding separate tails, I am inclined to refer for an explanation of the presence of several bodies in the seminal fluid unfurnished with tails, but nevertheless endowed with the power of motion. Most of the species of infusoria have the remarkable power of propagation by gemmation, as well as by ova, and I have an impression that the same happens with regard to the spermatozoa. I am not, however, inclined to urge this idea very strongly, merely on the strength of a single observation, though I consider it sufficiently worthy of attention, to justify further examination into the question. Donné has given drawings in his *Cours de Microscopie* of spermatozoa taken from the dormouse, from which it would appear that reproduction by gemmation does actually take place.

There are other bodies met with in the seminal fluid—namely, the spermatophori. These are supposed to be the source whence the spermatozoa are derived, and consist of compound cells of different magnitude, containing within them a granular substance. Kölliker pursued the subject of the evolution of the spermatozoa through various gradations of the lower animals, extending his researches upwards to man. He arrived at the conclusion that the spermatophori are the source whence the spermatozoa are evolved, and this evolution he has detected in the human species.

Such an investigation, however, is surrounded with difficulties, and with no small amount of uncertainty. Wagner demonstrated the same evolution from the spermatophori of birds. By the aid of analogy, and on such authority, therefore, we must consider the evidence of this one mode of reproduction of the spermatozoa as determined, but there is no reason for supposing that reproduction by gemmation may not also occur. Indeed, where such constant change in accumulation and diminution is taking place in the quantity of the semen, and the spermatozoa are thus liable to destruction, it is natural to infer that the means of their reproduction would be secured by every safeguard that nature could supply for that purpose.

Besides the spermatic animalcules and spermatophori, there are also found in the fluid of the testicle, minute glistening atoms, which have been supposed to be the earlier stages of development of the spermatophori.

From these observations we may conclude that much has already been accomplished towards a knowledge of the development and purposes of these remarkable animalcules. But there are still many points requiring more accurate elucidation, particularly the question of structure. Some physiologists of the present day doubt even the separate vitality of the spermatozoa. The improvements of the microscope, and the greater distribution of that instrument, with the necessarily increased facilities of manipulation, will however tend by degrees to put all doubt on the subject out of the question, and clear up all our present difficulties in respect to this interesting physiological inquiry.

CHAPTER III.

PATHOLOGY OF SPERMATORRHŒA.

THE term spermatorrhœa means simply an involuntary discharge of seminal fluid. The disease intended to be represented is more than this, since it is characterized by a series of consecutive symptoms, more or less important, developed in the constitution of the sufferer, and of which an involuntary discharge of seminal fluid is only one, but at the same time the chief of these symptoms. It is seldom that the malady depends merely on the derangement of a single organ; the different portions of the genital apparatus participate in a general irritation, and constitute essentially the disease. In a state of health the genital organs have a combined dependence on each other, and when diseased, they are capable of exercising a separate influence in the aggravation of particular symptoms. An observation of the results of disease on separate parts of the genital system leads me to conclude that the structure and functions of each organ may be affected independently of the rest. When a single organ alone is deranged, the disease presents the simplest form of spermatorrhœa.

With a complication of independent actions, it is not surprising that symptoms which arise apparently from the same cause should assume opposite forms in certain cases. Many interesting and remarkable circumstances of this kind have occurred to me in practice, and the necessity for determining their relative influence, and satisfactorily referring them to their proper origin, led me in the first place to contrive some mode of classification. With this intention, I constructed the following table, which has proven of essential service to me in enabling me to refer to their proper source many of the peculiar symptoms of spermatorrhœa.

A primary division of the disease may be made into the two forms of TONIC and ATONIC, under the designation of SPERMATORRHŒA STHENICA, and SPERMATORRHŒA ASTHENICA. Following the arrangement of the table, it will be seen that the sthenic and asthenic condition of the same organ occasions in it different modifications of the disease, in proportion as the symptoms that result are varied by the peculiar influence of structure and function.

SPERMATORRHŒA STHENICA.

[SPERMATORRHŒA ENTONICA—MASON GOOD.]

	STRUCTURE.	FUNCTION.
TESTES	*Orchitis*	Excessive secretion; relative deficiency of spermatozoa.
VESICULE SEMINALES	*Vesiculitis* . . .	Excessive secretion; with inspissation.

Prostate Gland .	*Prostatitis*	Excessive secretion; increased amount of salts.
Urethra . . .	*Urethritis*	Excessive secretion of mucus.

SPERMATORRHŒA ASTHENICA.

[Spermatorrhœa Atonica—Mason Good.]

	STRUCTURE.	FUNCTION.
Testes	*Atrophy*	Impotence; watery secretion; absence of spermatozoa.
Vesiculæ Seminales	*Irritability* . . .	Watery secretion.
Prostate Gland .	*Chronic Irritation* .	Diminished secretion and salts; deposit of calculi.
Urethra . . .	*Ulceration*	Purulent discharge.

It cannot be admitted as a necessary law of healthy individual existence, that the organs of generation should be brought into exercise. The functions of the body may be carried on perfectly well without their employment. On the other hand, taking society as at present constituted, and considering the large amount of nourishment usually taken into the system, it must be allowed that the moderate use of the generative organs is perfectly consistent with the highest degree of health. By moderate use of this function, and by the healthful activity which accompanies its exercise, the general system is, to a certain extent, relieved and lightened, and the tone both of mind and body improved. The too frequently repeated exercise of this function, on the other hand, is apt to occasion an unhealthy state of excitement of the organs, which is prone to terminate in disease. After a time the morbid excitement, assuming by continuance a chronic character, takes on an action independent of its cause, progresses gradually, and occasions a constant secretion of seminal fluid. The exhaustion proceeding from so abnormal and constant a drain upon the powers of the constitution quickly undermines the most vigorous strength, and establishes a state of serious disease.

The secretion of the seminal fluid, destined for the important purpose of preserving the species, demands for its perfection, if not the highest, at least a high standard of vital energy. Its excessive loss, for the same reason, occasions an immediate and destructive impression on the health. This symptom, therefore, as the most obvious, and apparently the most dangerous, will naturally attract the attention of the medical practitioner, and probably induce him to direct the entire force of his efforts to accomplish its removal. Lallemand based his system of classification on the character of the emissions, dividing them into *nocturnal* and *diurnal*. A careful consideration of the importance of the symptoms he has attached to each division, shows that the idea these terms convey does not clearly define his meaning. His arrangement resolves itself more into a question of degree, among a certain set of symptoms, controlled by peculiar circumstances, than of difference in the pathological conditions of the structure affected.

Emission is nothing more than the effect of some previous condition of stimulus or excitement. The classification of the species of spermatorrhœa, by the variations of this one symptom, even though that symptom be most important, must create uncertainty as to the part of the apparatus to which the seat of the morbid action should be assigned. Nocturnal emissions, arising from excessive activity of the organs, are looked upon as showing the first stage of the disease. They are attended with all the evidences of the normal state, by erection, and by venereal ecstacy. They are to be attributed to the reaction on the brain of the local nervous excitability, occurring either during partial sleep, or in active conditions of the imagination. Diurnal emissions, on the contrary, are marked by an absence of venereal desire and ecstacy, by an absence of spermatic fluid, and an equal absence of erection, and all sthenic condition.

A division has also been proposed, characterized by emissions occurring in the same individual both by day and night. This cannot, however, be received as a clearly separate state, but rather as combining the different stages of the two former conditions, or, perhaps, more correctly, the stage of diurnal emissions accompanied by occasional erection of the penis. But these terms, nocturnal and diurnal, evidently do not express the conditions of the affected parts with sufficient precision. The structural and functional differences are capable of more exact discrimination, and are sufficiently distinct to enable us to estimate the symptoms separately, as depending, for example, on affections of the testicles, vesiculæ seminales, prostate gland, or urethra.

Before proceeding to the separate consideration of these latter forms of the disorder, it may however be well to remark, that the laws by which the spermatozoa are governed differ altogether from those affecting the structures or functions. The existence of these animalcules is independent of the functional power, independent even, as I have already pointed out, of the place of their production; and they may be present or absent, for reasons quite irrespective of the healthy condition and fertilizing quality of the semen. So long, therefore, as disease of the testicle produces no essential change in the quality of the secreted fluid which affords them nourishment, the spermatozoa will continue to be reproduced at about the same average rate. As, however, the quantity of the fluid may be largely increased by excessive action, without any material change in its character, so will it happen that the number of spermatozoa in relation to the bulk of the secretion may be diminished.

SPERMATORRHŒA STHENICA TESTICULÆ.

Sthenic spermatorrhœa, arising from disease affecting the structure of the testicle, is attended with inflammatory symptoms more or less acute. The testicles are swollen and painful on pressure, a

sense of weight extends along the spermatic cord, accompanied usually with pains in the loins, and with all those symptoms which constitute an ordinary attack of inflammation of the testicle, or orchitis. It seldom happens, however, that orchitis, originating in this way is attended with resolution of substance and purulent deposition, even although the early stages of the inflammatory action be attended by a considerable amount of severity. The function of the testicle is greatly stimulated by the excitement, and the secretion of spermatic fluid is largely increased. The peculiar influence of this excitement is shown by erection of the penis, and emissions, and I have observed that so long as spermatic fluid, possessing a fecundating power, is secreted by the testicles, its emission is constantly attended by erection.

SPERMATORRHŒA ASTHENICA TESTICULÆ.

When the sthenic state has existed for some little time, a material change takes place in the symptoms, with respect to structure and function. The activity that characterized the earlier stages of the disease gives place to a condition of atony, and loss both of substance and power ensues. This is the spermatorrhœa asthenica. The orchitis is relieved in proportion as the structural excitement ceases, but function is sacrificed at the same time. The testicles begin slowly to diminish in size as their structure is absorbed, and they become flaccid and shrivelled. The spermatic secretion assumes a watery character, gradually ceasing altogether, and the spermatozoa disappear. This condition of the function of the testicle is quickly followed by complete impotence. Severe and dangerous effects to the constitution naturally accompany these changes. The brain and nervous system, on which the testicles depend for their activity, are continually being exhausted by efforts for the restoration of the functional power of the latter, and the constitutional symptoms assume characters of the highest degree of irritability.

SPERMATORRHŒA STHENICA VESICULÆ.

The vesiculæ seminales are differently constituted, in reference to their morbid phenomena, to the testicles. The results of excessive action in them are the direct opposite to those produced by irritation of the testicles. They have no special function to perform dependent upon nervous influence for its completion. Their secretion is only an important accessory to that of the testicles. The injurious effects to the constitution, of diseases affecting them, are seldom first shown by impressions on the nervous system. Their irritable activity increases with the continuance of excitement, and instead of being relieved by the excited function, they acquire a permanence of morbid action, by which the constitution is seriously undermined.

The sthenic state of spermatorrhœa in relation with the vesiculæ seminales is attended with inflammatory action, as shown by the excitement of those organs, though this inflammation does not rise to any high degree of intensity. I have designated this state by the term *vesiculitis*, meaning thereby, an inflammatory condition of the structure of the vesiculæ. It is attended by a sensation of dull pain or aching at the back of the bladder, becoming more painful as the latter organ is distended with urine. The effect of inflammation on the function of the vesiculæ is an excessive increase in the quantity of their secretion, which escapes under almost every sudden contraction of the surrounding muscles.

The coats of the vesiculæ are thin and fibrous, and admit of an active exosmosis. Inflammation sometimes increases this exosmosis, and by that means the fluid portion of the secretion is more rapidly removed, the consequence being inspissation of their contents to a degree amounting occasionally to almost complete solidification. When this happens to any great extent, and the cellules of the vesiculæ become much distended, their structure is liable to undergo destructive absorption.

A less degree of inflammation often occurs, by which the secretion, instead of preserving its pure, transparent condition, assumes the appearance of pus.

SPERMATORRHŒA ASTHENICA VESICULÆ.

After inflammation of the vesiculæ has lasted for an uncertain time, the active symptoms gradually cease, leaving behind an atonic or asthenic condition. This condition is associated with irritability, in a greater or less degree, and the functional result is the production of a watery secretion, and a gradual diminution in the quantity of that secretion. Impotence may arise from this cause, without an actual deterioration of the fecundating fluid of the testicle, although it is rare for one of these diseased states to happen independently of the other.

When the vesiculæ have become distended with secretion, either naturally or under excitement, their evacuation may be attained by the contraction of their coats, or by the mere physical effect of excessive distension, by pressure from repletion of the rectum, contraction of the levatores ani muscles, or compression of the viscera of the pelvis, occasioned by the position of the body as in sitting. These effects, it is evident, may take place independently of disease, and if rarely called into exercise, we should hardly look for serious effects from them alone. On the other hand, if the evacuation take place frequently, more or less serious effects will result from its repetition, for we may be sure, whether the cause be morbid or otherwise, that so unnatural a mode of evacuation could not take place without the presence of a morbid cause. The simple emission of this fluid can have little or no effect upon the constitution of the patient, but the debility and exhaustion which succeed are occasioned by the often re-

peated nervous excitations, or efforts which are rendered necessary for the restoration of the lost secretion. It is therefore very unwise to consider and to treat the mere injection as the actual disease.

The nervous phenomena here referred to are not those which accompany a state of healthy stimulus, but are the direct effect of that morbid state termed irritability. A continuance of this morbid condition would lay the foundation for the destruction of the organs themselves, and so much of the general system as might be brought by sympathy under the same morbid influence. The muscles in these cases become wasted, the quantity of blood diminishes, it loses its red globules, and the digestive organs and their secretory glands undergo a gradual but total derangement. These conditions usually come on slowly, and without the demonstration of any very sudden symptoms. Should they continue long, the vital power will be exhausted, and the constitution laid open to the invasion of still more acute and serious disorders.

SPERMATORRHŒA STHENICA PROSTATÆ.

The prostate gland is liable to numerous and complex changes, by which the symptoms affecting it, and depending peculiarly on spermatorrhœa, are very apt to be obscured. Like the other associated organs, however, it is subjected to sthenic and asthenic conditions; the first of which, exhibiting all the evidences of inflammation, I have named *prostatitis*. The structural effects of the disease are the same as those accompanying excitement of the prostate gland, arising from other causes. In the active form of the disease abscess of the prostate is liable to take place, and the presence of that affection is evinced by a discharge of purulent mucus. The functional activity of the organ is much increased under the influence of morbid irritation, and there is a copious production of mucus containing a superabundance of phosphatic salts. The quantity of these salts varies considerably under different circumstances, independently of alterations in the more fluid portions of the secretion; and these variations generally indicate some peculiarity in the progress of the disease, while the immediate effect of extreme dilution of the prostatic mucus is that of rendering its neutralizing power insufficient for the preservation of the fecundating fluid against the destructive reagency of mucic and other acids present in the urethra.

Concentration of the prostatic fluid may also take place to such an extent as to permit the formation of crystals of phosphate of lime, which give rise to much irritation, both in the gland itself, and to the mucous membrane of the urethra in its passage along that canal. To this circumstance, as it appears to me, some of the forms of blennorrhœa may be referred; such as that which consists in a discharge of thick-greenish yellow mucus, and is independent of any impure origin.

SPERMATORRHŒA ASTHENICA PROSTATÆ.

In the asthenic morbid state of the prostate gland, the effect taking place is an irritability, which may be termed chronic, as distinguishing it from the active irritability accompanying the inflammatory condition of prostatitis. The gland loses its power of producing healthy mucus; the secretion becomes watery and diminished in quantity, and the salts remain behind in the ducts, and there aggregate and form calculous concretions. Chronic irritability most generally occasions enlargement of the gland, with the production of impediments to the free passage of urine. The symptoms indicative of disease of the prostate gland are commonly felt in the region of the neck of the bladder, and the lower part of the rectum.

SPERMATORRHŒA URETHRÆ.

The mucous membrane of the urethra must necessarily have a place in any system of classification of the common phenomena of spermatorrhœa. It may be, and undoubtedly is, difficult to point out positive evidences of the presence of this disease in the urethral membrane, but we must not on that account be deterred from their investigation and consideration. There are two important and distinctive states which constitute the foundation of a classification of the diseases of this part—namely, urethritis, and ulceration of the mucous membrane; the former representing the sthenic, the latter the asthenic condition. Urethritis is attended with more or less generally a considerable discharge from the mucous membrane, and all the symptoms of acute inflammation. From the inflamed membrane irritation may be propagated throughout the whole of the generative apparatus, producing peculiar effects in each separate portion.

Ulceration of the mucous membrane of the urethra indicates a condition of depressed nervous energy, in which most of the surrounding organs participate, to the destruction of their natural sensibility.

Having thus examined the diseased conditions of the different portions of the genital apparatus separately, I must remind the reader that such states of complete isolation rarely or never occur in practice. On the contrary, it constantly happens that the whole of the associated organs, without exception, are involved in one confused assemblage of symptoms, which will require much care to disentangle and distinguish with accuracy. The due reference of each symptom to its proper source, and a knowledge of the diseased alterations of each portion of the genital system, constitute in reality the pathology of spermatorrhœa.

CHAPTER IV.

IMPOTENCY.

THE subject of impotency has been partially discussed when considering the condition of the testicles, under the head of asthenia of those organs in my table of classification. That reference was more particularly directed to functional incapacity, resulting from alteration of structure of the testicles, and consequent change in the constitution of the seminal fluid, such change being induced by spermatorrhœa.

Impotency, such as I am now about to direct attention to, has, however, an existence altogether independent of the above disease. It consists in an imperfect development of the generative power, or its partial or complete abnegation; the former succeeding to a defective organization of the apparatus of generation, the latter to an asthenic alteration in the condition of the same parts; the result of the presence of these conditions being an incapability of propagating the species. This definition of the term gives a wide scope for the introduction of collateral causes, and points out many minute circumstances capable of exciting the malady.

The most remarkable character connected with this disease is, that the organs of generation are rendered unfit for the performance of their natural functions without the exhibition of an amount of diseased action equivalent to the incapacity which succeeds. This character appears to be occasioned by certain imperfections and gradual alterations in structure of the parts themselves, by which the generative function becomes arrested.

The fact which I have mentioned in a former portion of this work, of the independence of individual healthy existence of the function of generation, is exemplified in the perfect state of health which may coexist with an incapability of procreation. The active performance of this function demands that an amount of nervous influence should always be in readiness for the purpose of properly developing its effects; but this nervous influence may not be called into action. The expenditure of this influence, on the other hand, would occasion those inroads upon the constitution, which, in spermatorrhœa, arise from the frequent repetition of the nervous phenomena.

IMPERFECT ORGANIC DEVELOPMENT, as occasioning impotency, presents us with extreme conditions, though at the same time the states of the disease are so definite, as almost always to enable us to form an immediate and correct judgment as to the result. Thus, when the defective organization is the consequence of amputation, or serious injuries to the penis, of non-evolution of the testes, or of

defect in any other of the generative organs, the nature of the case itself forbids every chance of success. Other impediments admit of removal, such as phimosis, incurvation of the penis from shortening of the frænum, and partial occlusion of the orifice of the urethra. The knife or the caustic, under such circumstances, offers ready means of relief.

ASTHENIC IMPOTENCY shows itself by a deficiency of power in the generative act, and assumes gradually a state of more or less complete incapacity for reproduction. This disease is brought on by several causes, one of the most influential of which is a natural diminution of power, resulting from inactivity of the generative function. It results also from exhaustion of power, following excessive indulgence in a life of debauchery; and it may be the consequence of paralysis of the nerves of the generative organs. When impotency arises from causes of such powerful influence over the constitution, the treatment naturally offers considerable difficulties, but the case is far from being incurable.

The same phenomena sometimes follow from blows on the loins, and from other means of concussion to the spinal cord.

The principle of treatment in this affection is very obvious. The disease is attended with considerable loss of power, and once established, continues to exist for that reason; to the restoration of this lost power, all means should be made subservient. General and local tonics, stimulants, and the cold bath, are the modes by which this end may be accomplished; and though they often require considerable time, they will eventually be successful when properly directed, and sufficiently persevered in.

There is a set of symptoms, however, which may as effectually prevent the continuance of the species, and therefore cause impotency, as those I have named, even though the functional power may not be wanting. These symptoms depend *remotely* on circumstances principally affecting the nervous system, and admit of treatment usually with a fair hope of success. The *immediate effects* are occasioned by irregularities in the character of the actual emissions.

The first of these diseases is the consequence of high nervous excitement, developing itself in the structural, instead of the functional portion of the generative apparatus; producing, in fact, a state of priapism. It naturally happens from this condition of the parts, that the nervous power, which ought to have been supplied for the stimulation of function, is absorbed in the production of structural excitement, and the consequence is a deficiency in emission, and therefore, impotency. The mode of relief in a case of this kind, is to reduce the tendency to excitement pervading the system through the constitution; to regulate the diet; and relieve structural excitement, by directing its activity to another channel, through the means of increased muscular exertion. If, as sometimes happens, the excitement occurs from some abnormal local cause, it may then become necessary to apply local remedies for its relief.

The venereal orgasm in persons of great nervous irritability is liable to cause such commotion through the system, and to stretch to so high a tension the excitement of the brain, as occasionally to induce an epileptic spasm. At the moment of such a seizure, the continuance of other excitations would cease, and with them naturally the condition of excitement, on which the act of proper emission depends. Under such circumstances impotency follows as a matter of course. The frequent recurrence of epileptic attacks so caused, would place the life of a patient affected with them in jeopardy, and no doubt the opportunity for such recurrence should be avoided; at the same time I am forced to admit that occasional indulgence in the practice is one of the readiest modes of subduing over-excited irritability of the nervous function. The treatment of this form of impotency consists in reducing the irritation of the system by depletive measures, such as aperients, and a strict regimen.

At the same time let it be borne in mind, that due judgment must be exercised to ascertain whether the excitement may not arise from an entirely opposite cause—namely, from debility of constitution, and an asthenic irritability of the generative organs inducing reaction in the brain. In such a state the plan of treatment will consist in supporting the constitution by tonic and stimulant medicines, and reducing excessive local action by sedatives.

Two other circumstances, namely, that which arises from a too precipitate emission, and that which arises from the opposite condition of a too tardy one, may become causes of impotency; the former from the emission occurring before the female orgasm, the latter from its happening afterwards. The first of these states depends upon a large amount of irritable excitement, so great occasionally as to cause emission before the introduction of the penis into the vagina, the second from deficient excitement. From the latter circumstance it happens that no distinct emission does actually take place, but that the seminal fluid gradually oozes away from the urethral orifice. The nature of these cases so clearly indicates the method which should be adopted in their treatment, that I shall be excused for not dwelling upon them.

Another cause of impotency connected with imperfection in the accomplishment of emission, is a condition of the urethra, by which the seminal fluid is prevented from issuing from its orifice, and is made to pass backwards by a refluent action into the bladder, or in some cases probably is not permitted to enter the urethra at all, on account of the swelling of the ejaculatory and prostatic openings. This state may arise from congestion of the mucous membrane of the urethra, from irritability and spasm of the canal, or from stricture. The treatment under these circumstances should be such as to remove the diseased conditions of the urethra, and with them, the effects of this form of impotency would also disappear.

I have thought it expedient to make my remarks on this subject as concise as possible, and avoid repetition; I have therefore merely

taken a general view of the principles of treatment. Those which apply to spermatorrhœa, and are more fully detailed in the chapter on the treatment of that disease, will be found to be very generally suitable to the phenomena of impotency.

CHAPTER V.

CAUSES OF SPERMATORRHŒA.

The knowledge of the precise cause of any given disease is of the first importance to a proper understanding of its treatment and cure. Where the phenomena presenting themselves are obscure, and difficult to trace to their proper source, as in the case of spermatorrhœa, the careful investigation of them, and of their mutual relations, becomes an urgent necessity. Inferences drawn from external appearances are frequently the first and only guide to the cause of the disease. As often happens, also, the indications of spermatorrhœa can only be traced to their true head, through a set of symptoms, which, considered as independent diseases, would naturally be referred to a very different origin and lead away the mind from the supposition that disarrangement of the genital system was indeed their primary origin. Increased difficulty also arises from the moral delicacy of the subject, and from the disinclination that most patients suffering from this distressing malady have to the investigation of a state of suffering, which, in their morbid fancy, is associated with degradation.

The diseases which it thus becomes necessary to look upon sometimes in the light of causes of spermatorrhœa occasionally assume the characters of cerebral and nervous affections, of derangements in the circulating and digestive systems, of congestions of various organs, and excessive general and local debility. These constitutional causes of the disease are numerous, and require judgment in their diagnosis, from the difficulty of determining the relative proportion of the symptoms assignable to a simple disarrangement of the function of any particular organ, and that due to primary disease of the structure of the part.

The brain and nervous system are of all the organs of the body the most susceptible of serious morbid changes originating in this disease; and upon them the first impression of disturbance is most readily shown. The least dangerous but at the same time the most persistent of these morbid conditions, is simple excitement of the brain, developed by the most ordinary external circumstances, and by the commonest occurrences of daily life. Excitement of this kind increases in importance, in proportion as the mind is subjected for a longer or shorter period to its influence. And although this state must be considered more as a perversion of healthy action than one of actual disease, still it is better to endeavor to effect

its removal while in a recent stage, than to allow it to acquire a firmer hold on the system. The symptoms now referred to depend on congestion, which, if permitted to continue, will eventually increase to a degree of extreme intensity, and assume all the characters of threatened apoplexy. At other times the irregular distribution of irritability will occasion serious inflammatory attacks, followed by such an amount of exhaustion that the patient often sinks beneath their violence; and unless the symptoms be arrested before they reach this degree of activity they are apt to proceed on to structural disorganization, and then admit of very feeble prospects of relief.

The progress of these psychological conditions may therefore be arranged into three stages: the *first*, and simplest, may be considered as merely a special tendency of the mind to erotic imagination while sleeping or waking, influencing directly the generative system, the state of the brain being healthy; the *second* embraces the effects of congestion and inflammation, the brain being diseased; while the *third* exhibits a state of paralysis, occasioned by structural decay. Constitutional effects, therefore, in relation with the brain may arise from any circumstance sufficiently powerful to excite that organ into undue action; from unchaste ideas created by the perusal of licentious books; from exciting passions; from close application to study; from long-continued attention to business. These conditions affect the brain directly, and bear a sort of self-evidence of their capability to produce diseased action in the genital system. But there are other and more indirect sources whence the same effect is likely to arise, such as violent and excessive exercise, accidental violence, or exposure to extremes of heat and cold. The disease may in short be occasioned by anything that overstrains the mind, or by which the bodily powers are weakened.

Such states of excitement can exist for a very short time indeed without involving in a greater or less degree the other systems of the body that depend for their performance on nervous activity. One of the first among these to participate in the disorder is that of digestion, and it soon becomes necessary to contend against the long train of symptoms which accompany disorder of the assimilating functions. When disarrangement of the circulation, such as is present with an apoplectic tendency, is added to these symptoms, it may easily be conceived that the difficulty of diagnosis is indeed seriously complicated.

Congenital debility is sometimes, though by no means frequently, a cause of asthenic spermatorrhœa. When such is the case, the malady is not very amenable to treatment, but it occasionally happens that a careful and judicious management is of essential benefit, if not in entirely removing the symptoms, at least in modifying them to a great extent, and thus improving the condition of the patient. Even those that are apparently the worst cases, sometimes

yield sufficiently to awaken hope and confidence in favor of the steady pursuance of a proper course of treatment.

The most frequent local causes of spermatorrhœa are to be found in the urethra. Inflammation seated in its mucous membrane, hence communicated to the prostate gland, and giving more or less evidence of its presence, usually precedes the same condition in the vesiculæ seminales and testes. Inflammatory attacks of this kind are by no means unfrequent, and arise from various causes, among which exposure to cold is not uncommon. In that state the membrane frequently takes on a disposition to active secretion, attended with inflammation, showing itself in the form of urethral catarrh, in the way that cold generally affects the mucous membrane; and the inflammatory action spreads more or less rapidly to the other contiguous structures. This condition is very different from the urethritis and mucous discharge, which arise as a consequence of primary irritation of the seminal organs, occasioned by structural disease, and independent of functional disorder.

The remote causes of spermatorrhœa sometimes take their rise in irritation of the kidneys and bladder. The spread of inflammation from the urinary organs is direct, by virtue of the continuity of the mucous membrane, extending along the surfaces of the seminal secreting organs. The severity of the attack will be usually found less in degree, and more easily treated, in proportion to the remoteness of the local exciting cause.

Next to inflammation of the kidneys and bladder, and proceeding from actual structural disease, as a cause of spermatorrhœa, must be arranged irritations excited in these organs, as well as in the urethra, by the abuse of spirituous liquors, the ingestion of certain articles of diet and particular medicines. Strong infusions of tea and coffee, the local action of cantharides, nitrate of potass, and camphor, naturally occur to the mind in considering a list of articles likely to produce excitement of the genital organs, by their local as well as by their constitutional influence on the system.

Venereal excesses are a fertile and common source of seminal disease, but not exactly proportionate to the amount of their indulgence. It constantly happens that an excess which in some persons would occasion only temporary derangement, would in others be sufficient to establish a permanent and exhausting discharge. Much depends upon the natural excitability of the constitution, and much also upon the predominant tendency to local irritations. If, combined with such a constitutional susceptibility, an attack of gonorrhœa should occur, symptoms of seminal disease more or less complete, seldom fail to be produced. A subsidence of the active symptoms of the disease may and usually does follow upon the disappearance of the gonorrhœa, but this subsidence must not be mistaken for a proof of the complete restoration of the genital apparatus to a state of health. The seminal disease requires only a certain amount of irritation to recall it into a condition of activity. Some-

times, however, the apparent subsidence really indicates that the disease is assuming gradually the passive or asthenic stage; in other words, is passing into a state of rebellious inveteracy.

A condition of the urethra occasioning stricture of the canal may become an exciting cause of spermatorrhœa, and when the local inflammation attending it diminishes to the state usually understood by the term atonic, the abrasion or ulceration which succeeds then continues to keep up the disease.

The prostate gland is also an occasional cause of spermatorrhœa, either from inflammation primarily arising in the texture of the gland itself, or from diseased action induced in it by irritation of the urethra. It is probably not often a primary source of the disease, for reasons incident to its situation and function. When it does become so, the effects produced on the gland are marked by great permanence, and long after irritation of all the surrounding organs has apparently ceased, the prostate seems to contain within itself the elements for a recommencement of the spermatorrhœa.

A varicose state of the veins of the prostate is also conducive to sustained irritation in the gland.

The rectum is subject to several diseases, both of a mechanical and structural nature, and its proximity to the vesiculæ seminales naturally influences in a considerable degree the irritations which affect those organs. The close vicinity of the intestine renders its ordinary distension, and the contractions of the levatores ani muscles, active in the production and continuance of the vesicular form of spermatorrhœa, especially when the vesiculæ are more than usually susceptible of irritation. This susceptibility excites the function of secretion, and the pressure or muscular contractions then cause an ejection from the urethra of a quantity of transparent glairy mucus, immediately or soon after the passage of the fæces. The occurrence of this circumstance leads the patient to an attentive examination of his state, and he discovers probably that it is almost constant on going to stool. To the medical practitioner this occurrence will be the evidence of an undue excitement already commenced in the vesiculæ, which, without proper treatment, must end in a permanently diseased action. If the vesiculæ be examined by the aid of the finger at this time, they will be found unusually tense, and distended with secretion, and this condition is accompanied with a sensation of dull, heavy aching pain. I have observed that the fluid which is then emitted is generally thin and transparent. It differs materially in its characters from urine, for which it is liable to be mistaken, especially as there is frequently a spasmodic expulsion of the last few drops of urine from the bladder, immediately after the passage of the fæces. At the commencement of the disease, the fluid excreted during these muscular contractions contains no spermatozoa, but after a time, when the testicles participate in the excitement, the animalcules become numerous, and the evidence of spermatorrhœa for that reason more distinct. When such effects

arise from simple mechanical disease of the rectum, they are generally temporary and removable, but occasionally sufficiently distressing and weakening to require careful and prolonged treatment for preventing a relapse.

Among the simplest mechanical inducements of irritation are collections of fæcal matter in the rectum and ascarides. These, however, present no great difficulty in their management. A varicose state of the hæmorrhoidal veins, by causing distension of the structures around the rectum, may also have a large share in promoting the conditions likely to occasion irritability of the vesiculæ, and therefore must be looked upon as a cause of spermatorrhœa.

Diarrhœa, acute and chronic, and dysentery, may also induce excitement of the vesiculæ. When the more important diseases of the rectum become the excitants of spermatorrhœa, the treatment is rendered particularly tedious and complicated, and the disease will depend for its relief upon the progress of the exciting cause. Those structural diseases of the rectum which may be admitted into the list of causes of this disease are tumors, stricture, and scirrhus; and it will be understood at once that causes so persistent offer almost insurmountable difficulties to successful treatment. Happily these serious maladies, as causes of spermatorrhœa, are the exception and not the rule.

The position of the testicles renders them liable to accidental violence, and they are apt, in consequence, to take on sometimes an inflammatory action. Orchitis, or inflammation of the testicle, arising from a blow, from sympathetic action, or from any other cause, readily communicates its excitement to the neighboring parts, and by the lining membrane of the vas deferens, directly to the vesiculæ seminales. Should the inflammation assume a chronic character and continue for any length of time, there is danger of its exciting the structures permanently, and thus establishing spermatorrhœa.

In enumerating the list of causes of spermatorrhœa, structural irritation of the vesiculæ seminales must not be omitted, but a purely independent structural excitement is probably not often fixed in them. When such is the case, it arises in very few instances from actual organic change. Functional excitement, on the contrary, occurs more frequently, and depends upon the general irritable condition of the nervous system. It seldom demands much attention, and will most probably cease entirely as the balance of nervous energy becomes restored.

There is another point of view, however, from which the vesiculæ seminales must be regarded in relation with spermatorrhœa, for though not frequently subject to become the origin, they are undoubtedly the centre around which all the diseased actions of the generative system are apt to congregate. Their structure and functions are such as to render them not easily liable to disturbance; but for the same reason, when really excited into morbid action and

disarranged, it is very difficult to bring about a cessation of that disturbance. When once sufficient irritation is established to occasion spermatorrhœa, then the disease progresses independently of the first exciting cause, kept up, indeed, by the participation of the neighboring organs in the irritation. For this reason it is that spermatorrhœa hardly ever admits of spontaneous recovery, when it has been allowed to obtain and secure a firm hold upon the vesiculæ seminales.

One of the most serious of all the causes of spermatorrhœa, and one which includes in its terrible embraces both the physical power of the constitution and the moral condition of the mind, is self-abuse. This habit is usually contracted at an early age, most frequently at school, and at a time when the moral power is insufficient to oppose the contagion of bad example, or the force of violent and precocious animal passions. Indulgence of this habit under these circumstances ought not, in my opinion, to be classed in the list of moral crimes, as too frequently happens, but rather in that of disease. The principal difficulty in the management and cure of this fatal propensity is the incapability of making the patient, at an early age, fully understand the injurious influence upon the constitution, or its after effects. It is not an easy matter to convince him that he is pursuing a course that demands the very strictest attention and counteraction to save him from the most evil consequences to his health. To him the necessity for a strict resistance is quite incomprehensible ; he is practising, as he believes, a simple sensual gratification merely, and if at any time it occurs to his mind, that he is doing something which is wrong, the impression unfortunately is so slight as scarcely to occasion him a moment's uneasiness. He relies, perhaps, on his capability of giving up the habit at a later age, before it becomes injurious to his health. In this idea, however, he will find himself sadly mistaken. When the mind has become morbidly directed to this subject, it is continually and irresistibly seeking the means of reproducing its pleasurable sensations. There is no departure from the idea, every moment unoccupied in bodily exertions is devoted to erotic fancies, and even sleep is not exempt from the mental fascination. As the disease increases in intensity, the mind wearies of any direction but *the* one, and however much it may be distracted for a short time, wanders back unconsciously to its morbid train of thought. The expenditure of nervous energy thus carried on, rapidly wastes and enervates the body, independently of the destruction of the function which subsequently follows. It is not long under these circumstances before permanent irritability becomes established, and the patient sinks exhausted by all the fearful symptoms that accompany this terrible condition of disease.

Hufeland, in his "Art of Prolonging Life," has so well and so aptly described the effects of this habit, as influencing the duration of life, and his description so perfectly agrees with my own obser-

vations, that I have considered it would add to the completeness of my work to introduce his remarks on the subject in this place.

"Of all the means of hastening death, with which I am acquainted, there are none so highly destructive, and in which every baneful property is so much united, as in these. None comprehend so perfectly all the four requisites for that purpose, which I have already laid down; and indeed these melancholy excesses may be considered as the most highly concentrated process for shortening vital duration. This I shall immediately prove.

"The first mean of shortening life was, lessening the vital power itself. But what can more lessen the sum of the vital power within us than wasting those juices which contain it in the most concentrated form, as well as the first vital spark for a new being, and the most powerful balsam for our own blood?

"The second manner of shortening life consists in lessening the necessary solidity and elasticity of the vessels and organs. But it is well known that nothing tends so much to relax, to soften, and to corrupt, as this dissipation.

"The third manner, or more rapid consumption, can be promoted by nothing so much as by a circumstance, which, as appears from the example of all nature, is the highest degree of vital activity; and which, as before shown, is in many beings the conclusion of their whole life.

"Lastly, proper restoration is thereby prevented in an uncommon degree, because that rest and that equilibrium necessary for repairing what has been lost are impeded, and the organs deprived of the power requisite for the same purpose; but, in particular, because these debaucheries have a peculiar weakening effect on the stomach and the lungs, and thereby specifically desiccate the grand source of our restoration.

"To this may be added the danger of imbibing, amid such irregularities, that most dreadful of poisons, the venereal, against which no one is secure who has illicit intercourse with the fair sex—a poison which may not only shorten life, but render it also painful, miserable, and loathsome, and of which I shall speak at more length when I come to treat on *Poisons*.

"I must here mention also several other concomitant circumstances which are connected with this dissipation, and among these in particular, that of the mental faculties being weakened. It appears that between both these organs, that of the soul (the brain), and those of generation, as well as between the two functions, that of thinking and that of generating, the one spiritual, and the other physical creation, there is a very intimate connection; and that they both require the noblest and most refined part of the vital power. We find, therefore, that they both act alternately on each other, and have a mutual and contrary effect. The more we strain mental faculties, the less vigorous will be our power of generation; the more we stimulate the generative power and waste its juices, the more does the soul lose its faculty of thought, its energy, its

acuteness, and its memory. Nothing in the world can so much and so irretrievably ruin the brightest mental talent as excess of this kind.

"It may, perhaps, be here asked, what is meant by *excess* in physical love? My answer is, when either sex indulges that passion too early, before the body is completely formed—females before the age of eighteen, and males before that of twenty; when this enjoyment is too often and too violently repeated, which may be known by the following consequences: lassitude, dejection, and loss of appetite; when one, by a frequent change of object and circumstances, or by the artificial stimulus of spiceries, heating liquors, and the like, excites new desires and the relaxed powers, or makes that exertion during the time of digestion; and, to include the whole in a few words, when one enjoys a physical love without marriage; for it is only under the matrimonial tie, which excludes the stimulus of variety, and directs the physical propensity to a higher moral object, that this passion can be physically refined, that is to say, be rendered salutary and useful.

"Everything that has been here said is applicable, in an eminent degree, to *onanism* also; for that forced and unnatural vice increases, in an extraordinary manner, the straining of the organs, and the weakening connected with it; and this is a new proof of the principle I before laid down, that nature avenges nothing so dreadfully as transgression against herself. When transgressions prove mortal, they are always crimes against nature. It is, indeed, highly worthy of remark, that a dissipation which seems to be so perfectly alike in all its parts should, however, be so different in its consequences, according as it is confined to a natural or unnatural method; and as I am acquainted with judicious men who cannot be fully convinced of this difference, I shall embrace the present opportunity of showing, how onanism, in either sex, does infinitely more mischief than natural enjoyment. Horrid is the impression stamped by nature on such an offender! He is like a faded rose, a tree blasted in its bloom, a wandering skeleton. All his fire and spirit are deadened by this detestable vice; and nothing remain but debility, languor, livid paleness, a withered body, and a degraded soul. The eyes lose their lustre and strength; the pupils seem sunk; the features are distorted and lengthened; the rosy complexion of youth vanishes, and the visage appears of a pale-white leaden color. The whole body becomes affected, and sensible of the slightest impression; the muscular power is lost; sleep brings with it no refreshment; every movement is attended with torture; the legs can no longer support the body; the hands tremble; aching pains arise in all the limbs; the faculty of thought is deranged, and cheerfulness is banished. The unhappy sufferer speaks little, and as if it were only by force; and all his former liveliness of mind is depressed. A youth endowed by nature with genius and talents becomes dull, or totally stupid; the mind loses all taste for virtuous and exalted ideas; and the imagination is altogether corrupted. The slightest circumstance respecting a female is capable of ex-

citing in him desire, shame, honor, and repentance; and despair of his evils being cured renders his misery complete. The whole life of such a man is a continued succession of secret reproach; painful sensations, arising from the consciousness of having brought upon himself internal weakness; irresolution and disgust of life; and it need excite no surprise that such an unhappy wretch should at length become a self-murderer; for no man is so much exposed to suicide as the onanist. The wasting of that which gives life, excites disgust of life in the highest degree, and that singular kind of self-murder *par depit* which is so peculiar to the present age. Besides, the powers of digestion are destroyed; the patient is tormented with flatulencies, and the cramp in the stomach; the blood becomes corrupted; the breast is choked up with phlegm; and eruptions and ulcers in the skin, a desiccation and wasting of the whole frame, epilepsy, asthma, slow fever, debililty, and premature death, are at length the consequences.

"There is another species of this vice which may be called *moral onanism;* it is possible without bodily pollution; but it exhausts in a dreadful manner also. I here alude to heating and filling the imagination with obscene and lascivious ideas, and a vicious and habitual propensity to indulge in such thoughts. This evil may, at length, become a real disease of the mind: the imagination is then totally corrupted, and governs the whole soul; nothing is interesting to men subject to it, but what relates to lewdness; the slightest impression of that kind excites in them a general fervor and irritation; their whole existence is a continual fever, which weakens the more, as it always stimulates without gratification. This state may be found, above all, among voluptuaries who have abandoned sensual enjoyment, but who endeavor, by such mental indulgence, to make themselves amends, without reflecting that in its consequences it is almost equally destructive; also in religious celibacy, where mental onanism can assume the mask of fervid devotion, and conceal itself under the appearance of divine rapture and ecstacy; and, lastly, among idle persons of the other sex, who, by novels and the like means, have corrupted their imaginations, and excited in them a propensity which is not unfrequently honored with the modish name of sensibility; and who, under a stiff and severe outside, indulge often in the lewdest and most dissolute ideas.

"This may suffice on the melancholy consequences of such debaucheries, which tend not only to shorten but to embitter life."

CHAPTER VI.

SYMPTOMS OF SPERMATORRHŒA.

The symptoms which accompany spermatorrhœa are numerous, and present appearances varying with the nature of the structures

involved. These variable symptoms demand our careful consideration and accurate judgment, for it is precisely in the states of irritable action, caused by excessive or defective tonicity, that forms of disease of a different nature simulate each other. Without an exact knowledge of the exciting cause it is quite possible to mistake them, and to do a serious injury to the patient by mistaking them, and adopting consequently a wrong mode of treatment.

A patient afflicted with spermatorrhœa, which has endured for some time, presents a melancholy and dejected appearance; he feels a constant desire for change, as the mere result of restlessness, and he exhibits a strong disinclination for exertion of every kind. The idea of entering into and taking part in the intercourse of society is in every way hateful to him. Seclusion, that he may dwell upon his morbid fancies, is the one object of his care; but this only serves to create dissatisfaction and remorse. He is incapable of applying his mind either to business or pleasure, and experiences a constant and indefinable dread of something about to happen. Even in the very commonest affairs of life he loses self-confidence. His temper becomes irritable; he has not unfrequently paroxysms of the most ungovernable rage, occasionally without a shadow of reason. Contradiction of his opinions, or a doubt of their irrefragibility, causes him sudden attacks of angry violence. He suffers much from fatigue and lassitude, aching in the loins, and general muscular debility, especially of the lower limbs. The surface loses its healthy color, the skin assumes a muddy appearance, the eyes become dull and sunken, and surrounded by a dark halo; his digestion soon gets thoroughly out of order, the appetite assuming a remarkable degree of capriciousness, selecting the most crude and most indigestible articles of diet, and rejecting the most simple and delicate food.

It is requisite to consider the symptoms of spermatorrhœa both as to their constitutional or functional and their local effects on the system. While a sthenic condition of the disease prevails, and is attended with nocturnal emissions, if those emissions arise simply from a plethoric condition of the seminal tubes, they occasion at first no ill effects to the patient. When, however, the state of excitement disappears, that of atony succeeds, and the disease then gradually unfolds itself, altering in the first instance the functional characters of the separate organs of the generative system, and then extending its mischievous and dangerous influence more generally through the constitution.

When a function so important as that of generation becomes excited into extreme and uncontrollable activity, it will not be matter of surprise that the vital power should be drawn away from the other equally necessary but less independent systems. The evil consequences to the latter soon become manifest, and great organic and constitutional disturbance follows.

The function which suffers soonest from the drain on the system is that of the brain and nerves, but it is not long before the heart

and stomach sympathize in the derangement, and evince their participation by several serious and alarming symptoms.

The affections of the brain which make their appearance, and result from the disturbance that has been set up in that organ, are indicated by giddiness and headache, the latter being principally referable to the cerebellar region. The power of commanding and controlling the ideas is lost, and much difficulty is experienced in recalling the most familiar subjects of memory. There is also considerable wakefulness, which terminates in general and extreme physical exhaustion.

If there be hereditary tendency to mental derangement, it frequently happens that the cerebral excitement occasioned by spermatorrhœa is sufficient to cause its development. Even where there is no such tendency, the overwhelming influence of long-continued cerebral excitement, combined with the disarrangement of the digestive and secerning systems, is apt to induce hypochondriasis or some form of monomania.

In conjunction with these indications of nervous irritability, the heart participates more or less quickly, furnishing unmistakable signs of sympathetic irritation by frequent and long-continued palpitations. The circulation undergoes various changes, giving, in the early conditions of the disease, evidences of congestion; in the advanced stages showing the effects of exhausting influences, as fainting and general anæmia. When the plethoric states predominate, the symptoms occasionally present a very severe character, and assume so completely the appearance of apoplexy as to cause anxiety for the life of the patient. Irritability of nervous power, rather than fulness of blood, must, however, be referred to as occasioning these results. The diagnosis, therefore, naturally offers many difficulties, not merely on account of the peculiarities of the disease itself, but also from the fact of the symptoms leading away to all appearance from the actual cause.

Under circumstances of such constitutional disarrangement, it cannot be supposed that digestion will be properly performed. The digestive power becomes too feeble to assimilate sufficient nourishment to preserve the strength and the bulk of the body, and a gradual and progressive emaciation sets in. The epigastrium becomes tender to the touch, and this symptom is accompanied with flatulence, distension, and spermatic pains; and all the complicated phenomena of dyspepsia are very soon established. There is a tendency besides to local congestion of the viscera of the abdomen, and the action of the bowels is apt to become irregular, at one time being obstinately constipated, at another thrown into a state of excitement by a debilitating diarrhœa.

The local symptoms of spermatorrhœa present many very apparent anomalies having reference to the structural and functional peculiarities of the several portions of the apparatus which happen to be affected. Neither must the effect of temperament be omitted; for some of the more important symptoms of this disease depend

probably as much upon the temperament of the individual, as upon any other cause for their continuance. These symptoms also are modified in their forms by the sthenic or asthenic condition of the organs affected. One of the earliest symptoms of the complaint is frequent erection with nocturnal emissions. This state so nearly approaches to simple plethora, such as may exist in a healthy condition of the organs, as scarcely to attract attention, except in so far as by its constant repetition it leads on to the more decidedly morbid stages.

Voluptuous ideas are constantly recurring in this excited condition of the organs, which no watchfulness or effort of the mind is capable of banishing entirely, and emissions as constantly follow after every such cerebral excitement, albeit slight in degree. When this condition has become permanent, the patient is alarmed at finding that his capabilities are inferior to his desires; in fact that there is an unaccountable debility of the genital organs at the moment when he might have imagined his power to be greatest. This frequently is the symptom which first arouses in his mind the idea that there must be some serious change taking place in his constitution.

Along with symptoms of this kind there occurs one which I have remarked to be very distinctive of vesicular and prostatic irritation, and one which will be found present in almost every patient in whom sthenic spermatorrhœa exists. It is that during coitus there occurs a sensation of burning and smarting, as the semen escapes into the urethra. This sensation, though a marked symptom of the disease, is nevertheless favorable, when considered in relation to treatment, as it is rarely experienced when the asthenic state has become confirmed. It probably arises from an inflamed and sensitive condition of that portion of the urethra situated around the openings of the ducts, and its intensity is usually an evidence of the actual amount of inflammation in the diseased organs.

After a continuance of the disease for some time, the emissions not only increase in number during the night, but begin to make their appearance also in the day, giving rise to the diurnal emissions of Lallemand. The patient experiences a sensation of weight and fulness in the rectum, with a tendency to bearing down at the anus. There is a good deal of muscular contraction on the passage of fæces; and during or immediately after these contractions, there will be observed an occasional involuntary escape of seminal secretion. This state of excitement gradually increases, until the patient rarely goes to stool without suffering a more or less abundant emission, and as the disease progresses, the excitement of riding or walking alone is sufficient to bring on the same occurrence. As the disease advances further the erections cease; though there still exists an irritable condition of the vesiculæ seminales, with atony of the ejaculatory and prostatic duct. The consequences of this atony is, that from the patent orifices of the ejaculatory ducts the secretion of the seminal organs is constantly oozing. This loss

acts with fearful effect upon the constitution, the mental and bodily powers diminish rapidly, and the most alarming exhaustion becomes established.

The list of local symptoms that attend on a confirmed case of spermatorrhœa can hardly be complete without including within it certain disarrangements that take place in the kidneys and bladder, but which, though attendant upon the disease, may not perhaps be considered as exclusively resulting from it. These ill effects do, however, occur sufficiently often to render it necessary to include them in the description of its symptoms. They consist of a general excitement of the kidneys, causing them to pour out a considerable quantity of thick, muddy, unhealthy urine; and an irritability of the bladder, including a frequent desire to micturate, accompanied with heat and pain in the urethra. The frequent desire to pass the urine becomes exceedingly troublesome, after the symptoms have endured for a short time, especially during the night. Patients are accustomed to refer these attacks to exposure to cold.

In a well-marked case of spermatorrhœa, the urine submitted to examination presented the following characters: Reaction neutral, appearance thick and muddy, specific gravity 1.23. Having been allowed to stand for some time, a considerable flocculent mucous deposit subsided to the bottom, carrying with it granular urate of ammonia, with some crystals of uric acid. A film, which spread over the surface of the fluid, contained stellæ of the urate of ammonia, with some dispersed crystals of triple phosphate, or ammonio-phosphate of lime. The color of the urine, after deposition of the sediment, was light brown. On the addition of nitric acid and subsequent evaporation, a large quantity of nitrate of urea was obtained. In other cases of spermatorrhœa in which I have made an analysis of the urine, the contained salts consisted entirely of phosphates. The urine in most of these cases had a disagreeable odor, and became rapidly putrid.

Symptoms such as these I have enumerated, are seldom met with in practice separately, and it is not often that we have to contend with them in any large proportion. When, however, they do come before us in large number, we must do our best to trace them to their source, and determine, if possible, the *causa causarum*, for our guidance to the attainment of cure. On a correct diagnosis our success in treatment must necessarily rest.

CHAPTER VII.

TREATMENT OF SPERMATORRHŒA.

The treatment of spermatorrhœa is deserving of our most careful attention, and is in reality the sole object to be accomplished by a

study of the phenomena of the disease. The scheme of classification proposed in the third chapter of this Essay sufficiently exposes the error of attempting to treat the disease with specifics, since it would be more than absurd to attempt the removal of symptoms arising from causes so diverse, by one uniform mode of treatment, however great its excellencies.

The observation of Lallemand, that "the discovery of the sustaining cause of spermatorrhœa is of more importance than the primary one with respect to treatment," deserves consideration in one point of view, namely, in that which seeks to accomplish the purpose of curing the disease without ascertaining the principles by which the cure is to be effected. The idea will, of course, bear greater proportionate weight with those who consider spermatorrhœa as consisting always of a more or less violent affection of the entire of one set of structures. It must, however, at the same time be admitted, that a knowledge of the particular structure in which the immediate symptoms originate, might furnish us with a very useful indication as to the peculiar influence and direction of the sustaining cause.

A plan of treatment worthy of adoption should have a due regard to the active or passive condition of the parts affected, not merely so far as those conditions may be the evidences of disease, but also in respect of their relation to the natural performance of their accustomed functions. In the one instance, the remedies employed should be competent to subdue action; in the other, they should be calculated, either by direct stimulation or counter-irritation, to promote a condition of reaction in the affected parts, akin to a state of health. Our chief endeavor should undoubtedly be to remove the cause of the morbid symptoms; but we must also consider that there is usually a remote, as well as a sustaining cause, on which the persistence of those symptoms may depend. The prognosis of spermatorrhœa is not easy. The development of the disease will be rapid, and its duration long, in proportion to the amount of natural constitutional excitement, and the tendency of the system to local irritations. The results may depend materially on the natural powers of the constitution.

I do not intend entering on the question of the applicability of Lallemand's treatment of cauterization, to the various forms of the disease, as arranged in my table under their proper heads. It would appear, however, that in many of his cases the treatment which he has pointed out as next to specific in theory, was frequently unsuccessful in practice, and certainly does not favor the infallibility of discovering and acting upon the sustaining cause alone. The treatment by cauterization proves of the most essential service where its employment produces the effect of a sufficiently extended counter-irritation. It is particularly serviceable in subacute inflammation of the vesiculæ seminales and testicle. It may be used also with much advantage in those atonic states of the openings of the prostatic and ejaculatory ducts, where there is a constant oozing

away of spermatic fluid. The effect in such cases is a certain degree of inflammation, sometimes attended with an escape of blood; and when this inflammation subsides, it frequently happens that the primary excitement of the organs is also subdued.

Lallemand has stated, that the application of nitrate of silver acts only specifically when it is brought in substance into direct contact with the openings of the prostatic and ejaculatory ducts, and that the same benefit has not been obtained by its application in the form of injection. The latter circumstance arises, I believe, merely from the fact of its force being expended on the mucous membrane of the urethra, and not being applied directly to the diseased spot. A careful application of the solution immediately to the part affected may be made to produce an equivalent benefit, without risking the serious effects which sometimes arise from the contact of the solid caustic with the urethra. I am in the habit of applying a strong solution of the nitrate to any single part of the canal by using a curved glass syringe, a catheter in fact with an opening on the back of the curve, near its extremity, the instrument having a small globe of India-rubber attached to its external end. The opening is made to pass over every part to which it is required to apply the caustic solution, and a slight pressure kept up on the India-rubber globe always brings a fresh quantity of the solution to the opening. Wherever the solution comes in contact with the mucous membrane the nitrate will be almost immediately decomposed, and no longer liable to produce irritation.

The mode of applying the caustic has certainly very much to do with its success, and is the reason probably that there have been so many failures in its employment. When used too freely to the irritable mucous membrane in the neighborhood of the disease, it is liable to occasion excessive action with severe pain, and sometimes lays the foundation for ulceration. This might naturally be anticipated from the known high degree of sensitiveness which renders the membrane so liable to irritation. Such irritation is generally an evidence of the degree of diseased activity in cases of spermatorrhœa. In whatever form, however, the nitrate is applied, the object to accomplish, is just such an amount of action as to induce counter-irritation, without occasioning abrasion and ulceration. On the other hand, an insufficient application of the caustic simply increases the existing inflammation, without effecting any good purpose.

The simple introduction of a catheter is also at times very serviceable, apparently from producing, though to a less extent, a certain amount of counter-irritation in the neighborhood of the openings of the ducts. The pain occasioned by the introduction of a catheter was taken by Lallemand as the test for the necessity for the use of the caustic.

The application of cold of a sufficient intensity and prolonged duration is often of great advantage, and when the disease depends

on irritation of the testicle, can easily be managed. There is much difficulty in applying cold of a proper degree of intensity in irritation of the vesiculæ, on account of the depth in the perineum at which those organs are situated. Cold may also be used as a stimulant, through its power of inducing reaction after a short application. Thus it is evident that cold may be made useful in two very different conditions of the organs, but a previous discrimination of the cause of the disease is absolutely necessary for its effective employment. For this reason cold baths and douches are sometimes efficacious in affording relief, and at other times increase the disease materially. The same observations are applicable to the use of hot and medicated baths. It sometimes happens that the most desirable results are produced by their use, while, on the other hand, it occasionally chances that the symptoms are not only not improved, but greatly aggravated.

Whenever there are evident proofs of local inflammation, benefit is often obtained by the application of leeches, and also by cupping. The good effects of the abstraction of blood are, however, too frequently fugitive; indeed, are generally so, unless followed up by an active constitutional treatment.

Blisters to the perineum occasionally prove very serviceable, and in proportion apparently to the intensity of the inflammation which they excite, and the amount of serous effusion which follows their application. The objection raised against them of inducing strangury, can seldom be fairly made, when they are used with care, and removed immediately after sufficient irritation has been effected to cause a plentiful discharge of serum. A piece of muslin interposed between the surface of a blister and the skin, is generally all that is necessary to prevent this accident from occurring.

When these remedies have failed to effect a cure, a still more severe treatment may be employed for the purpose of accomplishing this desirable object, namely, the insertion of an issue or seton in the perineum. In the case related in the first chapter of this treatise, this plan succeeded perfectly. The formation of an issue by transfixing a fold of skin in the perineum by a bistoury, is not a very painful operation, and is far from being difficult to perform, It may, however, be considered as one of the most effectual means of local treatment, on account of the extensive and permanent counter-irritation which is excited. This proceeding must not, however, be put in practice without great caution, and it is necessary to determine correctly beforehand whether the condition of the parts affected is asthenic or sthenic.

Previously to entering upon the general constitutional treatment of spermatorrhœa it may be as well to examine into the effects of certain medicines, which, taken internally, pass into the blood, and appear to exert a kind of specific influence upon the urethra and its surrounding structures. The applicability of the peculiar properties of these medicines to different forms of the disease has natur-

ally given them a right to be fully considered in any system of treatment to be recommended for spermatorrhœa.

The ergot of rye, or spurred rye, has a remarkable influence on the organs of generation, and renders valuable service in the treatment of their diseases. Of all the classes of remedies having a power of local determination to these organs it has certainly in my hands appeared to effect the greatest amount of good. It must not, however, be used indiscriminately and in every form of the disease, but only in those states which are associated with an asthenic condition. In these cases it seems to have a specific action of its own, in restoring permanently the function of the generative system, and in relieving the peculiar atony which, in the cases referred to, pervades these structures. The forms in which I have been in the habit of prescribing it are a spirituous extract made into pills, and an infusion of the powdered grains with camphor. The former of these two preparations is the most convenient, but I have not always found it so effective as the latter.

Camphor has a great effect in subduing excitation of the urinary organs, and occasionally proves of much service where the disease is accompanied with irritation of the kidneys and bladder; but, like the ergot, it is a remedy which does not admit of indiscriminate use. Copaiba, turpentine, and the oleo-resins, are other useful aids, but their employment also requires limitation, and they are probably most suitable where the disease has originated in syphilitic irritation of the mucous membrane of the urethra.

Many objections have been raised against the use of cantharides in this disease, some even contending that as an internal remedy it should be totally abandoned; but I do not give my assent to this opinion without further consideration of the matter. In the atonic forms of the disease its use is often advantageous, and it certainly has a special influence over the bladder and urethra that no other medicine possesses; but like, and perhaps more than all other remedies, it requires that the particular cases to which it is applicable should be distinctly ascertained.

When, as sometimes happens, the inflammatory conditions of the organs are attended with pain, especially when the exciting cause is referable to the bladder, sedatives may be administered with advantage. The best sedative for the purpose is hyoscyamus, because it has no tendency to confine the bowels, and because its employment is unattended with the excitement which follows the exhibition of opium; for this reason it is also preferable to most other narcotics. The addition of a small quantity of ipecacuanha, by arresting in some degree the rapidity of the circulation, renders a smaller portion of the sedative capable of producing the desired effect.

Occasionally the pain increases to such an extent, and appears to be so slightly controlled by constitutional means, as to require a local application. Under these circumstances, the inunction of veratrine and belladonna to the perineum has often the effect of subduing

action and relieving pain, when other modes of treatment have proved unavailing.

Gallic acid and tannin, on account of their power of arresting excessive mucous secretion, are useful remedies in this disease, and can be employed to produce their effects constitutionally or by local application.

I must not pass over another local remedy, namely, acupuncture, without a remark, since it has been highly extolled and recommended by Lallemand for the relief of spermatorrhœa. I have had the opportunity of applying it in two cases only, but in both without success. Lallemand's plan consists in transfixing the prostate gland with one or two fine long needles, the stimulus excited by their presence being intended to relieve the morbidly irritated portions of the genital apparatus, as in other forms of counter-irritation.

From the list of remedies I have here detailed, the principle of treatment will be distinctly perceived. There are, of course, practical suggestions that will arise, and present us with reasons for modification, in every case, and by these we must be guided in our selection of the most appropriate plan.

The same general observation bears a more important application in the management of the constitutional evidences of the disease. To the different kinds of spermatorrhœa, excitement of the brain and nervous system contributes a very serious complication. Symptoms of this nature require to be treated by the avoidance of all stimulating food, by following a cooling regimen, and paying careful attention to the bowels. When the nervous disorder arises from a reaction of the excitement of the generative system on the brain, it will be necessary to adopt local, in addition to constitutional, measures. A morbid condition of the brain is sometimes established, which depends for its continuance on the accumulation of a large amount of nervous irritability. This may be relieved most effectually by increased natural stimulus given to the mind, the direction of the thoughts being turned into a train different from its ordinary course, or, better still, by the occupation of vital force in active muscular exertion.

The circulating system in cases of spermatorrhœa demands much attention, as many grave symptoms indicating serious disturbance of the heart and large vessels are apt to arise. These attacks, though depending essentially upon the progress and activity of the original disease, nevertheless place the life of the patient in jeopardy by their own peculiar violence. Symptoms of this kind appear to be of so much vital importance, and it is so difficult to separate them from the supposition of structural disease of the parts affected, that they are very likely to deceive both patient and physician, as to the true point whence they take their origin. If the patient should be of a full plethoric habit, with a tendency to cerebral attacks, it will be expedient to remove blood, in quantity proportioned to his general powers or the activity of the disease. This, however, must be done

with caution, as the symptoms occasioned by irritable nervous action, resulting from excitement of the genital organs, resemble, in a remarkable degree, those produced by an entirely different cause. As a general rule, instead of diminishing power by abstracting blood, the opposite course must be pursued, of supporting the constitution, and enabling it to meet the constant drain upon its vital resources.

The digestive function is extremely sensitive to exhausting influences existing in the system. In the early stages of spermatorrhœa, when the symptoms indicate plethora of the testicles and vesiculæ seminales, the unloading of these organs by emission of their secretions tends to increase the appetite and promote activity in the performance of digestion. If this mode of relief be too often repeated, it induces an opposite effect on the system, namely, irritability of the stomach. This organ becomes incapable of retaining sufficient food for the necessities of nutrition, and the power of assimilation is also lessened. It then naturally follows that the strength and substance of the body waste with rapidity.

The remedial indication, in such a condition as that I am now describing, is to corroborate the constitution by tonic medicines, such as quinine, gentian, the mineral acids, steel, and to these may be added a regulated use of ordinary dietetic stimulants. A strict regimen should be enforced, but with a reasonable amount of light and digestible food. Care must, however, be taken to avoid the use of spices, and of everything likely to irritate the stomach or occasion indigestion. An excellent means of supporting the constitution under the emaciation that usually follows an attack of this disease is presented to us in a medico-alimentary substance, which has of late years come much into favor, namely, cod-liver oil. Probably no dietetic preparation could be proposed more likely to be serviceable in spermatorrhœa. The oil is not admitted into the treatment with any supposed special medicinal quality, but offers us a concentrated article of diet as a means of nourishment superior to most others we are in the habit of using. It should be taken directly after a meal, twice or thrice a day. In this way it will be brought in contact with the absorbing and assimilating apparatus, when in their most active conditions. It is readily absorbed into the system, and rapidly supplies the wasting body with nourishment.

The chief objection which may be raised against cod-liver oil is its aptness to occasion nausea, a circumstance which arises partly from the weakened powers of digestion, and partly from the large quantity usually thought necessary to be administered. The objections to this remedy are, in many instances, got over by a preparation which I have found of great value, namely, the cod-liver oil of chocolate. It is composed of the purest oil, carefully combined with chocolate in its most agreeable shape. To cover the odor and taste of the oil as completely as possible, various essential oils can be added to the chocolate, by which means it becomes a pleasant article of diet.

Prepared in this way, the oil is much less likely to occasion nausea, or otherwise to interfere with the delicate digestion that patients suffering from spermatorrhœa are so liable to experience. The division of the particles of the oil by chocolate, itself a highly nourishing substance, renders the compound very easy of assimilation by the system.

It will be gathered from the remarks I have thus made on the constitutional effects of spermatorrhœa, that whatever be the method of treatment which may appear most fit for adoption under particular circumstances, or whatever the urgency of the symptoms that may arise, I consider the primary cause of the disease ought to be sought after with diligence. In no complaint perhaps is it more difficult to understand the complication of disease which is likely to occur from the commingling of symptoms as they are derived from their various sources.

The treatment of onanism demands more than common care, on account of the serious injury it causes to the strength and constitution of the sufferer. It arises usually at an age and under circumstances in which it is unlooked for and unexpected; and previous to its discovery has often obtained a hold on the individual that renders it more than usually rebellious to treatment. When the habit is once contracted, there is every inducement in the sensations of the patient to pursue it. This habit originates when the mind is not sufficiently developed to comprehend its fatal tendency. When the practice is discovered, the patient should be watched; he should not be left alone; and all opportunity of solitary seclusion prohibited. Careful attention must be paid to diet, and to the regulation of general health. A proper amount of muscular exercise, verging even on fatigue, is to be taken, and for this purpose gymnastic exercises are the most appropriate. The mind should be directed to interesting and absorbing occupation, as far away as possible from its morbid feelings. It is a prevailing idea that the disease will prove of easy self-correction when the mind begins to comprehend the degradation of the habit; and that as the child becomes older, he will leave off the practice of his own accord. Nothing can be more fallacious than this supposition, and the reverse is more generally the case; the demand for the peculiar excitement becomes more urgent, and the moral disgrace lessens in his own eyes in proportion as the practice requires an ascendency over the mind. The endeavor to stay its progress cannot, therefore, be too prompt or too energetic. With very inveterate cases, it will be found expedient to blister the penis and neighboring surfaces, in a way to render the continuation of the practice exceedingly painful. This plan is often a means of entirely checking the disease, since it causes sufficient pain and smarting to awaken the patient when he is unconsciously pursuing the habit during sleep.

When spermatorrhœa arises from the habit of masturbation, of which it is commonly the consequence, the most important thing to

be accomplished is the removal of the cause. It is quite evident that little can be attempted in the way of treatment until that has been attained. To a certain extent it will be self-relieved more especially in the advanced stages of atony, occasioned by the constant practice of the habit. The system to be pursued, therefore, for remedying the early stages of spermatorrhœa so contracted, is precisely the same as that advised for counteracting the evil influences of masturbation.

Treating on this subject, Hufeland, to whom I have already had occasion to refer, has laid down a set of rules so applicable to the plan in view, that I feel no apology necessary for transcribing them. Speaking of early life, and the evil habits sometimes acquired at schools, he says:

"To this period belongs also a very important point in regard to physical education—the guarding, against onanism; or, rather, guarding against too early a propensity to amorous enjoyment. As this evil is one of the most certain and most terrible of those means which shorten and derange life, as has been already shown, I consider it my duty to speak a little more expressly of the methods that ought to be employed to counteract it. I am fully convinced that this vice is exceedingly common and highly destructive to human nature; but that where it has once become habitual it is very difficult to be eradicated. People also ought not to imagine that the principal helps against it are to be found in nostrums and specifics, which generally are employed too late; but that the grand object is to prevent onanism altogether, and that the whole art and secret consists consequently in guarding against too early an expansion and excitement of the propensity to amorous indulgence. This is properly the disease with which mankind are afflicted at present, and of which onanism is now the consequence; for this disease may exist in the seventh or eighth year, before onanism takes place. But it is necessary to pursue early measures for preventing the latter, and to attend, in this respect, not to single points, but to the whole education in general.

"According to my observations and experience, the following, when properly employed, are the most certain means to subdue this pestilence of youth.

"1. One must beware, from the beginning, not to give a child strong stimulating, nutritive food. Many, indeed, when they indulge their children very early with flesh, wine, coffee, and the like, do not reflect that they are thereby laying a foundation for a tendency to this vice. These stimulants, given so soon, hasten, as I have already shown, expansion of the organs. It is, in particular, hurtful to allow children at night, meat, hard eggs, spiceries, or puffing things, such as potatoes, which, in this way, have a very powerful effect.

"2. Washing with cold water daily, as already mentioned; the use of free air and light clothing, particularly of the private parts,

are also of importance. Close warm breeches often tend to promote this premature expansion; and it is therefore a good rule to give children, during the first years, a loose under-frock, and not to suffer them to wear breeches till a more advanced period.

"3. Do not permit them to sleep on feather beds, but on mattresses; do not let them retire to rest till they are heartily tired with exercise, and cause them to get up early in the morning. Lolling in bed of a morning, between sleeping and waking, particularly under warm bedclothes, is one of the greatest causes of onanism, and ought never to be suffered.

"4. Give them sufficient exercise daily, so that their natural stock of vigor may, by muscular motion, be employed and exhausted; for, when a poor child is kept sitting the whole day, and its body retained in a passive state, is it to be wondered at if its vigor, which will and must have vent, should assume that unnatural direction? Let a child or youth daily exercise his vigor in the open air, by running, jumping, &c., and I engage he will never fall into the detestable vice of onanism. It is peculiar to a sedentary education, in schools and other seminaries, where exercise is confined to half hours.

"5. Let not the powers of thought and sensation be strained too early. The more these organs are refined and brought to perfection, the more tendency will the body have to onanism.

"6. One should be particularly cautious in regard to all discourse, writings, or circumstances which might tend to excite such ideas, or turn the attention of children to certain parts. It will be highly necessary to divert them from these by every means possible; but not in a manner recommended by some, that is, making these parts interesting to them by explaining their nature and use. The more their attention is drawn to these, the sooner, without doubt, can they be acted upon by any stimulus; for internal attention to any point (internal contact) is as good a stimulus as external contact; and I agree, therefore, with the ancients, that the organs of generation should not be mentioned to a child before the age of fourteen. Of that for which nature has not as yet organs they ought to have no idea, otherwise the idea may call forth the organs before the proper time.

"One, also, must keep at a distance plays, romances, and poems, which may have a tendency to excite such sensations. Nothing should be allowed that may inflame the imagination of children, or lead to lascivious ideas. Great mischief has been occasioned to many by reading some of the old poets, or the study of pathology; and for this reason, it would be much better to begin a child's education with the study of nature, botany, zoology, economy, &c. These subjects can awaken no unnatural propensity, but preserve the thoughts pure, and therefore will act rather as an antidote to anything of the kind.

"7. One ought to watch, with the utmost care, over nursery-

maids, domestics, and others, that they may not ignorantly foster the first germ of this dissipation, as is too often the case. I have met with some instances, where children became onanists merely through the nursery-maids, who, when they cried and would not sleep, knew no other method of soothing them than to sport with their privities. The sleeping together of two ought also never to be suffered.

"8. If, however, notwithstanding all these precautions, this unhappy propensity should be excited, one ought above all things, to inquire whether it may not be owing rather to disease than to viciousness, to which most of those intrusted with the care of education pay too little attention. All diseases, in particular, which occasion great irritability in the abdomen, if they are combined with an extraordinary sensibility of the nerves, may give rise to this vice, as I know from experience. Of this nature are worms, the scrofula, and plethora of the lower belly, whether it be the consequences of too heating food, or of too much sitting. When there is any suspicion, therefore, of this being the case, one must always begin by removing the bodily cause. Let the unnatural sensibility of the nerves be subdued by strengthening medicines, and without any other helps one may cure this propensity to onanism, or too great irritability of the organs of generation."

Before concluding, I would remark, that in cases of spermatorrhœa, from whatever cause arising, when by proper treatment the patient has been restored to a state of health, no inconsiderable amount of care is requisite for some time afterwards, for the purpose of preserving him in a sound state. When once the important functions of generation have suffered disarrangement, the liability to a return of the disease is very great. However, with a judicious plan of diet, exercise, pure air, and mental occupation, the disposition to disease will be finally subdued, and the patient may enjoy the remainder of life free from every symptom, and even from a dread of the return of so distressing a malady.

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