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Contributors

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SEXUAL IMPOTENCE

BY

VICTOR G. VECKI, M. D.

CONSULTING GENITO-URINARY SURGEON TO THE MOUNT ZION HOSPITAL, SAN FRANCISCO

FIFTH EDITION, ENLARGED

PHILADELPHIA AND LONDON

W. B. SAUNDERS COMPANY

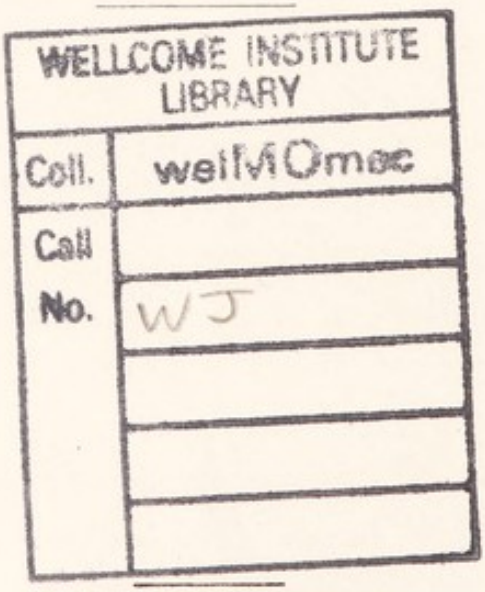
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WITH
THE PUBLISHER'S
COMPLIMENTS.

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PREFACE TO THE FIFTH EDITION

DESPITE the brief lapse of time since the publication of the fourth edition of this book, additions and a few modifications in this new edition were imperative.

New and better instruments have made the deep urethra more accessible to a rational local treatment, but likewise have offered suggestions for varied mutilations.

In their time the ovaries were the object of the "furor operandi," and it appears now as if the colliculus seminalis and the seminal vesicles must be substituted for them, and must be sacrificed to demonstrate brilliant technic.

Proceeding from one extreme to another, one encounters the beseeching demands of psychotherapy. That psychotherapy is new is not true, and that it is very often the true treatment is not new. Even psychotherapy for sexual neurasthenic troubles is nothing new. The author advocated it in the first edition of this book (published in 1888), when urology was in its toddling clothes, and at a time when the subject of sexual neurasthenia was strictly tabooed in polite medical society.

Even a superficial study of the history of medicine will convince any one that psychotherapy was

used at all times by the physicians of all nations. Fakers also, at all times, tried to take hold of psychotherapy, and some of them were exceedingly successful with many patients; but in order to treat any case of disease, first of all a correct diagnosis must be made. No treatment of any kind should be entered upon before the indication is properly established. This being so obvious, it also proves irrefutably that it is either gross ignorance or a brazen and criminal impertinence that any one should have the temerity to subject a fellow human being to any kind of healing, mental or other, without having previously mastered the knowledge necessary to discriminate between the nature of a sickness in which mental healing can accomplish anything and other forms of diseases where different means must be used to protect the patient against suffering or even against premature death.

THE AUTHOR.

SAN FRANCISCO, CALIFORNIA,
PHYSICIANS BUILDING,
December, 1915.

PREFACE TO FOURTH EDITION.

The enormous strides made during the past twenty years towards a rational consideration of the many perplexing problems of the normal functions of the sexual organs and their pathology are most gratifying to the pioneers in this field. It is very significant that now even great surgeons, when removing a sufferer's prostate, condescend to consider the consequences to the man's sexual power.

The lion's share in this fortunate change of front must be awarded to the extraordinary progress that modern urology has bestowed upon modern medicine. This youngest medical specialty, at first spurned on all sides, is forging its way to the front.

Physiologists considered the urinary organs within the exclusive domain of internal medicine, and, besides, refused stubbornly to consider the functions of the male sexual organs. But urology broke into physiology and into internal medicine almost at the same time. The newest ally to the sexual part of urology appears in that great question, probably one of the most important that medicine ever tried to solve, the riddle of internal secretion. Physiology is compelled to join in the campaign by emphasizing that the sexual functions cannot be loftily ignored.

In consequence of the interesting and important discoveries made by the explorers of the bacteriologic flora of the various sexual organs and their appendages, reinforced by the local findings made possible

by newly invented, excellent urethroscopes with which we can really see, even the most one-sided neurologists were compelled to acknowledge that many a neurasthenic in reality had an ampulla, a vesicula seminalis or two, a prostate or a verumontanum that need the urologist's help.

In this new revision I endeavored to reflect the gains made by urology. The chapters on anatomy and physiology had to be revised and enlarged in order to form a proper foundation for the modifications of our opinions on sexual neurasthenia, the influence of many diseases upon the sexual power, for our modest attempts at the understanding of internal secretion, of physiotherapy and for the most energetic protests against urological atrocities committed on the complicated and delicate structures of the deep urethra.

The reader will find most of the modifications and additions in the chapters on the treatment of sexual impotence, but none in those dealing with the sociological and ethical sides of our subject; thirty years of experience as a physician only strengthened youth's "glad inheritance, the inextinguishable love of truth."

The medical press of the United States, Canada, England and Ireland was very kind to this little book. I tried to heed some of the good advises given to me, but was unable to do so with all of them, some I could not, and a few I would not.

THE AUTHOR.

SAN FRANCISCO, CALIFORNIA,
381 BUSH STREET.

PREFACE TO THIRD EDITION.

THE reading part of the medical profession in the English-speaking countries has pronounced judgment upon this monograph. The verdict is highly gratifying to the author. The first American edition was exhausted in less than two years. The comments of the medical press were almost without exception favorable. True, one anonymous critic was rather harsh, but the sting from his pen has been removed by the queer coincidence that the publishers of the paper which gave room to his assault offered in 1898 to publish my work. The critic himself is naïve enough to admit that the handling of some phases of the question will be misunderstood, and we agree with him, as evidently he is a fair example of those few who misunderstood the book altogether.

May this new edition meet with the same success as the previous ones, and without a murmur we shall endure if it meets with the same enemies.

THE AUTHOR.

PREFACE TO THE FIRST AMERICAN EDITION.

WHEN the first German edition of this work was published, in 1889, there was some commotion in the ranks of old and young medical fogies, who were indignant that any one dared to resist their intellectual tendencies, refused to worship their superannuated gods.

The second German edition found the ranks of the same kind of professional formula-riders and bigots solid, though somewhat thinned.

I have taken the liberty of preserving the independence of my altruistic opinions, and shall continue to fight against false and hypocritical quasi-scientific pretentions. The circumstance that my work has been given earnest consideration by authorities like Casper, Eulenburg, Fürbringer, Krafft-Ebing, and others makes it easy to bear all the acrimonious aggressions dictated by the bilious nature of some of the "Dii minorum gentium."

I wish to thank Professor A. A. D'Ancona, who kindly revised the manuscript and helped me in many other ways.

THE AUTHOR.

PREFACE TO THE SECOND GERMAN EDITION.

In the lapse of seven years passed since the publication of the first edition of this work, we can record but very little progress in the theoretic as well as the practical development of our subject. We know to-day just as much—or, better, just as little—about the physiology of the sexual act as we did seven years ago.

Quite new, indeed, is an abundance of newly-forged names for old pathologic conditions. Some authors try to perpetuate themselves in this way. We can only hope that most of these new names will be short-lived.

The therapeutics of sexual impotence has received some valuable additions, and we have in the method of suspension a frequently efficacious, and in hypnotic suggestion an occasionally efficacious, remedy.

It affords me special satisfaction that my monograph has not proved to be an ephemera, in spite of the many adversaries the liberal interpretation of some pertinent questions has encountered.

The Author.

San Francisco, California, 1896.

PREFACE TO THE FIRST GERMAN EDITION.

To write on the much-scouted subject of sexual impotence is a venturesome undertaking under all circumstances; but to write without the customary affectation and without any hypocritical excuses, to speak the bare truth, surely requires even greater courage. Many an eminent medical man may have felt a secret desire to take the risk, but refrained from carrying out the resolution through fear of endangering his professional reputation. Some one not counted among the magnates of the medical realm may feel licensed to plunge to the very bottom, "to see what the gods have covered with darkness and horror," and may dare to relate to his colleagues what he sees and hears, without alteration or retouching.

"No physical or moral suffering, no wound, however putrid it may be, should frighten him who devotes his life to the science of man; and the sacred ministry which obliges the physician to see everything, to know everything, gives him also the right to relate everything."[1]

It must be admitted that the subject has never

[1] Tardieu Étude médico-legale sur les attentats aux mœurs. Paris, 1878, p. 2.

received the attention its preëminent importance deserves. Everywhere in the world it seems to be considered the proper thing to treat the affair with supercilious nonchalance. Few medical men in Germany can boast of ever having had an opportunity to hear a clinical lecture on sexual impotence; and the complaints and criticisms of authors prove that elsewhere the question receives no greater attention. "The subject is thus not yet emancipated from the tenacious grasp of the most rampant charlatanism."[1]

"Let us be frank from the first steps of our researches, because hypocrisy is the worm which in modern society attacks and corrodes the highest and most powerful plant of this life's garden."[2]

This somewhat serious neglect is no doubt to be attributed to the circumstances that those suffering from impotence can hardly be subjects for treatment in hospitals, and that the observation of the details and symptoms of the disease is attended with unusual difficulties; nay, is hardly possible at all.

Recent indications seem, however, to point to a better future. Men of prominence in the learned world, with Eulenburg, Krafft-Ebing, Fürbringer, Edw. Martin, Lydston, Sturgis, and some others at the head, do not think it beneath their dignity to busy themselves with the solution of the perplexing problems of the sexual life, and it is to be hoped that before long the conventional medical lies with which every book, every pamphlet on the subject is swarm-

[1] Campbell Black, On the Functional Diseases of the Urinary and Reproductive Organs. London, 1875, p. 6.

[2] Mantegazza, Fisiologia dell'amore. Milano, 1882, p. 75.

ing, will disappear and Mantegazza's satire[1] become obsolete.

"Difficult problems cannot be solved if we run away from them or if we avoid them; and still many a physician, many a philosopher, tries to solve the most burning questions of modern society in the manner of the baby who believes he can escape the threatening dog by closing his eyes."

VECKI.

[1] *Op. cit.*, p. 298.

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SEXUAL IMPOTENCE.

INTRODUCTION.

No one denies that the sexual function is of very great consequence to the individual as well as to society in general, although most people do not care to make this a subject of conversation.

"At any rate, the sexual function forms the most powerful factor in individual and in social life. It is a mighty impulse for bringing into action our most effective energies, for acquiring property, for the foundation of a home, for rousing altruistic feelings for a person of the other sex first, and, later, for one's children, and, in a wider sense, for the whole human family."[1] The Massachusetts statute concerning divorce says: "A divorce from the bond of matrimony may be decreed for—among other causes —impotency of either party." The English and German law is to the same purport: "Any incurable cause of complete inability to perform the matrimonial duty, any incurable bodily infirmity which excites loathing and disgust or wholly prevents the attainment of the objects of matrimony."[2] The civil code of Austria correctly estimates the

[1] Krafft-Ebing, Psychopathia sexualis. Stuttgart, 1886, p. 2.

[2] Draper, A Text-book of Legal Medicine. Saunders, Phila. and London, 1905, p. 96.

importance of sexual virility, Article 60 declaring that "the continued inability to fulfil the conjugal duty is a bar to marriage." The criminal code (Section 156) declares, "But if the crime has caused the loss of the procreative power of the injured man, then the punishment of imprisonment with hard labor is to be meted out for from five to ten years."

Without virility there can be *no procreation*. That the semen of impotent men frequently contains spermatozoa need not be taken into account in considering the propagation of the race, and, generally speaking, there are certainly but very few persons who owe their lives to impotent fathers.

He who has become prematurely impotent is one of the most unfortunate creatures, his misfortune being the greater as he mostly is ashamed of it, thinks he must conceal it, is pitied by no one, but scorned, and, alas, not always can he hope for recovery. I venture to assert that in many cases it is a better deed to restore to an impotent man the power, so precious to every individual, than to preserve a dangerously sick person from death, for in many cases death is preferable to impotence.

The energy of man, his courage, his enjoyment of work and life, all, with hardly any exception, depend on his sexual power. Purposely we disregard here the sundry vows of chastity made by persons who expect to be rewarded in the hereafter for their voluntary martyrdom here below. These people hardly seem to be enjoying their lives, and they call this world a vale of tears. Now, this world is not exactly a vale of tears or of grief; but let a man who

has to labor and produce from early morning till evening, who must day after day begin ever anew the struggle for existence, lose that little bit of love and his pathway will lead through a vale of tears indeed. The difference between the view of things in general formed by old people and that formed by the young has its only explanation in the virility extinguished in the former and vigorous in the latter. Prematurely impotent people very often appear aged physically, and always mentally. Moreover, we must not forget that the sexual nervous system is closely related to all the rest of the nervous mechanism, including those parts essential to its physiological operations. "The feeling of sexual impotence is the most humiliating which can ever afflict a man; because it degrades him in his own eyes, and does not leave a single possible illusion, not a solitary moment of mercy."[1] Eunuchs and the sexually impotent differ in appearance and in conduct from their fellow-men who are in full possession of virile power. Even though executed with talent and spirit, the work of an impotent man bears the stamp of impotence.

In the year 1878 I happened to be in the Paris Salon with one of the most famous French painters. While contemplating some paintings, the great master, to whose words a crowd of artists were eagerly listening, said, "That painter must be impotent." To a question of mine the master replied that he was able to tell by a picture, not only whether it was painted by a young man or an old one, but also the

[1] Lallemand, Pertes séminales, tome ii., 1re partie, p. 132.

condition of the artist's sexual power. To-day I give full credit to this assertion, as I am convinced that with some experience one can distinguish an impotent man from a virile one merely by his looks, demeanor, ideas, words, and works.

The exterior of an impotent man, whether his impotence be real or imaginary, does not always suggest physical weakness; on the contrary, many present a very healthy appearance, and are stout. The keen-eyed public have baptized this corpulency "capon-obesity." In spite of the apparent healthiness, the impotent man is generally melancholy, discontented, and peevish. The prematurely impotent are, without exception, ill-humored, pessimistic and can be cheered up even for a short time only with great difficulty. Most of them are grudging, cowardly, envious, and wicked. They are all very jealous, as may easily be understood. The younger they are, the handsomer their bodies, the higher their social rank, the more pronounced is their bad character.

The character of a man must, as a matter of course, be considerably affected by the consciousness of impotence. No one is more severe than the impotent in passing judgment on his neighbor. No one so ruthlessly or mercilessly condemns a misdeed, caused by passion, against the very wise prescripts of Ethics. Since he cannot join the virile in their enjoyments of life, he makes a merit of his incapacity.

The striving of a man to found for himself a home, a family, is a stimulus to work and to the accomplishment of great deeds in his sphere of life. Such a

stimulus does not stir the impotent. Although they do not care for life, yet they are cowards. It is very seldom that an impotent man turns dare-devil and shows a contempt for death, due to despair. Some puzzling suicide cases of newly married men can thus be explained.

The impotent are incapable of love; for, as Krafft-Ebing says, "With all the morality which love needs to rise to its true and pure character, its most vigorous root is nevertheless sexual passion. Platonic love is a nonentity, a self-deception, a wrong designation for cognate feelings."[1] Similarly, ambition is closely dependent upon the sexual power, as it seldom makes its appearance before puberty.

Finally, it must not be forgotten how wretched a part is played in matrimony and in every other relation to a woman by the man who is completely or even partially impotent. He must renounce the affection and regard of a woman. Galopin[2] is quite right in saying, "Without this good friend (the woman) the dawn and evening of life would be helpless, and its mid-day without pleasure." With all the capacity for self-sacrifice which is inborn with the entire sex, women will nevertheless seldom soar to so high a degree of self-abnegation as to love an impotent man. It is the aim of every husband to hold a dominant position in his family; the more so as the weight of his voice is less elsewhere. My object is not to examine whether such a position is in the interest of the man himself and of his family, but

[1] Krafft-Ebing, Psychopathia sexualis. Stuttgart, 1886, p. 9.
[2] Le parfum de la femme. Paris, 1886, p. 101.

I wish merely to call attention to the fact that the influence of an impotent man must be very insignificant with a woman living with him, whether she be wife or mistress.

I further wish to point out that many fallen women would have continued good and faithful had their husbands not been more or less impotent. The greater share of sexual appetite roused inconsiderately or ignorantly remains unsatisfied, and much matrimonial happiness is ruined by the husband's impotence. "Tutavia la compagnia fra moglie e marito si conferma grandemente per questo atto, e non pùo far miglior cosa il marito per tenersi affettionata e pacificata la moglie, che questa e spesso. Perchè a questa foggia, tutta la casa sta in pace, e tranquilla, e tutte le cose vanno bene." (Levinio Lennio.)[1]

Now and then as mentioned before impotence leads to suicide. Marc[2] tells, for instance, of a young man who, before committing suicide, had written down the words, "I am impotent, consequently I am good for nothing in this life."

If impotence declares itself slowly and gradually, refuge is not so often taken in this safe though extreme remedy for all diseases; but is applied more frequently when the calamity shows itself at once and without a state of transition, so that the patient understands plainly that there is no help for his ailment, and thus has no time to accustom himself to his misfortune. Richerand[3] made the observa-

[1] Mantegazza, Igiene dell'amore. Milano, 1881, p. 95.
[2] Mantegazza, op. cit., p. 143.
[3] Roubaud, Traité de l'impuissance. Paris, 1876, p. 66.

tion that after penis amputation the patients become melancholy, and consequently are more subject to malignant wound fever (?), which often causes death, while other mutilations by surgical operations are borne with fortitude. Lallemand[1] tells of a man forty-five years old who, after penis amputation, when on the point of leaving the hospital, received a visit from his wife, after which he grew gloomy, mournful, taciturn, and died suddenly. The most careful autopsy failed to reveal any cause of death; Lallemand ascribes the fatal result to despair. In this case the patient had so much the more reason for despair, as the sexual appetite had not vanished with the loss of the penis. The Russian Skopzi after having been maimed suffer a complete change of character: they grow egotistic, malicious, hypocritical, and covetous.[2] It is to be observed, however, that surgical operations performed on the genitals can cause genital reflex neuroses in the form of melancholia.[3]

Even very old people are not exempt in this respect. In February, 1900, I amputated the penis of a man seventy-three years old. Two days after the operation he grew violent and almost unmanageable, though the temperature remained normal at all times. The formerly jovial gentleman became dismal, irritable, and taciturn. He remained in

[1] Op. cit., p. 38.

[2] Mantegazza, Gli amori degli nomini. Milano, 1886, p. 182.

[3] Kurz, Zwei innere Urethrotomien, gefolgt von Melancholie. Ref. der med.-chir. Rundschau. Wien, 1887, Heft xviii, p. 683.

good health for several years after the mutilation, but was always ill-humored.

The fate of being impotent is borne with more stoicism when along with the loss of virility goes that of every desire for intercourse with the other sex. Here again we find in Lallemand[1] a typical example: A man about thirty years of age, who, in consequence of an injury of the occiput, was left without sexual appetite, and whose testicles were atrophied, used to talk in a joking way and quite merrily about his injury and its sad consequences. No doubt the personal character is of great importance here, as each individual shows different characteristics in the reaction following injury.

The impotent are misanthropic and distrustful. They are ever afraid that the defect of which they feel ashamed may be discovered. All this is aggravated by self-reproaches of the worst kind, for almost every one believes he has himself caused his misfortune. A reason for self-reproach is soon found, for who has not indulged in real or imaginary sexual excesses or self-abuse?

These people are so much ashamed of their deficiency that they will not acknowledge it, even to the physician, except in a most reluctant manner. It is, therefore, advisable to meet the communications of an impotent person with the required scepticism from the very beginning. This sense of shame is more intense with people of humble condition than with those of a higher social rank, who will not infrequently speak of their impotence in a

[1] Op. cit., p. 41.

joking tone, even where it might not be expected, in order thus to make you believe the contrary. I had an opportunity to observe a case where a member of the nobility was by every one considered to be impotent. Under the cover of this reputation the nobleman was following up several intrigues, until at last it was discovered that his inability was not to be relied upon.

So far we have had under consideration the influence of impotence upon the mind, and have seen that it is of no slight degree. The influence of this disease upon the body is no less important. We shall at present neither consider circumstances which are the cause, but not the consequence, of impotence, nor circumstances which may be the consequence of spermatorrhea.

The cessation of so important a process as the sexual function cannot occur without producing by itself an essential change in the individual. According to Arndt,[1] there is no disturbance of any function of a man without change in the man himself. Real impotence has a powerful influence, primarily over the mind, and secondarily over the state of health of the entire body. It is conceivable that a person who is dull or mournful and always ill-humored, who is plagued by a bad thought, must by degrees lose his appetite, suffer from indigestion, and consequently must become physically ruined; though, no doubt, one often meets, as previously said, impotent persons looking thoroughly well and healthy.

[1] Die Neurasthenie. Wien und Leipzig, 1885, p. 3.

Howell[1] voices a popular sentiment when he says: "The reproductive organs might be eliminated entirely and the power of the body as an organism to maintain its individual existence not be seriously interfered with." No doubt this is true when we consider that the oyster also has an "individual existence."

Impotence besides being a very *serious* disease is also of *frequent* occurrence. "Experience proves that the large towns especially harbor crowds of persons suffering from a diseased nervous system, who, in the different stages of life, are afflicted with sexual infirmities which throw a gloom over their existence. Youths who have scarcely stepped beyond the threshold of puberty, adults who are at the entrance or perhaps at the zenith of manhood, no less than individuals who have already reached the autumn of their lives, make up elements of these numerous groups of the sexually discontented who are suffering from diseases of the nervous system, as burdensome as they are unyielding. Victims of an unequal fate, some more, some less severely wounded in the combat against untoward circumstances—unequally furnished with chances for improvement—all these pitiable persons are nevertheless animated with the same desire, that of being once more admitted to the full enjoyment of life and being able to found a family."[2] "It is quite

[1] A Text-book of Physiology, Saunders, Philadelphia and London, 1913, p. 944.

[2] Rosenthal, Ueber den Einfluss von Nervenkrankheiten auf Zeugung und Sterilität. Wiener Klinik, 1880, p. 136.

incomprehensible that there should be physicians who almost absolutely deny the existence of impotence."[1]

Every being instinctively longs for enjoyment. The desire for enjoyment is certainly justified, and only hypocrites or people with limited views of things in general can demand that man shall work and fulfil duties without the moments of gladness and gratification that are so scarce in comparison to the bitterness of life. "La nature veut que nous jouissions."[2]

Sensual love and the so-called ideal love, which grows out of it, but which is quite an impossibility where there is no sexual vigor, are foremost among the few joys and gratifications.

Those who are seeking help for their impotence are surely very pitiable subjects; they feel themselves unutterably unhappy, and, in most cases, entertain thoughts of suicide, though they seldom have the necessary courage to carry them out. A good man cannot refuse his assistance to them. It cannot be the physician's task to question whether one or another of them owes his infirmity to his own or somebody else's fault. Nor can it be expected from the medical man that he should investigate what may be the object or aim of any patient who is endeavoring to recover his virility. The physician has to keep in view only one object, that he is in the presence of an unfortunate person whom he must help if he can.

So much for the determining of my standpoint

[1] Lionel S. Beale, Our Morality. London, 1887, p. 34.

[2] Renan, L'abbesse de Jouarre. Paris, 1886, p. 29.

and to justify the total separation of impotence and sterility.

And now the question suggests itself, *What is impotence?* It is well-nigh impossible to give a precise answer. The authors seem not to be satisfied with the simple explanation, that it is loss or lack of power to copulate. Maximilian v. Zeissl, for instance, gives the following definition: "Impotency is a collective idea of the various pathological details which hinder a man in the carrying out of coitus, so that the ultimate purpose, viz., that of begetting a child, is not attained in spite of sexual intercourse with a fertile woman."[1] This definition is far-reaching, because, though we may include both the impotentia cœundi and the impotentia generandi, it should yet be said that, in spite of sexual intercourse with a fertile woman, the begetting of a child "must" remain unattained.

It is much easier to give a definition of sexual virility. Sexual virility is that condition of the body, of the nerves connected with the generative organs, of the centers of these nerves, and of the genital organs themselves, which enables an individual to accomplish the sexual act with an acceptable woman always, under all circumstances, and within the limits set by nature.

This ideal condition of virility is somewhat rare with men following the customary manner of life of our days, and in any given case it will generally last for but a short time. Every deviation from this

[1] Dr. M. v. Zeissl, Ueber die Impotenz des Mannes und ihre Behandlung. Wiener med. Blätter, 1885, Nr. 15.

ideal condition must, indeed, be reckoned as a starting-point of impotence. The lesser deviations are not taken into account, and are generally considered as in the nature of things.

When virility is in full vigor the sight, the slightest touch, the first embrace of the desired woman must cause sexual desire and the erection necessary to the performance of the act. The individual is in the same degree approaching impotence when he requires longer preparations and longer and more intense excitation to produce the necessary sexual rousing. Of course, we do not consider here the repetition of coitus after short intervals. The reverse of the aforementioned ideal condition is that state which we call total impotence, in which condition the individual can never have an erection or experience excitement, and can, therefore, never, under any circumstances, perform the act of coition. As nature never progresses by leaps and bounds, so these two forms of sexual capacity do not pass abruptly from one into the other, but between them are numberless transitory forms of impotence.

Although this essay is written for medical men only, who are conversant with the anatomy of the genitals and with the physiology of procreation, we shall devote a few pages to both Anatomy and Physiology. In the course of years and the throng of professional occupations small matters escape the memory of the practitioner, and occasionally we may read again, with profit, that with which we are supposed to be well acquainted.

CHAPTER I.

ANATOMY.

We shall now give a rough sketch of the male organs of reproduction. For more minute study we refer the reader to the great number of excellent anatomical works.

The male genitalia have been divided into different sections; but as this separation contributes in nothing to the clearness of the subject, we shall simply discuss the different organs in their turn.

The *testicles* (testes, testiculi, orchides, didymi) are a pair of oviform, glandular organs. We shall first consider the coverings which protect and support them. Proceeding from the outside inward, we find first the outer skin starting from the perineum, from the inner surface of the upper thighs, from the root of the penis, and from the pubis, and forming the *scrotum* or purse. The whole of the scrotum appears asymmetrical, hanging a little lower on the left side. The slight enlargement of the cutis forming the median raphe, which runs from the perineum forward to the inner surface of the prepuce is not exactly in the median line, but draws somewhat to the left. This raphe separates externally the whole genital apparatus into two halves, thus indicating the inner division.

At the scrotum we find the epidermis, cutis, and

tunica dartos. The *epidermis* is distinguished by the amount of pigment it contains; the *cutis*, by a strong growth of hair, sudoriparous glands, and a rich rete of lymphatics. The *tunica dartos* is a fibrous, fleshy membrane, consisting of rather strong, smooth, muscular fibers, elastic, without fat, and ligamentous in character. Still proceeding inward, we next come to the *tunica vaginalis communis*, which envelops the testicle and spermatic cord. That part which surrounds the spermatic cord is loose and spongy, containing here and there adipose tissue, and is intimately connected with the spermatic cord and the scrotum. This portion of the tunica vaginalis communis consists of three layers—an inner, an outer, and a median muscular layer. These layers or membranes are not in all parts distinctly separated from one another, because the *musculus cremaster* which separates them runs in isolated flat bundles down the spermatic cord; between the bundles the two layers run into each other. These isolated flat fasciæ of the cremaster pass in a fan-like manner downward, twining around the testicle. These muscular bundles have the power to draw the testicle upward and outward. Contraction of this muscle ensues reflexly from violent movements of the abdomen; also as the result of independent action. The testicle may, besides, be raised through the contraction of the muscular fibers in the tunica dartos.

Immediately enveloping the testicle we find the *tunica vaginalis propria*, which may be divided into two layers—namely, the parietal membrane, which is connected with the tunica vaginalis communis, and

the visceral membrane, which is united with the albuginea of the testicle and the epididymis.

As the testicles produce the sperm, they are the most important part of the male generative organs. The testicles lie side by side in the scrotum, hanging down between the thighs, below the symphysis pubis, each in its own compartment, and separated from its fellow by a median membranous partition—the *septum scroti*. The testicles are in the abdominal cavity until the seventh month of fetal life, when they descend through the inguinal canal into the scrotum.

The left testicle is slightly larger than the right one and hangs a little lower, this arrangement being very appropriate, as it prevents friction of the testicles in case of the sudden pressing together of the thighs.

In the testicle we have, first of all, to distinguish between the testicle proper (Henle calls it testicular gland, others call it main or chief testicle) and the epididymis.

The *testicles* are oviform in shape, flattened laterally, with the greatest diameter four to six centimeters in length, directed obliquely from above downward, forward, and outward. The weight of the testicle is fifteen to 24.5 grams, its cubic contents twelve to twenty-seven cubic centimeters, its length five centimeters, its breadth 2.5 centimeters, its thickness three centimeters. Weight and volume, length and breadth, are subject to great variations in different individuals, and fluctuate considerably even in the same individual. In spite of Henle's[1]

[1] Handbuch der Anatomie. Braunschweig, 1874, p. 366.

opinion to the contrary, my experience teaches me that this fluctuation in the volume of the testicle corresponds to the amount of seminal fluid contained. It is true that the testicle does not collapse immediately after coition, but observation has convinced me that the volume increases after unusual abstinence; so that I feel sure that contraction of the scrotum is here not the main cause of variation.

Having noted that the testicle is an oviform body flattened laterally, we observe further two points, the upper and the lower, and two margins (anterior and posterior) connecting them; also two flat surfaces, an inner and an outer. The superior point and the posterior margin are covered by the epididymis and the beginning of the seminal cord.

Directly investing the testicular gland itself is the *tunica albuginea*. This is a dense, fibrous membrane, brilliantly white, 0.6 millimeter thick, containing numerous ramifications of veins and small arteries, and becoming considerably thicker and more vascular toward the posterior margin. From its inner surface it sends off numerous bundles of connective tissue, and, at almost regular intervals, stronger flat transverse bundles, dividing the tissue of the testicle into numerous conical lobules, the number of which is placed by different authors at from one hundred to three hundred. Each lobule contains a great number of very fine tubules, called *spermatic canals*, or vasa seminalia. These have a volume varying, according to the degree of distention, from 0.1 to 0.2 millimeter. They inosculate with one another, and are very tortuous, so that it is

difficult to disentangle them. Their number is estimated at eleven hundred.

As we have stated, the tunica albuginea becomes much thicker toward the posterior margin, this enlargement forming what is called the *corpus Highmori*. Here the seminal tubes collect, three to six inosculating, and grow less and less tortuous until they become almost straight and form the *rete vasculosum* (seu Halleri) *testis*. From this rete start about twenty larger tubes running almost in a straight line, and passing through the tunica albuginea into the epididymis; there they form lobuli again, giving rise to that single tube with manifold convolutions which constitutes, in the main, the parenchyma of the epididymis.

Besides the seminiferous tubules, the parenchyma of the testicle contains comparatively large winding vessels with thick walls and a cellular mass, of the function of which we still know nothing positive, and which many anatomists and physiologists consider to be connective tissue. Before entering the epididymis the seminiferous tubules change in structure and become simply excretory ducts.

The *epididymis* properly considered is merely an excretory duct of the testicle. It is a body weighing generally 1.5 grams, its cubic contents being 1.78 cubic centimeters. Its upper end is globular in form and tapers off to pass into the vas (recte ductus) deferens. The epididymis is also invested with a tough albuginea, which has the same structure as the albuginea of the testicle, but is not so thick, its thickness being only 0.04 millimeter. The inner

surface of the albuginea of the epididymis also sends off septa of connective tissue into the parenchyma, dividing it into lobules, though superficially only.

The unfolded *vas* (recte ductus) *epididymis* has a length of about six meters, with a diameter of about 0.44 millimeter, and gradually dilates as it approaches the vas deferens. Besides this principal duct, the epididymis contains also one to three small blind canals, the *vasa aberrantia* and the so-called *hydatis Morgagni*, which are said to be remnants of embryonic conditions.

At the lower point of the testicle the canal of the epididymis is turned directly upward in order to reach the orificium cutaneum canalis inguinalis; it is then called the *vas deferens*, and, together with the vessels and nerves running in the same direction, forms the seminal cord (plexus spermaticus seu pampiniformis). The so-called vas deferens is no vas, but a duct; we shall drop the misleading name and term it ductus deferens.

The tortuosity of the epididymis continues into the first part of the ductus deferens, but the tube becomes gradually more nearly straight, its walls at the same time increasing in thickness and extent. The total length of the seminal duct is about fifty to sixty centimeters. According to Henle,[1] the straight part is about three millimeters in diameter, one-sixth of which is taken up by the lumen, so that the thickness of the wall is 1.5 millimeters. On this thickness depend the firmness and cylindrical form of the ductus deferens.

[1] Op. cit., p. 382.

Before the seminal duct unites with the seminal vesicle it forms the spindle-like *ampulla of Henle.* The lumen in this place becomes almost doubled in extent, the thickness of the wall increasing also. The mucous membrane is folded, and resembles a great deal that of the seminal vesicles.

The ampulla is a very important part of the sexual organs, but has so far never received proper consideration. At the end of the ampulla the vas deferens grows thinner again, and has outlet in the inferior pointed end of the seminal vesicle lying at the outer part of the base of the urinary bladder, between the bladder and rectum. The end of the ductus deferens forms with this pointed end of the seminal vesicle the ductus ejaculatorius.

The *seminal vesicles* are really hollow glands of a very irregular form, resembling a very knotty, somewhat flattened club. Even in the same subject the two vesiculæ seminales differ in form and size. The length of the vesiculæ seminales varies from four to 8.5 centimeters, their diameter from 0.6 to 0.7 centimeter. The superior end is blunt, usually having a hump-like protuberance, which, looked at from the outside, resembles a small hunch. The entire surface looks uneven or rough, the little hunch-like prominences corresponding to depressions on the inside.

The interior of the seminal vesicles is still more peculiar, and varies just like the exterior. The mucous membrane is of a yellowish tint, infolded, has little pits, and forms depressions and longer or shorter diverticulæ. The organ has altogether a cellular

appearance. In the mucous membrane there are some peculiar glands, which, though the granular epithelium is different, have a structure similar to that of the mucous glands, but produce a secretion essentially different from mucus, as it does not congeal in acetic acid.[1]

By the union of the deferential ducts with the vesiculæ seminales the *ejaculatory ducts* are formed about the superior margin of the prostate gland, but with numberless variations in the share provided by the individual organs in this formation.

The parietes of the ductus ejaculatorius are about 0.4 millimeter thick, the lumen one millimeter in diameter. While the lumen runs from two to three centimeters forward and downward through the prostate, it diminishes in volume; the mucous membrane, which at first resembles that of the vesicula seminalis, losing gradually its folds and its glands, as well as its yellowish tint. The two ejaculatory canals also frequently exhibit variations with respect to form, course, convergence, and mutual contact. Even coalescence of the two ducts into one may take place. The ejaculatory canals lead into the prostatic part of the urethra near the verumontanum or colliculus seminalis, opening by circular mouths. The fact, minutely described by Henle,[2] that the muscular membrane of the ductus ejaculatorius within the prostate assumes the character of a cavernous tissue seems to me of special importance.

[1] Compare Barnett's very interesting anatomico-surgical study: The vesiculæ seminales. Transactions of A. Urol. Ass., 1909, pp. 65–68.

[2] Op. cit., p. 388.

The *prostate*, shaped like a chestnut or flattened cone, embraces with its anterior surface the neck of the bladder and the first portion of the urethra, its posterior surface resting on the anterior wall of the rectum. This posterior part of the gland is divided into two lobes by the ejaculatory duct. The texture of the prostate is firm, the borders rounded off. The superior border or margin which surrounds the bladder is broader, slightly bent in the middle, while the inferior margin tapers off. The greatest diameter of the prostata measures thirty-two to forty-five millimeters; from the base to the point it is twenty-five to thirty-five millimeters; its thickness, fourteen to twenty-two millimeters. Its weight is estimated at seventeen to 18.5 grams.

According to Henle, the prostate comprises three different organs, or, rather, structures—a number of racemose glands, the glandula prostatica; a closing muscle of the bladder, composed of smooth muscular tissue, the sphincter vesicæ internus; and a transversely striped closing muscle of the bladder, the sphincter vesicæ externus. Besides these, we have to notice in the wall of the ductus ejaculatorii, of the sinus prostaticus, of the urethra, and of the colliculus seminalis, the peculiar structure which sends off shoots into the substance of the prostata and also the exterior coat of the glandular portion, together with the separating walls or septa starting from it. Walker,[1] however, claims that the whole muscular

[1] George Walker, A contribution to the study of the anatomy and physiology of the prostate gland . . ., Johns Hopkins Hospital Bull., Oct., 1900.

structure of the organ is arranged primarily to compress the prostate, and not to act as a vesical sphincter.

Some superficial authors seem to think that the anatomy of the sexual organs is a closed chapter and should only be treated in text-books. Kolischer[1] evidently is not of the same opinion and emphasizes that Zuckerkandl and Tandler have called attention to the fact that our usual terms describing the prostatic anatomy and the pathology of prostatic hypertrophy are in need of a thorough revision. Our accepted division of the prostate in two lateral and one median lobe does not correspond with the anatomic facts, and that what we call "the surgical capsule" of the prostate is a misnomer. Zuckerkandl and Tandler agree with Freŭdenberg's statement that the prostatic capsule of the surgeons consists of compressed prostatic tissue.

It is now generally conceded that the physiological function of the prostate is almost exclusively a genital one. The prostatic fluid mixes with the spermatozoa, the product of the seminal ducts and the seminal vesicles to make up the fluid which we call semen. The muscular part of the prostatic gland causes the action of the ejaculatory ducts and probably prevents the ejaculated semen from flowing into the bladder. Herrick[2] says that the former idea, the prostate greatly aiding in the control of the

[1] A prostatic study, Jour. Amer. Med. Assoc., July, 6, 1912, p. 8.

[2] Prostatic hypertrophy and its radical cure. Med. Record, Aug. 15, 1903, p. 243.

bladder is given up, as in eunuchs with atrophied prostates, or in children in whom they are not developed, and in women in whom they are absent, urinary control is not interfered with, and in many cases of complete prostatectomy incontinence is the rare exception.

The main substance of the prostata is the real gland, which does not reach complete development until after puberty, as the glandular ducts and vesiculæ develop greatly at the expense of the substance of the connective tissue, which predominates before puberty. They give to the whole gland a yellowish-red tint and a spongy appearance.

The relative proportion of the muscular fibers and the glandular substance in the prostate varies considerably in different individuals. Morris[1] considers the muscular element, comprising both striped and unstriped fibers, to represent about one-half of the entire mass. In one subject the glandular spaces may be predominant, and in another their contractible coatings, so that in one person the secreting function of the prostate may predominate, and with another the motory.[2] Unfortunately, we have, as yet, no observations to determine what influence this difference in the structure of the prostata has on the sexual life.

The excretory ducts within the prostata unite into an indefinite number of stems, which open into the urethra at the colliculus seminalis anterior to the

[1] Human Anatomy. Philadelphia, 1899, p. 1022.

[2] Ruedinger, Zur anatomie der Prostata, des Uterus masculinus und der Ductus ejaculatorii. Muenchen, 1883, p. 4.

mouths of the ductus ejaculatorii. Two of the largest stems open almost symmetrically, side by side, quite close to the openings of the ductus ejaculatorii; the others, from seven to fifteen in number, open rather more in front, asymmetrically and with variations.

The *secretion of the prostata* is of the nature of mucus, but is only slightly congealed by acetic acid. It is rather significant that even the chemical reaction of the prostata's secretion is not an undisputed item. While Fürbringer and Finger claim that the motility of the spermatozoa is impaired by an alkaline catarrhalic secretion of the prostata Schultz[1] found the secretion of the prostata in men of normal sexual conditions to be of alkaline reaction.

We now pass to a short description of the real organ of copulation, the penis, which, with its corpora cavernosa, is perforated by the urethra.

The *urethra*, which runs from the neck of the bladder to the exterior orifice of the penis, is divided into three portions—the pars prostatica, pars membranacea, and pars cavernosa. The course of the urethra resembles the letter S—*i.e.*, it has two bends or curves, of which the posterior retains its shape even during erection. The length of the urethra varies very much, and is from fourteen to twenty two centimeters, the pars prostatica = 2 to 2.8 centimeters, the pars membranacea = 1.50 to 2.50 centimeters, and the pars cavernosa = 10.5 to 16.7 centimeters. There is a similar variation in the lumen of the urethra. It is narrowest in the pars

[1] Wien. klin. Wochenschrift, xvii, 43, 1904.

membranacea, and of varying width, but least extensible, at the orificium externum.

In the pars prostatica the lower wall stands out, forming the *colliculus seminalis* (caput gallinaginis, verumontanum, crista urethralis). This is the most important part of the urethra, with regard to the subject we are treating, as it is the seat of many diseases. The caput gallinaginis begins, according to Henle, at the urethral mouth of the bladder, with two longitudinal folds, converging toward the median level space; along with these two there is occasionally a third, the median fold. The caput gallinaginis may begin with a greater number of smaller folds. This crest reaches its greatest extent, in height and breadth, at about the middle of the pars prostatica, immediately before (under) the sharp bend; it then decreases again even less abruptly, its transverse diameter diminishing at the same time. The anterior end extends, in the form of a narrow ridge, far into the pars membranacea, and often divides, toward the end, into fork-like branches at an acute angle.

This description is very definite, indeed, but indicates clearly the great variations we meet in the structure of the crista urethralis. These differences become still more numerous in consequence of disease or the frequent use of instruments. Age also has a great influence on the formation of this organ, so that variations are met with at every autopsy as well as at every endoscopic examination. The same thing may be said of the measurements of the breadth and height, stated to be about three millimeters.

The mucous membrane of the crista gallinaginis is laid in small creases, which open out during erection.

Besides the above-described openings of the ductus ejaculatorii and of the excretory ducts of the prostate, we find at the anterior slope of the colliculus seminalis a slender follicle without outlet, the *sinus prostaticus* (Morgagni, also utriculus prostaticus or vesicula prostatica). It can scarcely be determined what function, if any, this structure has. At any rate, the statement of Rüdinger,[1] that the uterus masculinus has remained capable of contraction in a very high degree, in virtue of the smooth muscular fibers, which can be demonstrated in all parts, may perhaps seem to justify the assumption that it performs some functional, possibly a secretory, part or rôle.

The *pars membranacea* (s. carnosa, s. isthmus) *urethræ* is that part of the urethra which, leaving the prostata, penetrates into the diaphragma urogenitale to enter the corpus cavernosum urethræ at the inferior surface of the diaphragm; from this point on it is called the pars cavernosa.

Next to the posterior border of the diaphragm, between the layers of the musculus transversus perinæi profundus, lie *Cowper's glands*, belonging to the racemose variety. These are two lobulated bodies, resembling a mulberry, spherical, sometimes pressed flat, and measuring from four to nine millimeters in diameter. Their excretory ducts, three to six centimeters long, converge and have their outlets close together in the urethra, at the end of the bulbous

[1] Loc. cit.

and somewhat dilated part of the pars cavernosa. It is always difficult and frequently absolutely impossible to locate these outlets. Even when using Goldschmidt's endoscope they are frequently confused with the lacunæ Morgagni. At autoptic examinations it is often necessary to introduce a bristle in order to locate the real endings of Cowper's glands.

The mucous membrane of the *cavernous portion* of the urethra is in longitudinal folds. Besides the outlets of Cowper's glands, it contains the very fine *glands of Littré* (0.1 millimeter average diameter) and the very small *lacunæ Morgagni*, dot-like in appearance. The lumen of the urethra is dilated at both ends of the cavernous portion, corresponding to the bulbous part and the fossa navicularis.

The entire urethra is lined with cylindrical epithelium, which in the fossa navicularis, and occasionally a little before, changes into pavement epithelium. Within the region of the pavement epithelium there are papillæ sometimes 0.22 millimeter in height and of diverse forms. Vajda[1] declares that he has discovered vascular papillæ of sundry sizes and shapes in the whole mucous membrane of the urethra, nearly as far as the pars bulbosa; and that the pavement epithelium of the fossa navicularis extends over the whole surface of the urethra.

The wall of the urethra consists of the mucous membrane, to which is annexed a layer of areolar tissue, the meshes of the latter being stretched in the longitudinal direction of the urethra. This areolar

[1] Beiträge zur Anatomie des männlichen Urogenital-Apparates. Wien, 1887.

layer is, in the prostatic part, the membranous part, and the first portion of the cavernous part, enclosed by a layer of smooth muscular texture, with which many elastic fibers are interwoven.

The areolar tissue, which constitutes the areolar layers of the ductus ejaculatorii, the pars prostatica urethræ, and the pars membranacea urethræ, is called by Henle *compressible areolar tissue*, in contrast with the erectile areolar tissue, of which the corpora cavernosa urethræ et penis consist.

The pars cavernosa urethræ is enveloped in a cylinder of areolar tissue, which, toward the posterior end, gradually thickens to a club-shape and forms the so-called bulbus urethræ; while the anterior part suddenly spreads out, covers the anterior ends of the corpora cavernosa penis, and thus forms the glans penis. Each of the anterior ends runs off into a blunt point, which is covered by the anterior expansion of the corpora cavernosa urethræ.

The *corpora cavernosa penis* are a pair of bodies of cylindrical shape, slightly flattened on the inside. They come in contact in the even median surface, while their posterior ends, the so-called roots, diverge and fasten themselves on the inner surface of the lower border of the inferior branch of the pubis. The superior and lateral surfaces of the corpora cavernosa can be felt through the outer skin, while the inferior surfaces in their contact form the urethral furrow for the reception of the corpus cavernosum urethræ.

We must be brief in the description of the corpora cavernosa, as details would lead us too far. Each

corpus cavernosum has a ligamentous, brilliant white tegument, consisting of connective tissue and elastic fibers, in which there are a few very sinuous blood-vessels. This cover, called *albuginea of the corpora cavernosa*, is about two millimeters thick when the member is flaccid, but grows much thinner when the corpora cavernosa are filling.

From this albuginea proceed into the interior of the corpora cavernosa transverse vascular bundles of connective tissue, consisting of elastic filaments and smooth muscular fibers, and parietes or septa, with small interstices between. Thus is formed the spongy texture of the corpora cavernosa. These small interspaces are coated with vein epithelium; all are interconnected by emissariæ.

Henle asserts that these interspaces are vascular plexuses between the ends of arteries and the beginnings of veins, as neutral in character as the capillary rete of other tissues. They may be considered capillaries which have dilated and run together at the cost of the intermediate tissue, partly through atrophy of the latter, and which have reduced the intermediate tissue to a number of transverse bands and leaf-like septa, in which run some supplying vessels as well as ordinary capillaries of the usual diameter.

We omit as unnecessary a description of the cutis of the prepuce, the frenulum, and, in a word, of the exterior of the penis. Every physician is aware of the individual differences in the volume of the entire penis, of the length and form of the prepuce.

The inner surface of the prepuce is devoid of hair,

smooth, and shining. The surface of the glans when the member is flaccid is slightly furrowed, and consequently dull in appearance; during erection it becomes even and shining. There are numerous sebaceous glands on the arched surface of the glans, on the prepuce, and around the frenulum; moreover, there are many papillæ differing in number and size. Sometimes single papillæ are found also on the inner surface of the prepuce where it joins the corona.

Following the lucid description in Morris' Human Anatomy, we find that the *nerves* of the scrotum are derived from the genitocrural and superficial perineal; the nerves of the testicle from the aortic, renal and hypogastric plexuses. The nerves to the vas deferens form a slender plexus which accompanies that structure as far as the internal abdominal ring, where it unites with the spermatic plexus. The nerves of the vesicula seminalis and the prostata are derived from the hypogastric plexus. "The secretory nerve of the prostate gland is the descending branch of the inferior mesenteric ganglion. The vasodilator fibers of the prostate are contained in the nervus erigens and its two branches."[1]

The integumentary structures of the penis are supplied by the genital branch of the genitocrural and the superficial perineal branches of the pudic. The erectile bodies receive filaments from the dorsal nerve of the penis, the superficial perineal, and the hypogastric plexus.

In regard to *blood-and lymphatic vessels* it is of

[1] Ott, A Text-book of Physiology, 3d ed., Phila., 1909, p. 858.

special importance to know that the deferential, spermatic, and scrotal blood-vessels intercommunicate freely, as do the testicular and scrotal blood- and lymph-vessels behind the epididymis, which explains why the ligature or excision of the spermatic veins and artery leaves the nutrition of the testicle unimpaired; it likewise accounts for the extension of inflammatory infections of the epididymis to the scrotal integument.

The prostatic arteries spring forth from the adjoining vesical and hemorrhoidal vessels. The veins receive the vena dorsalis penis, then form the plexus Santorini, and end in the adjacent vesical veins. In view of the frequently attempted ligation and excision of the vena dorsalis penis as a cure for some forms of impotence, it is important to know, that many a would-be operator mistook the vena cutanea superficialis for the dorsalis penis, and performed an operation just as simple as useless.

The lymphatic vessels end in the pelvic glands, though there is frequently to be found a small gland on both sides of the base.

The envelopes of the penis are supplied by the external pudic, the superficial perineal, and the dorsal artery; the first from the femoral, the others from the internal pudic. The corpora cavernosa are supplied by the cavernous branch of the pudic; the corpus spongiosum by the special artery of the bulb (internal pudic) and the dorsal artery.

The veins of the coverings of the penis end in one or two superficial dorsal veins which run in the connective tissue layer between the dartos and fascial

sheath, and end in the long saphenous and femoral veins. The deep veins of the corpora cavernosa and corpus spongiosum terminate partly in the plexus of Santorini (chiefly through the deep dorsal vein), and partly in the internal pudic. They communicate freely with each other and with the superficial veins.

The lymphatics run with the veins, those of the coverings being collected by superficial dorsal trunks that pass to the inguinal glands. The deep lymphatics from the corpora cavernosa and corpus spongiosum for the most part join a dorsal cord which runs with the deep dorsal vein to end in the inguinal glands; a few probably reach the pelvic and lumbar glands.

CHAPTER II.

PHYSIOLOGY OF THE SEXUAL ACT.

We shall now consider the male sexual functions, with the exception of fecundation, and shall give our attention to a short sketch of the physiology of coitus alone, without mentioning the processes which cause fecundation. Besides, in the following chapters we shall pay due attention to the physiology of our subject.

It is generally asserted that, with regard to procreation, nature has imposed on the woman all the burdens, and reserved only pleasure for the man. This is so, indeed, if we take into consideration that the woman, after conception, has to carry and nourish the fruit in her body for nine months and then undergo the labor of parturition. So far as coitus is concerned, however, in and for itself, the greater part devolves upon the man, and, moreover, in comparison with the woman, he is at a great disadvantage. I shall not dwell longer on this subject, as, strictly considered, it does not enter into the framework of our purpose, and I shall make the man alone the object of my discussions.

Sexual Maturity.—In order to perform normal coitus the individual must be in possession of all the qualities necessary; in the first place, he must have attained *puberty*. In our climate males reach

puberty, on an average, at the age of seventeen. Puberty announces itself by various exterior signs, the most striking being the alteration of the voice, which grows deeper and sounds rough and broken during the period of sexual development known as the age of puberty. This deepening of the voice is caused by a certain series of changes in the larynx: the processes vocales become cartilaginous, the larynx larger and protruding, the vocal cords lengthened. Furthermore, the bones and muscles grow stronger, the lungs larger; the pubic region becomes covered with hair. But the greatest changes occur in the genitals, the testicles enlarging and beginning to secrete. The tissue of the penis, capable of enlarging, develops disproportionately, and the prepuce loosens from the glans. The sexual impulse awakens, and, if not satisfied, results in pollutions.

This transition of the child into a pubescent man requires about two years for its accomplishment. Thus, generally speaking, the young man would be nubile at the age of seventeen.

Here I must assert my opinion, in opposition to others, Roubaud, for instance, who says that spermatozoa are never found in the semen of youths under eighteen years of age. I have repeatedly discovered perfectly developed spermatozoa in the semen of Frenchmen, Italians, Croatians, and Hungarians hardly sixteen years old. I must remark, however, that most of these were youths who sought for sexual gratification prematurely.

In 1886, I performed the autopsy on a sixteen-and-a-half-year-old shepherd, who had been accidentally

drowned, and whom his comrades had declared to be an onanist. I found in the testicles, as well as in the excretory ducts, spermatozoa in every grade of development. I also found a great quantity of spermatozoa in the semen of the second pollution of a Croatian peasant boy, who was not quite sixteen years old, who did not masturbate, and who never had sexual intercourse with the opposite sex.

The individual retains his power to perform the sexual functions during a greater or less period of his life. There are people who, in their fiftieth year become sexually useless in a quite normal manner, according to constitution, temperament, and habits. On the other hand, it is impossible to state any age at which there have not been or may not be men sexually capable. The procreative power is, however, most likely to be extinguished after the age of sixty, while the capacity for intercourse is certainly preserved much later. Girault found that the spermatozoa change after the fifty-fifth year, the heads growing larger and the tails shorter; this alteration certainly not contributing to their power of movement.

Sexual Orgasm.—The copulative power requires not only that the individual be virile and his sexual instinct unextinguished, but also that he be capable of having the necessary libido sexualis and to attain the final sexual orgasm, which is a combination of centrally or peripherally roused fancies and pleasurable sensations associated therewith. The libido sexualis is very frequently in itself a peripheral excitement, and in the sexually virile the center of

erection acts promptly through the afferent and efferent nerves. We shall see in our future considerations that there are many cases where the impotence is merely a consequence of complete or incomplete absence of sexual excitement. We shall see that anything capable of distracting the sexual excitement at the given moment, to divert the run of ideas from the sexual track, is also capable of causing sexual impotence, be it only for the moment.

What is it, then, speaking generally, that can cause the sexual orgasm? If the human male is left to himself and nothing comes to disturb the natural course, the first sexual rousing will not occur until he has reached the state of full sexual maturity; when the testicles, spermatic ducts, and vesiculæ seminales are filled with sperm. This first sexual excitement would occur even in those exceptional cases where the individual has no idea of sexual things. This is a proof that the accumulation of sperm in the seminal organs may and must occasion sexual excitement quite independently of the will of the individual. On the other hand, we see that sexual excitement takes place with persons whose seminal organs are anything but full of sperm. It is evident that here the sexual excitement comes about through mental impressions. The center for mental impressions is in the cortex cerebri. Therefore sexual excitement may be caused through the medium of the cortex cerebri, and this is generally the case.

We see individuals whose sexual sense is deadened to such a degree that the psychical impressions alone

can no longer bring about sexual rousing. Such people generally have not sperma enough in their spermatic organs to cause the rousing, and yet they are known to accomplish coition. It is well known that these persons are in the habit of putting themselves into a state of sexual excitement by irritating the exterior part of the organ, and sometimes have recourse to the most loathsome manipulations.

Indeed, we see that the most diverse irritations, practised on the outer and the inner nerves of the sexual organs, cause libido sexualis. Thus, for instance, incidental friction of the genitals by too tight garments, an inflammatory or catarrhal condition of the urethra, the pressure of a full bladder or of the rectum, anal fissures or hemorrhoidal ulcers, irritation by worms or by urine containing some medicinal or certain alimentary substances, and sometimes even the introduction of a sound or a catheter, the massage of the prostata may cause hyperemia and secondary libido sexualis.

Finally, it is known that from the most diverse organs sexual erethism can be aroused; above all, from the organs of the senses, particularly the organs of sight, touch, and smell. It must be observed, however, that these cause sexual excitement indirectly only, by means of the central organ, the cortex cerebri. The sight of a beautiful woman, the touch of certain parts of the body of a woman, the agreeable odor of a woman, a lascivious picture, all are apt to bring about sexual excitement, but only in so far as such impressions on the senses give rise to some idea or recollection in the central organ.

Sexual excitement may arise, therefore, in three distinct ways: (1) reflexly and naturally, through the accumulation of sperm in the seminal organs, in which case there is no intervention of the cortex cerebri, the seat of sensation and ideation; (2) psychically—the most frequent way—through ideas, consequently through the activity of the cortex; and (3) unnaturally, by means of direct excitation of the sexual organs.

Here I have no reference to single and rare cases, in which it is pretended that the sight of an object in no way related to sexual things, odors certainly not coming from a woman, the touch of objects not in any relation with woman, the eating of certain food not physically aphrodisiac, or even impressions on the sense of hearing, have produced sexual excitement. Observations of this nature, if they do not belong to the province of fable or are not based upon error, can be made only upon individuals psychically abnormal, and in most cases can be traced to fancies or recollections.

Thus we see that in sexual matters the *cortex cerebri and the sexual organs are in mutually dependent relations*. Ideas and desires which originate in the cortex cerebri act upon the sexual organs through the medium of other centers situated in the lumbar region; on the other hand, certain occurrences in the sexual organs, principally such as accumulation of sperm, create images and ideas of a sexual nature in the cortex cerebri, which may seem unaccountable to an inexperienced person, but which result in libido sexualis.

Seat of the Sexual Instinct.—It has not yet been discovered which part of the cortical substance is the *seat of the sexual instinct.* Ferrier places it in the occipito-temporal convolution, near the olfactory center. He found that monkeys were capable of sexual excitement after the occipital lobe had been removed. Arthur Schiff's experiments[1] to verify Flies' observations on certain genital regions in the nose, are very interesting and decidedly support Ferrier's views. Besides the center of excitement there must be a *center of inhibition*, which, with people who have learned to control themselves, is developed in a higher degree, and puts a kind of check on the libido sexualis. It is probable that this inhibitory center either does not exist in animals at all or is present in a rudimentary form only, and is but slightly developed in people on a low mental plane. However, this inhibitory center, often very beneficent, has also its disadvantageous side. In the numerous cases of sexual neurasthenia called by various names, the cause often lies in the untimely interference of this inhibitory center.

The *sexual capacity* of an individual depends mostly on the facility with which he can be brought into a state of sexual excitement. Lively and excitable men, who are easily and on every occasion thrown into sexual excitement, are more prone to excesses in venery, and, all other conditions being equal, accomplish more in this respect than phlegmatic, cold natures, with whom it requires a concurrence of several circumstances in order to produce sexual erethism. This fact explains also the well-

[1] K. k. Gesellschaft der Aerzte in Wien., Jan. 12, 1901.

known sensuality of artists, to which years ago attention was called in the celebrated Graef case at Berlin, and which derived a more conclusive proof from the prudish protest of the artists themselves.

Erection.—Sexual irritation causes the *erection* of the virile member. An erection may, however, take place without the excitement by reflex action; but such an erection is not sufficient for coitus without the addition of sexual erethismus. We apply the term erection to that physiological process which puts the male sexual member into the condition that enables it to make its way into the vagina.

We shall now direct our attention to what takes place in erection. In the chapter on Anatomy we have described the structure of the penis, and we have seen that, from the tunica albuginea of the three erectile bodies, vascular transverse fasciæ and septa run into the inner part of the corpora cavernosa, leaving small interstices, thus converting the corpora cavernosa into spongy bodies. These small hollow interspaces of the three corpora cavernosa are coated with endothelium resembling that of the veins, and are consequently venous spaces. Numerous emissaries keep all the corpora cavernosa in communication with one another, and open out into the vena dorsalis and the vena profunda penis. In the base of the penis there are the arteriæ helicinæ, which are wound in the shape of a ram's horn, in order that they may yield to the changes of volume in the erectile tissue. It is now clearly demonstrated that erection is caused by a filling of these spaces with blood, but the entire process of erection in man is nevertheless far from being explained. The researches on

this subject by Kölliker, Rouget, Langer, Eckhard, Goltz, Lovén, and Frey are highly meritorious, it must be admitted, but the *mechanism of erection* has still its mystery.

We know that erection is the result of an increased influx of blood into the areolar tissue of the corpora cavernosa, together with a decreased outflow of blood from the same bodies; but we are far from understanding the cause of that afflux, often quite sudden, and of that checking of the outflow. At first an attempt was made to explain the process by the macroscopic anatomical relations. It was supposed that either the outer transversely striped muscles or the inner smooth muscles exercise a pressure on the efferent veins. Kölliker's opinion was that the relaxation of the smooth muscles caused erection. Opposed to this opinion is the theory that the smooth muscles in the walls of the cavernous spaces do not possess sufficient strength and energy by themselves to influence erection to such a degree; for when the nervus dorsalis penis, which innervates the transverse fibrous bands of the areolar tissue of the penis, has been severed the erectile power is reduced. Eckhard has even painlessly irritated the nervus dorsalis penis of dogs under chloroform without producing an erection; nor has an erection ensued after the excitation of the central end of the severed nervus pudendus communis of a dog.[1] If it were not for these experiments, much might be said for the opinion of Kölliker; for, if these muscles were powerful

[1] Eckhard, Ueber den Verlauf der Nervi erigentes innerhalb des Rückenmarks und Gehirns. Beiträge zur Anatomie und Physiologie, Band vii, Heft 1, p. 70.

enough, their contraction would certainly prevent an erection. On the other hand, the fact that warmth causes a dilatation and cold a contraction of the corpora cavernosa speaks with some force for the influence of the smooth muscles. However, this is not sufficient for an explanation of erection, and consequently other theories regarding the physiological process of erection have always been sought. Thus, Eckhard obtained, through his experiments upon animals, the following results: Erection can be caused in rabbits by faradization of the lumbar and cervical regions of the cord, the pons Varolii, and the peduncles of the cerebrum, while irritation of the cerebellum alone has no such effect.[1] Eckhard is therefore of the opinion that the seat of erection is in the cerebrum, and that the nerves which bring about erection, starting from the cerebrum, run downward in the medulla spinalis.

Goltz, in his experiments upon dogs, cats, and rabbits, found that erection can be caused by excitation of the glans, bladder, and rectum, even after the spinal cord has been severed at the upper border of the lumbar region, and that it is also possible to cause ejaculation of sperma after destruction of the lumbar region of the cord, even though the capability of erection has been entirely extinguished.[2]

The result of these experiments on animals corresponds with clinical observations in cases of injuries and diseases of the spinal cord. Further experi-

[1] Eckhard, op. cit., p. 77.

[2] Goltz, Ueber die Functionen des Lendenmarks des Hundes. Pflüger's Archiv für die gesammte Physiologie, Band viii, Heft 8 u. 9, p. 464.

ments have shown that in the cerebrum and in the upper portion of the spinal cord there must be inhibitory nerves affecting erection; because, after section of the cord at the upper border of the lumbar region, erection can be caused more easily and more vigorously by means of electric irritation.

We have seen that erection is caused by afflux of arterial blood and an obstructed outflow of venous blood. Erection cannot, however, be brought about by mere compression or ligation of the veins. That an increased flow of arterial blood takes place is proved by the rising of the local temperature of the penis and the lowering of the blood-pressure in the neighboring inguinal arteries, and even as far as the arteria cruralis, as shown by the manometer. How this increased arterial afflux is caused is not yet explained. Certainly the acceleration of the heart's action which always takes place during sexual erethism can have but a very slight influence. Possibly, the arteries of the penis, in consequence of the sexual erethism, become dilated, and thus admit more blood. The question is, has this erethism a paralyzing influence on the muscles of the walls of the vessels, or is it an invigorating effect, causing the contractions to become more energetic and more frequent, and the arteries to pump, so to speak, a greater quantity of blood into the mesh-like spaces of the penis?

Goltz endeavors to explain the act in this way: "I share the opinion of those who compare the connection of the nervi erigentes with the penis to that of the vagus with the heart, or the chorda tympani with the vessels of the glandula submaxillaris. The prog-

ress of blood through the penis is considerably hindered during the time of physiological rest; for then the small arteries of the penis and other vascular spaces are in a state of moderate contraction. Very likely this state of tension or firmness of the vessels of the penis is maintained by the action of the small ganglia whose presence in the penis has been demonstrated by Lovén. The pressure of the ingoing blood dilates the arteries; when the resistance is removed the blood flows more freely through the areolar tissue into the erectile bodies, and puts them into a state of turgescence. Being, then, with Lovén, inclined to consider the peripheral ganglia the tonic center of the vessels of the penis, we must suppose that the nervi erigentes during their activity paralyze or check these ganglia in the same way that the vagus checks the activity of the ganglia of the heart."[1] Goltz saw this opinion confirmed by the fact that he succeeded in proving experimentally that reflex erection of the penis could be prevented by a more intense irritation of the nervus ischiadicus.[2]

Such experiments, if continued, will no doubt at some future time result in a complete explanation of the mechanism of erection, though for the present the practitioner can obtain but unimportant benefits from the above researches.

Experience teaches us that erection can be either caused or checked by different impressions from the

[1] Goltz, op. cit., p. 466.

[2] Compare: Prof. Dr. A. Spina (Prague): Experimentelle Beiträge zu der Lehre von der Erection und Ejaculation. Wiener med. Blätter, 1897, No. 10–13.

most varied parts of the body. It is certain, however, that the cerebrum is the place of origin of the sensations of sexual excitement. With this higher center is connected, by intercentral nerve-channels, an inferior, mechanical reflex center, which has its seat in the lumbar region of the cord, and governs the performance of the act of copulation.[1] It is probable that from the spinal cord issue some special nerves which straighten the erectile vessels or else diminish their extensibility.[2]

When erection is accomplished, the penis is in a condition that makes penetration possible; its volume is increased, it is of the necessary firmness and directed upward. This last condition is not caused by a contraction of muscles but is due to the circumstance that "the dorsal fascia, a sort of ligament, is denser and shorter than the one of the lower side."

Ejaculation.—Coitus ends, for the man, with ejaculation, after which the erection gives way in most cases. Occasional exceptions occur, however, though this is contrary to the usual opinion. With particularly vigorous men the relaxation of the member is not so rapid, and an immediate repetition of the act is possible, and is actually practised by men not particular in regard to cleanliness. The rule, however, is that if, after ejaculation, the man continues the movements of coitus, it is done generally out of gallantry toward the partner; all that the man really wants after ejaculation is rest.

Of coitus it may be said with full justice, "Finis coronat opus," for ejaculation, the end of the act, is

[1] Goltz, op. cit., p. 473.

[2] Eckhard, op. cit., p. 80.

also its most essential and decisive part. The process in ejaculation has been observed to some degree, but only in animals. The effect of the friction on the sensitive glans is communicated to the musculi ischiocavernosi, called by Visale erectores penis, and to the musculi bulbocavernosi, which contract and convey more and more blood to the glans. This superabundance of blood invades the prostate and the neck of the bladder also, thus completely closing the bladder. By the continued irritation the contents of the ductus ejaculatorii, the prostata, the seminal vessels and the ampullæ are expelled, these fluids combined constituting the ejaculated sperma. It is probable that the muscles of the prostata and of the pars membranacea contract first, and then are immediately followed by the musculi ischiocavernosi and bulbocavernosi, which are much stronger and constitute the principal element in ejaculation.

The center for ejaculation has been proven, by Budge, to be at the level of the fourth lumbar vertebra. It is surprising that Finger[1] heralds the idea of such a separate center as if it were a new discovery.

With the contraction of the prostata begins an intensely voluptuous sensation, but, in case the movements of coitus cease here, the ejaculation can be retained, which possibility is frequently taken advantage of by persons expert in coition.

Ejaculation takes place also in nocturnal pollutions. Here the excitation, caused by other conditions, leads also to a contraction of the muscles, and if the sleeper awakes before the musculi ischiocaver-

[1] Die Pathologie und Therapie der Sterilität. Leipzig, 1898 p. 6.

nosi and bulbocavernosi are contracted, he may prevent the issue of semen.

Ejaculation is accompanied by an intensely pleasurable sensation, which is dependent on the exciting of the sensitive terminal branches, or rami, of the nervus pudendus running out into the glans. A number of these rami end in the genital nerve-bulbs. The bulbi, irritated by the friction against the stretched surface of the glans, covered with delicate skin, lead this irritation toward the center.

Ejaculation, as we have seen, is the physiological process by means of which the sperm is sent forth toward the orifice of the uterus.

The Semen.—We must now turn our attention finally to the product of the male genital organs—viz., the semen.

Hippocrates considered that the whole body was employed in the production of the semen. We know that this fluid is a mixture of the products of sundry glands within the sexual apparatus of the male, and that it consists of the secretions of the testicles, the epididymes, the vasa deferentia, the seminal vesicles, Cowper's glands, and the prostata.

Ebner has very thoroughly studied the process of the preparation of the sperma in sections of the testicles of rats, and found that it proceeds from special cells, ending in lobules, and advancing like columns toward the inner portion of the canal. The cells are called *spermatoblasts*.

Within a seminal canal are to be found, at the same time, all the different degrees of spermatic formation; all the forms of development repeat them-

selves about twice within the space of from ten to fourteen millimeters.

Landois, who worked at the same time and independently of Ebner, obtained the same result. He calls these spermatoblasts spermatic ears or spikes.[1]

Many different views prevail with regard to details in the preparation or production of sperma, and this subject is far from having a satisfactory explanation. Some results to which von Bardeleben came in the course of his researches show that the seminal canals contain during childhood two kinds of cells, the spermatogoniums, or as the Germans call them: "Ursamenzellen," and Sertoli's follicular cells, obstructing the lumen completely. During puberty the spermatogoniums multiply and form by division the spermatocytes, which again are transformed by double division into spermatides, and the latter by forming a tail into the spermatozoids.[2]

The *seminal corpuscles* are the product of the testicles. Every corpuscle shows three characteristic portions—viz., a head, a middle piece, and a tail. The head is stained by carmin, and therefore is to be considered the nucleus. The middle piece has the form of a delicate little rod, or of a cone, and connects the head with the thread-like tail. This middle piece is stained by iodin more than is the head. The whole semen corpuscle measures 0.051 millimeter, of which the head forms 0.005, the middle piece

[1] Landois, Lehrbuch der Physiologie. Wien und Leipzig, 1893, p. 1012.

[2] Nagel Handb. d. Physiologie, Band ii, Hälfte 1, p. 47. For detailed information see: Bardcleben's Handb. d. Anat., 1904.

0.006, and the tail 0.04. In each of these parts are finer structures, which can be distinguished only by staining and the use of oil-immersion lenses.[1]

The tail is the principal motor organ of these spermatozoa, the mechanism of motion being explained differently by different investigators. The energy of motion of the individual corpuscles is variable. Hensen[2] estimates the time of half an oscillation at at least one-quarter of a second during the continuance of full vital power. The rapidity of the movement forward is between 1.2 and 2.7 millimeters, or, according to others, 3.6 millimeters per minute. Foster[3] says 2 or 3 millimeters a minute.

The semen corpuscles, formed in the testicles, remain there until they are discharged in the usual manner of seminal expulsion. It is hard to believe that spermatozoids once formed are reabsorbed. There are, it is true, some isolated observations which seem to support the idea; as, for instance, Schweiger observed spermatozoids of a young ram undergoing granular decay; this and Kehrer's experiments in applying ligatures to the vas deferens of rabbits are well-known cases. Finally, as a curiosity, may be mentioned the reabsorption of urine in the bladder, described in the *British Medical Journal*.[4]

[1] For further information see the very interesting investigations by Martin, Carnett, Levi and Pennington. Univ. of Penna. Med. Bul., March, 1902.

[2] Physiologie der Zeugung. Hermann's Handbuch der Physiologie, Band vi. Theil 2, p. 92.

[3] A Text-book of Physiology. New York, 1897, p. 1114.

[4] Black, On the Functional Diseases of the Urinary and Reproductive Organs. London, 1875, p. 157.

The question of the absorptive power of the bladder has been ventilated *cum studio* and at times, also, *cum ira*. While Alapy[1] came to the conclusion that absolutely nothing can be absorbed by the bladder itself, Hottinger's[2] experiments seem to prove the contrary. If we remember that a limited absorption can be accomplished even by the skin, it is hard to understand why the intact bladder should not, under favorable circumstances, be able to absorb to some extent.

Dr. Gerota, of Bucharest,[3] showed by a series of microscopic plates that, while there was imbibition on the part of the mucous lining of the bladder, there was no real active absorption. Recent experiments by investigators, too numerous to be enumerated, prove[4] that the normal bladder, is, to a certain extent capable of absorbing liquids and dissolved substances. The absorptive faculty is enhanced through lesions of the epithelium. Bacteria, however, can penetrate into the deeper layers only when the epithelium is damaged.

The philosophical discussions of Gosselin, Haller, and others show only that these men had no correct conception of the sexual functions of the man.

To me this theory of reabsorption of semen is comparable to the notion that a cold can be caused by the absorption of perspiration, which Hebra, in his lec-

[1] Centralblatt für die Krankheiten der Harn und Sexual Organe, 1896, p. 328.

[2] Ibidem, p. 333.

[3] Medical Record, September 18, 1897.

[4] Victor Blum. Die Harnvergiftung. Sammlung klin. Vorträge, 1904, No. 365, p. 148.

tures ridiculed whenever an occasion arose. Hensen[1] says, in referring to the above, "We require better proofs to establish a normal decay. Decaying of elements in the sperma would of necessity be so unprofitable, even dangerous, for the race that some contrivance to excrete them would long since have formed." Hensen thinks that the sperma, being slowly formed, will gradually be driven or pushed out of the ductus ejaculatorius, in case pollutions alone do not favor the continued renewal of sperma. Hensen, therefore, supposes a physiological spermatorrhea. This also is an assumption which would likewise require demonstration. I myself, during the years 1884 to 1888, made observations on this subject, and, although they may not constitute a conclusive argument against Hensen's assumption, I will state them as an incentive to further investigations.

During two years I have, with special care, repeatedly examined the urine and urethral mucus of two perfectly healthy and vigorous men, aged twenty-nine and thirty-four, who were absolutely continent and had had no seminal emission; and I have never found even a trace of spermatozoids. The younger of these men, a clergyman, submitted to this examination on account of a friendship of long standing between us and his love of science. Before the first discharge of urine in the morning, for seventy-five successive days, I examined carefully, with the microscope, the urethral mucus, which was small in quantity, and then every discharge of urine; but

[1] Op. cit., p. 93.

never found as much as a trace of a spermatozoid. I lay especial stress upon this as opposed to the assertions of Black,[1] who states that he had frequently found seminal filaments in the urethral mucus after alvine evacuations in healthy men.

The other of the above-mentioned men, thirty-four years of age, had been married, but his wife died of phthisis six years before I began my observations upon him. He had lost his two children by diphtheria in the same year. The unfortunate man grew melancholy and for some time felt no sexual desire. Later on he had pollutions and violent sexual desires; but he overcame them, and after four years of absolute continence he seldom had erections in the mornings, and thought no longer of sexual passions. He asserted that formerly he had been vigorous in coitus and had indulged daily.

The twenty-nine-year-old man had masturbated at wide intervals from the age of sixteen to twenty-three. He struggled against this "sinful practice," as he called it, with all the power of his exceptionally strong character. He finally mastered his passion. For two years his occasional pollutions grew less frequent, and for three years past he has had no emission of sperm in any way; sexual desire visits him seldom, though he has erections every morning.

Still more characteristic is the following observation. A professor at a university, thirty-nine years old, and of large and powerful build, has been married for fourteen years, enjoying good health. His wife, often sickly, disinclined to sexual intercourse,

[1] Op. cit., p. 63.

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is absent for months; hence a forced continence for long periods. As soon as this goes beyond a month there appears a slight but painful swelling of the testicles. He finds himself compelled to indulge in sexual congress at any cost, during which he emits unusually large quantities of sperm, and the swelling and pain in the testicles vanish as if by magic.

I claim no conclusive credit for the above three observations; but they, together with a number of others, of which I may have to speak in connection with impotence as a result of continence, confirm me in the opinion that sperm once formed will, if it is not expelled in any of the usual ways, at first hinder, and finally stop, the production of new semen. It would indeed be interesting to know what becomes of this stored-up semen. The only chance for clearing up this question would seem to be an autopsy of persons who, after long continence, have died suddenly; but such an opportunity will seldom be offered. The third observation of these three individuals seems to prove that, in some cases of continence at least, the production of semen is not only not retarded but actually increased, so that the accumulation of sperm becomes so great that it causes the testicles to swell and become painful. Systematic examinations of centrifuged urines, made at my laboratory by J. Henderson, seem to support my early conclusions.

What is commonly called semen consists of the spermatozoids, formed in the testicles, to which are added the secretions of several glands situated in the terminal portion of the vasa deferentia, the so-

called ampulla; there is added also the secretion of the walls of the vesiculæ seminales. The latter are not real glands but canals; their inner surface is much increased by folds and villi, and their secretion helps mostly in diluting the sperm.

It does not seem to me satisfactorily determined whether the *vesiculæ seminales* are secreting glands or merely receptacles for the sperm. The new experimental researches about the physiology of the seminal vesicles by Rehfisch[1] are very interesting, but do not reveal any important or new points. It is probable that the vesiculæ seminales and the ampullæ of the vasa deferentia have two functions—viz., to serve as receptacles, and to produce an albuminous secretion that attenuates the sperm. The contents of the ampullæ and of the vesiculæ seminales of fresh cadavers have all the characteristics of ejaculated sperm, but are poorer in spermatozoids. Henle[2] endeavors to explain this fact by supposing that at the last moment of coitus that portion of the vas deferens nearest to the ampulla evacuates its contents more quickly.

We know that the left testicle is slightly larger than the right one, in the same proportion is the left seminal vesicle larger than the right one. The circumstance that in cases of atrophy of one testicle we always find atrophy of the seminal vesicle on the corresponding side, certainly speaks for the assumption that they are mainly a storing receptacle for semen.

Extirpation of the seminal vesicles did not dimin-

[1] Deutsche med. Wochenschrift, 1896, No. 16.

[2] Op. cit., p. 389.

ish the sexual instinct in white rats, though their procreative power seemed impaired.[1]

As stated before the importance of the ampulla is not being properly realized. Pathological changes in this small organ are frequently the cause of ejaculatio precox.

To the semen, attenuated as above described, is later added the secretion of the prostata and of Cowper's glands.

Eckhard obtained by irritation, from the prostata of a dog, a secretion which had the specific gravity of 1.012, one per cent. of albumen and 2.4 per cent. of solid constituents.

The relation of the *prostata* with its secretion to the semen is not clearly demonstrated. Henle[2] is quite right when he says that the seminal fluid in the ampullæ of the vasa deferentia and in the vesiculæ seminales, although closely resembling the ejaculated semen, is poorer in spermatozoids. Hence what needs explanation is not an attenuation of the semen, but an actual increase in spermatozoids. Henle says further: "It is scarcely reasonable to suppose that the function of the prostata is to attenuate the semen as the principal mouths of the prostatic ducts are situated behind the summit of the colliculus seminalis, and the latter seems to shut off the urethra during erection. Finally, as far as my knowledge extends, the concentric concretions, which are seldom wanting in the glandula prostatica of old men, and which

[1] Nagel's Handb. d. Physiologie, p. 60.

[2] Op. cit., p. 401.

are often found in the outlets of the prostata, are not found in the ejaculated semen."

Henle asked: "Is the prostata connected perchance with erection, and does it furnish the mucous fluid which oozes from the mouth of the urethra after continued erection?" The reaction of the prostatic secretion has, according to Lohenstein[1] and Casper's convincing arguments, no influence upon the vitality of the semen. Posner as usual mistook one thing for another, and he must not be surprised when authors neglect to register all his self-styled physiological discoveries. The secretion of the prostata, however, seems to play some part in coitus, because the whole gland remains undeveloped in castrated animals. Walker[2] came to the conclusions that the immediate production of the motility of the spermatozoids is induced by a thinning of the testicular secretion with the prostatic juice, and that the continued movement is probably kept up by substances in the prostatic fluid, that either act as stimulants or as food for the organisms.

We must agree with Reynolds[3] when he says: "What the exact function of the prostate is we are unable to say definitely."

It is certainly very significant that "the vasodilation of erection is accompanied by a vasodilation of the prostate.[4] We shall have occasion to return

[1] Verein für innere Medicin in Berlin, Oct. 15, 1900.

[2] Walker, op. c.

[3] Walter S. Reynolds. Am. Jour. of Urol., Jan., 1906, p. 354.

[4] Ott, op. c.

to the important question of the functions of this extremely interesting organ.

Finally, it is held that the mucus of *Cowper's glands* unites with the sperm, but Henle[1] thinks that Cowper's glands do not add their secretion to the sperm, and are, therefore, not to be reckoned among the organs of the sexual apparatus, but of the urinary apparatus. Beyond doubt these glands, together with the mucous glands proper of the urethra, make provision for the moisture and lubricity of the urethra, and thus, in any case, aid in ejaculation, and perhaps, as Hensen[2] conjectures, clear the urethra of remains of urine, which have an acid reaction and kill the spermatozoa. Besides this, we must not forget that Cowper's glands are perfectly developed in infancy and in eunuchs.

Let us direct our attention now to the ejaculated *sperm*. The quantity and quality vary greatly in different individuals, as well as in the same individual, the differences being determined by the variable productiveness of the glands, which differ in the same manner and degree as their products, for reasons, some known and some unknown.

Mantegazza[3] finds the quantity of ejaculated semen of a thirty-year-old man weighing, about eighty kilograms, to be between 0.75 and 6.0 cubic centimeters. Ultzmann[4] estimates the average

[1] Op. cit., p. 413.

[2] Op. cit., p. 101.

[3] Ricerche sullo sperma umano. Gazzetta medica Italiana Lombardia, 1886, Nr. 34.

[4] Ueber Potentia generandi und Potentia coeundi. Wiener Klinik, 1885, Heft 1, p. 2.

quantity for a moderately living man at ten to fifteen grams.

It is to be regretted that, in connection with the above figures, there are no indications how these ejaculations have been brought about, because those from involuntary night-emissions, are considerably less in quantity than those in coitus. This fact, which I was first to note, may be explained in this way: the vesiculæ seminales and spermatic ducts do not always empty their contents into the urethra at the same time, and it may be that when the excitation is moderate only one of the receptacles empties itself.[1]

The measuring of the quantity ejaculated during coitus is an impossibility, since the quantity is less when the coitus is prematurely stopped or interrupted, as in the cases known as "frauding," or "coitus interruptus." This may explain why the so-called "fraudeurs" can at first accomplish coitus oftener than those who follow nature, and why the same individual when he begins frauding can repeat the act more frequently than when he does not cheat nature in this way. The bad effects of frauding, also, which Bergeret[2] paints in colors decidedly too gloomy, may here find their explanation. There are cases, nevertheless, where long-continued frauding has undoubtedly weakened the sexual sense. I have observed this repeatedly within the last few years. The sexual sense, however, soon recovers when frauding is discontinued.

[1] Landois, op. cit., p. 1024.

[2] Des fraudes dans l'accomplissement des fonctions generatrices. Paris, 1884.

The ejaculated sperm is a colorless, opalescent fluid, in appearance resembling boiled starch. The seminal filaments on their way from the testicles to the meatus urinarius externus are joined by the products of sundry glands, and thereby assume certain characteristics, the odor of chestnut-blossom or newly sawn bones being peculiar to the main substance formed in the testicles. Nagel,[1] however, thinks that this odor is due to the spermin which is produced in the prostate gland. It is very interesting and most significant that spermin is also found in the testicles, the ovaries, the pancreas, spleen and thyroid gland.

The alkaline reaction comes, possibly, from the secretion of the prostata; the color, from the admixture of the secretion of the vesiculæ seminales; the gluey consistency, from the secretion of Cowper's glands.

The seminal liquid is heavier than water, soluble in water and acids, and coagulable by alcohol. Colorless, brittle crystals separate from it when it has been standing for a long time, the process being somewhat more rapid when the sperm has been placed in ice, or when inspissated. These crystals are compound phosphates containing an organic base.[2] Vauquelin's chemical analysis is as follows:

Water	90
Organic substance, mucin	6
Earthy phosphates	3
Sodium chlorid	1

[1] Op. cit., p. 48.

[2] Foster, op. cit., p. 1115.

The solid matter contained in the semen is mostly furnished by the spermatozoa. The head of a spermatozoon appears to be largely composed of the body or group of bodies known as nuclein or nucleo-albumin, a result which supplies chemical evidence of the nuclear nature of the spermatozoon head; and nuclein forms a considerable portion of the solid matter of the whole semen. Lecithin and cerebrosid, closely related to the cerebrin are also present in considerable quantity in the semen.[1]

The consistency of the sperm changes soon after ejaculation, becoming more nearly liquid.

Whether or not a fluid is sperm can be proven only by microscopic examination. Sperm under the microscope shows seminal corpuscles, granules, cells, and epithelia from the prostata and urethra. If the sperm comes from coitus, it also contains pavement epithelium from the female genitals.

Each cubic centimeter of ejaculated semen is said to contain 60,000,000 to 70,000,000 spermatozoa.[2]

Frequent indulgence will both diminish the quantity and impair the quality of the sperma. Differences have been observed in this with respect to individuals and to time, and I can myself assert as a result of numerous observations that habit and sexual vigor are the main agents producing such differences.

The presence of spermatozoa determines the fertilizing power of the semen. The sperma of a vigorous man in a state of perfect virility shows under the

[1] Ibidem.

[2] Howell, A Text-book of Physiology, Saunders, Philadelphia and London, 1913, p. 969.

microscope a very animated life picture, which Ultzmann quite appropriately compares to the life exhibited by an ant-hill. The spermatic filaments are seen to shoot across the field of vision like arrows, making movements that seem anything but aimless, so that it is not to be wondered at that they were formerly thought to be animalcules.

This animation is most lively in newly ejaculated semen, and grows calmer in proportion as the spermatozoa die; but, if the sperma be preserved under favorable circumstances, some of the filaments may be seen alive even at the end of forty-eight hours. They are killed by urine and the vaginal mucus, having an acid reaction. Mantegazza[1] found that the spermatozoa retain their vitality in temperatures varying from 15° to 47° C. Heating above 47° or freezing below 15° kills them. It was further discovered that these filaments remain vital in frozen semen as long as six days, possibly even longer. In an incubator kept at normal blood temperature they can retain their vitality up to eight days, and Dührssen[2] found them in the female sexual organs motile even after three weeks and a half. Slightly alkaline fluids, such as blood, favor the life of the spermatozoids. Such fluids, as well as concentrated solutions of salt, sugar, and albumen, are capable of reviving spermatozoids that are already motionless. Water destroys motion after an hour, at the latest; but they are very lively in purulent sperm; consequently they are not affected by pus.

In dead spermatozoids the lifeless tail is found in

[1] Loc. cit.

[2] Nagel, Op. cit., p. 54.

various positions. In spermatozoids that die after ejaculation the tail is stretched out or slightly bent, while in those that are ejaculated dead it is spirally wound up, but seldom broken.

Most authors adduce various experiments, the results of which have led to an opinion not wholly correct—viz., that frequent coition reduces the number of spermatozoids, and daily coition makes them disappear altogether. To these investigators I can oppose many observations, where, after coition repeated daily several times, the sperma still contained numerous spermatozoids. These observations were made in the years 1884–1888. The differences in the results of the *observations* can easily be explained, inasmuch as examinations made on old men lead to different conclusions from those made on vigorous and perfectly virile young men.

Even so modern an author as Draper[1] reiterates the same old errors, though, when treating on an other subject he warns against the acceptance of all sorts of inheritance "handed down from author to author" and says: "It is well to test the value of authority, ... by new investigations from time to time."[2]

Before I refer to some of my own observations, I wish to observe that of necessity it has not always been possible to make the microscopic examinations immediately after coition, nor at an equal length of time after copulation; and, furthermore, the frequency of coition could not be regulated by the

[1] A Text-book of Legal Medicine. Saunders, Phila. and London, p. 144, 1905.

[2] Draper, Op. cit., p. 133.

investigator. The sperma was invariably taken in the largest quantities possible, and was preserved in glass tubes, which were sealed and so placed that neither air nor light could affect the contents. All the microscopic examinations were made with a No. 3 ocular and a No. 7 objective of a Wetzlar microscope.

OBSERVATIONS ON SUBJECT NUMBER ONE.

A vigorous and perfectly healthy man, twenty-nine years old, who performed coition on an average once a day. The microscopic examinations gave the following results:

From October 1 to October 9 one coition per day; on October 9, examination of sperma nine hours after coition; result, few spermatozoids, mostly dead, not well developed; but the few still moving are very lively, although mostly young forms.

October 10.—One coition; sperma not examined.

October 11.—Sperma examined eleven hours after coition; result, few spermatozoids, all dead.

October 12.—Examination nine hours after coition; no spermatozoids.

October 14.—Coition after a lapse of forty-nine hours; examination eight hours afterward; result, about thirty spermatozoids, few alive, movement slow but very energetic. The coitus having been performed with a woman whose menses had begun, there is a blood-corpuscle (I could never discover blood-corpuscles in the ejaculations of so-called continent persons, as reported by Richard[1]); a few

[1] Histoire de la génération. Paris, 1883, p. 159.

seminal filaments join the blood-corpuscle, but, after a momentary effort, push the corpuscle aside.

October 17.—Coitus after forty-eight hours' rest; examination eight hours later; result, about fifty dead filaments.

October 18.—Coitus after sixteen hours' rest; examination sixteen hours later; result, many spermatozoids had died, a few had been ejaculated dead.

On the same day, the sperm of a coitus, being the third within twenty-four hours, was examined ten hours after coition; result, very numerous spermatozoids, movement very energetic and as if with a purpose in view.

October 20.—One coition after an interval of forty-eight hours; examination ten hours after; result, fifty spermatozoids, all dead but a few. Second coition, one hour after first; examination nine hours later; result, spermatozoids very numerous and exceedingly lively; scarcely one-third had died.

October 21.—Coition after an interval of twenty-three hours; examination eight hours later; result, numerous spermatozoids, all living.

October 22.—Coition after sixteen hours' rest; examination sixteen hours later; result, fewer spermatozoids ejaculated alive, and, with few exceptions, all had died prior to my examination.

October 23.—Coition after thirty hours' rest; examination seventeen hours later; result, very many spermatozoids, but nearly all had died; besides a few ejaculated dead.

Similar results from examinations of sperm from same individual on October 24 and 25.

October 28.—Coition after sixty-four hours' interval; examination eight hours later; result, about sixty spermatozoids, which had nearly all died, but one-third of them had been ejaculated dead.

October 29.—Coition after six hours' rest; examination two hours later; result, very numerous, active spermatozoids, only a few ejaculated dead; very few had died.

October 31.—Coition after fifty-eight hours' interval; examination sixteen hours later; result, spermatozoids few in number, nearly all ejaculated dead; the rest had died.

November 1.—Coition after fifteen hours' rest; examination one hour later; result, rather more spermatozoids, nearly all alive, though not moving with energy; others ejaculated dead.

On same day, a second coition after fifteen hours; examination ten hours later; result, spermatozoids numerous, lively, only a few ejaculated dead.

SECOND SUBJECT FOR OBSERVATION.

Powerful man, thirty years old, healthy, though inclined to obesity; enjoying life, very vigorous in sexual matters, and observes no rule at all; offers himself for ten days' observation.

February 10.—Coition after forty-one hours' interval; examination ten hours later; result, spermatozoids few in number, but moving with energy; few ejaculated dead, few died after ejaculation.

Same day, second coition, one hour later; examination nine hours after; result, spermatozoids very numerous, lively, and moving energetically; with-

out exception ejaculated alive, and only very few had died.

February 11.—Coition after twenty-three hours' rest; examination ten hours later; result, spermatozoids less numerous; some moving, some had died, the rest ejaculated dead.

February 13.—Coition after an interval of forty-three hours; examination fifteen hours later; result, spermatozoids very few and most of them ejaculated dead; none moving.

February 14.—Coition after thirty hours' rest; examination and result, same as February 13.

February 15.—Coition after seventeen hours' rest; examination sixteen hours later; result, spermatozoids numerous, moving energetically.

Same day, second coition six hours later; examination ten hours afterward; result, spermatozoids not very numerous, but movement lively; most of the forms young; none were ejaculated dead.

February 17.—Three coitions within six hours; spermatozoids of the third coition examined ten hours after; very numerous, some of them still moving with energy; many had died, only few were ejaculated dead.

February 18.—Coition after eleven hours, therefore fourth coition within seventeen hours; examination one hour after; result, spermatozoids less numerous, but moving with great activity and energy; few ejaculated dead, almost none died after ejaculation.

February 19.—Coition after fifteen hours; examination ten hours later; result spermatozoids extra-

ordinarily numerous, very well developed, with energetic and lively motion; none ejaculated dead, and only isolated ones had died.

THIRD SUBJECT FOR OBSERVATION.

Age not quite thirty, healthy and vigorous, life very active, but finds time to enjoy it, and makes best use of his leisure hours for venery.

After fifteen days' abstinence, intercourse fourteen times within six days. The last ejaculation examined scarcely one-quarter hour after; result, spermatozoids very numerous, many well developed, moving with energy and vivacity. The field of vision shows the picture that Ultzmann compared to an ant-hill.

From these observations and many more I have made, it may be concluded that, with persons who have accustomed themselves to frequent intercourse and have the power to do so, the number of spermatozoids increases to a certain limit with the frequency of coition, instead of decreasing, as supposed by the older authors. It may be concluded also that the spermatozoids become very numerous, well developed, lively, and energetic only when coition is repeated.

It is difficult to say to what this phenomenon is due, though it is probable that the sperm of the vesiculæ seminales, which is poorer in spermatozoids, is evacuated first, and that only after that, by the repetition of coition, come the contents of the vasa deferentia, and last of all those of the testicles. This circumstance may be of special importance in the consideration of certain cases of sterility.

Furthermore, such results justify the supposition that the spermatozoids which enter the vesiculæ seminales for storage lose their vitality in that canal gradually. According to the results of my observations, however, they lose it rather quickly. I am still further confirmed in this belief by the fact that, although I have very often had the chance to examine the semen from nocturnal emissions, sometimes within an hour after such emission, I have seldom found living spermatozoids in such sperma. Most of the spermatozoids, which were often found in great numbers, looked as if they had been ejaculated dead, while only few had the appearance of having been ejaculated alive and of having died on account of their low vitality. I must not omit the observation that the first portion of a pollution scarcely ever contained a living spermatozoid, while the second was more likely to show living forms. It is possible, but not proven that, as Fürbringer, Burckhart and Finger assert, the spermatozoa contained in vesiculæ seminales are motionless until the secretion of the prostata is added to them.

In my numerous microscopic examinations of sperm I have made a few more discoveries, which I shall here adduce briefly. The energy of movement of a spermatozoon is most easily determined by gentle pressure on the cover-glass, which causes a current in the small quantity of seminal fluid between the two glass disks. If there are any spermatozoa moving with energy, they will swim unaffected by the current, and continue in their original direction, some swimming against the current.

The forward movement of the spermatozoids seems to me not to be produced by a whip-like motion as has been stated. "The movements are of an undulatory character, the waves traveling from the middle-piece to the end of the tail."[1] It seems to me rather a regular, rudder-like action on the part of the tail. This action is seen plainly when a dying spermatozoon is watched; the movements grow slower and slower until they gradually cease altogether.

It is very interesting to watch how spermatozoa often meet with premature death. A spermatozoon swimming along quite energetically suddenly strikes some obstacle; the tail finds itself caught between masses of detritus, fragments of cells; the spermatozoon makes desperate efforts, moves spasmodically, and seems thus to use up all its vital power in a short time, as it quickly dies. Sometimes the spermatozoon succeeds in disengaging itself, but usually it suffers some injury. I once saw one with a sharp bend in the tail close behind the head swim on in a lively manner.

[1] Foster, op. cit., p. 1114.

CHAPTER III.

ETIOLOGY OF IMPOTENCE.

Among the circumstances that determine sexual vigor the foremost of all is the structure of the genitals. Here we shall not take into consideration abnormal formations, as they will be treated specially, but shall limit our attention to genitals anatomically normal..

The *appearance* of the genitals varies considerably as regards size, form, and color. The differences are noticeable even in childhood, in which case they cannot be ascribed to extraneous causes. Small genitals are always a sign of insignificant sexual power, while large ones, remaining in proportional size during erection, indicate great power. There are genitals which during sexual repose show large dimensions, but which are flabby and appear large only in consequence of the extent of the vascular meshes of the cavernous tissue, and do not grow larger proportionally by the filling with blood during erection. In such genitals erections do not occur readily, and they accordingly indicate anything but sexual vigor. Such qualities belong to genitals of the aged and to sexual organs which owe their size to sexual excesses committed before puberty.

Together with the necessary dimensions the texture of the penis must possess firmness. The testicle must be sufficiently large, firm, and insensible to slight pressure.

Besides this, the vascularity of the genitals is of importance. A pinky, transparent cutis of the glans and warmth of the penis indicate that a sufficient quantity of blood is present. A pale glans and a penis that feels cool indicate local poverty of blood as well as sexual weakness.

Finally, the *excitability of the nerve-ends* that spread in the glans is of consequence with regard to the qualities of the genitals. Where the glans is entirely covered by the prepuce its surface is very sensitive. Such subjects answer quickly to external excitation, but are seldom noted for their power, as coition lasts too short a time, and they are inclined to what is called irritable weakness. If the glans is covered by the prepuce only partially or not at all, its epidermis grows harder and less sensitive; external excitation affects tardily; a greater amount of irritation is required to complete the coitus, and the sexual organs themselves become more inclined to insensibility, which becomes more noticeable in riper age, when the central excitations grow fewer by degrees. Innate as well as acquired advantages or defects in the formation of the sexual organs influence their capability of action advantageously or otherwise.

Stronger pigmentation in the sexual organs is generally accompanied by greater capacity in venery, which fact is seen in negroes, who are, as a rule, endowed with large genitals. The well-known rule that brown-haired men have usually more sexual power than light-haired ones is admissible only in the comparison of men of the same race.

The *bodily structure* of a man is of the utmost

weight with respect to his sexual capacity. It is self-evident that an individual who is in every respect healthy and vigorous will accomplish more in sexualibus than one sickly and weakly. Apparent anomalies are not wanting, and, indeed, we see often enough that decrepit and cachectic individuals commit considerable excesses in venery; but in the long run the weakling and the sick man will suffer more or less disaster, and only an energetic metabolism can for any length of time enable one with any effect to resist the manifold ravages of lavishing semen.

Due weight must here be allowed also for *hereditary predisposition*. There are families in which all the male members are distinguished for great sexual power; whereas the contrary may be noticed often enough in other families. I can only agree with Morrow[1] when he says, "The important rôle which heredity plays in determining disorders of the genital function has not been fully recognized nor sufficiently emphasized by writers upon the subject." Indeed, I expressed the same views years ago.[2] Idiosyncrasy, in fact, all the psychical qualities of a man powerfully influence his sexual capacity.

Of great importance also is *the age*. Some authors allow a greater, others a lesser, latitude. There are severe moralists who will not allow sexual enjoyment before a man has completed his twenty-fifth

[1] Functional disorders of the Male Sexual Organs. A System of Genito-Urinary Diseases, Syphilology, and Dermatology. New York, 1893, vol. i., p. 1001.

[2] Pathologie und Therapie der Männlichen Impotenz. Wien und Leipzig, 1889, pp. 45, 73–83.

year, and who say that he must be moderate even then, and desist from it when he is fifty years old.

The vast difference in the opinions held upon this subject evidently proves that no fixed rule can be laid down. Most authors have committed the error of allowing their personal experience to act as a criterion. The following general principles may, however, be stated:

Nature alone indicates the time when a man should satisfy sexual desire. The course of nature should in nowise be interfered with or anticipated. When nature has done her work of bringing the man to maturity, when the testicles have produced sperm, and that sperm is thrown out by involuntary emissions, when the youth's whole being is undergoing a radical change, then I cannot understand why he should not satisfy that impetuous, irresistible longing; why he should be condemned, in the best part of his life, to become an onanist or to lose his power by pollutions.

Virility generally begins when the man reaches the age of eighteen years, increasing until he has reached his fortieth year. From that time it begins slowly but steadily to decrease, until in his sixty-fifth year it is usually extinguished. There are some who in their sixteenth year, and even before, are perfectly fit for coition, and a great many who preserve their sexual power to an advanced age; whereas, on the other hand, some hardly enter into puberty at the age of twenty-four, and are overcome by senile impotence before they are fifty years old.

Besides these congenital qualities, over which the individual has no control, there are many circum-

stances generally beyond his control also, but which he may, nevertheless, endeavor to bring about so as to influence his virility more or less.

Here we must, first of all, mention acquired deformities and diseases of the genitals or other organs; after that the manner in which one husbands the gifts of nature. Too much indulgence may be just as injurious as too little. Furthermore, there must be taken into account the influence of nutrition, of certain alimentary or medicinal substances, and of occupation and habits. Finally, there are many other things that have more or less influence on the strength of a man in sexual matters, and their connection with virility seems peculiar and strange because we cannot understand it.

It would surely lead into trouble should we endeavor to consider *dreams* and subsequent "dormant, forgotten complexes" or so-called "soul happenings" as etiologic factors of sexual impotence. While my personal experience teaches me that Freud goes too far, I am sure that his theories cannot be disposed of easily, and even Dercum[1] couches his adverse judgment diplomatically by saying that "dreams are probably always symptomatic and never casual." The etiology of every single case of so-called psychic impotence is of the greatest importance, and we must always be on the look-out by scanning the patient's past sexual life, and prying even into his dreams.

The varying *influence of seasons*, for instance, modifies the sexual power, though this cannot be ac-

[1] Journ. Am. Med. A., May 13, 1911, p. 1377.

knowledged unconditionally. Everybody knows that man is given to love in spring more than in any other season. Some French investigators (such as Villermé, Quetelet, and Smits) have worked out tables in which the order in which the months are named is indicative of the number of conceptions that occurred therein; but they cannot be accepted as valid, because such proofs, based on statistical calculations, are not always independent of chance. Nor can we accept as an absolute proof the fact that most crimes against morality are committed in the spring; as here, too, many other social conditions must be taken into consideration. M. Perry-Coste and M. Féré have published two cases of sexual periodicity, and M. G. Loisel (Academie des Sciences, Paris, October 29, 1900) tried to explain the fact by assuming spermatogenetic phases. I would rather agree with Kisch who sees in this phenomenon an atavistic tendency.

Besides the influence of season, we must bear in mind the momentary disposition and the varying feelings of inclination and disinclination, to which we cannot deny a rather strong control over virility.

After this brief enumeration of the most important circumstances capable of influencing sexual virility, we may pass on to a description of the individual forms of impotence.

A classification of the manifold forms of this disease, which has hitherto received so little attention, offers, for the present, insurmountable difficulties.

Krafft-Ebing's schema[1] of all the sexual neuroses

[1] Psychopathia sexualis. Stuttgard, 1890, p. 24.

was very ingenious. He distinguished three kinds. They are—

I. Peripheral neuroses.
  1. Sensory.
    a. Anesthesia.
    b. Hyperesthesia.
    c. Neuralgia.
  2. Secretory.
    a. Aspermia.
    b. Polyspermia.
  3. Motor.
    a. Pullutions (spasm).
    b. Spermatorrhea (paralysis).

II. Spinal neuroses.
  1. Affections of the erection center.
    a. Irritation.
    b. Paralysis.
    c. Inhibition.
    d. Irritable weakness.
  2. Affections of the ejaculation center.
    a. Abnormally easy ejaculation.
    b. Abnormally difficult ejaculation.

III. Cerebral neuroses.
  1. Paradoxia.
  2. Anesthesia.
  3. Hyperesthesia.
  4. Paresthesia.

Ingenious as this classification is, it is of no practical use for our purpose.

Furthermore, Eulenburg[1] considers that differ-

[1] Sexuelle Neuropathie. Leipzig, 1895, p. 44.

ences between "peripheral neuroses" and "spinoferic neuroses" of the genitals can hardly be determined except on paper. This is certainly neatly expressed, and holds good also with reference to Eulenburg's division of the sexual neuropathic phenomena, or with reference to any other possible or impossible division: they all look well on paper, but, in reality, chaos reigns.

There are, as we have seen, many causes that may lead to impotence; and although it is always reducible to partial or complete failure of erection, yet the accessory circumstances accompanying this main moving force are often various, according to the exciting cause. In consequence of this, the disease may present to a careful investigator very different aspects, and therefore will demand also very different forms of treatment, determinable by the actual causes.

The usual division of impotentia cœundi into an organic form, a psychical form, a form depending on irritable weakness, and a paralytic form is surely not sufficient, because there are so many varieties that cannot be forced into such a frame.

Beard[1] distinguishes the following forms:

1. Slight deficiency, both of desire and capacity.
2. Deficiency of capacity with increase of desire.
3. Profound deficiency both of desire and capacity.
4. Erectile power increased abnormally, but no discharge of seminal fluid.

[1] Beard and Rockwell, Sexual Neurasthenia, fifth edition. New York, 1898, p. 124.

Mantegazza[1] distinguishes even as many as ten degrees or grades of sexual capacity, but avoids the exceedingly difficult task of a classification of the different forms of impotence.

I have tried to classify the different forms of sexual impotence from the etiological standpoint, and hope the clinical differences were taken into consideration at the same time and as far as any division will permit. Thus we will have to distinguish Impotence

1. From congenital malformations and defects of the sexual organs;
2. From acquired defects in the organs of generation;
3. Consecutive;
4. Inherited;
5. Neurasthenic;
6. Professional; and
7. Senile Impotence.

[1] Igiene dell'amore. Milano, 1881, p. 112.

CHAPTER IV.

FORMS OF IMPOTENCE.

CONGENITAL MALFORMATIONS AND DEFECTS OF THE SEXUAL ORGANS.

CONGENITAL malformations of single organs of the human body are, fortunately, very scarce. While in the service of the Croatian government I was a member of the commission to examine the conscripts. Among six thousand young men there were only five who showed malformations of importance, and in three only were the genitals affected.

As all these six thousand men were, without exception, over twenty years of age, and as many individuals afflicted with congenital deformities do not attain that age, it would not be safe to infer an infrequency of malformations; but we might rather conclude from it the relative percentage of malformation of the genitals, because this does not shorten life so frequently as malformation of other vital organs.

Hypospadia and excessive smallness are the most frequent of the malformations connected with the sexual parts; while entire absence of these organs is the most infrequent.

In malformations which prevent copulation altogether, the outer attributes of virility are absent.

The whole appearance of these unfortunate beings resembles that of a woman, and appearance, voice, and behavior indicate that the formation of the genitals is not normal.

In the exceedingly rare cases of **absence of the penis** there could be no possibility of copulation. Dr. Robert T. Harris[1] found in the literature six authentic cases of congenital absence of the penis, the urethra making its exit into or below the rectum. He estimates that one male in about thirty millions is born with this abnormality. In the fifty years up to 1898, England, France, Germany and Austria have reported one case each, the United States two. Entire absence of both testicles is quite as rare, and has, perhaps, never been observed in adults.

Extreme smallness of the penis alone, or of the penis and testicles, occurs now and then, and is noticeable either at birth or later as an arrest of development. If the testicles are normally developed, and only the penis has remained very small, the desire and relative capacity for coition may be preserved unweakened, but the result will be a failure.

Such individuals are well aware of their defect, and are with difficulty induced to have intercourse with the opposite sex, particularly after they have had some bitter experiences. Most of them seek to satisfy in some other way the sexual desire that they may feel. Some of these wretched beings are fortunate enough to meet a woman indifferent in sexualibus or one endowed with the ability to suppress her

[1] Medical Record, Feb. 19, 1898.

sexual passions sufficiently to enable her to live contentedly with a husband so deficient in the sexual organs. In justice to the fair ones we must acknowledge that the capacity of self-denial is a peculiarity inborn with the entire sex. If both penis and testicles are diminutive, there is a poor prospect for the sexual desire, such subjects, as a rule, never holding intercourse with the other sex.

The opposite deformity—viz., **excessive development of the penis**—occurs also, and is usually indicative of great sexual power. It offers no obstacle to coition, provided a proper mate is found, and generally, little difficulty is experienced in this line.

It is very rare to find a marked congenital flexion in the penis arising from a deformity in the corpora cavernosa. Curvature to a very considerable degree would render copulation impossible.

Of more frequent occurrence is a **defective development of the erectile tissue,** in which case the penis may be sufficiently large, but abnormally flabby. This congenital defect is, in my eyes, of great consequence, and I cannot understand how it is that, in spite of its frequency, it is ignored entirely by modern authors. Lallemand alone has carefully described this condition.

Impotence is said sometimes to depend also on great **narrowness of the orificium externum urethræ.**[1] The possibility of this may be admitted the

[1] Maximilian v. Zeissl, Ueber die Impotenz des Mannes und ihre Behandlung. Wiener medicinische Blätter. Wien, 1885, Nr. 15.

more readily since we know that stricture of the urethra undoubtedly causes impotence. I have had occasion to observe a man fifty-five years old whose orificium externum was exceedingly narrow, and who, though virile, could never impregnate a woman. It is more than probable that this malformation, unimportant as it may seem, was the cause of the sterility; for the semen was quite normal, and an examination of his wife brought no explanation to light.

Some consideration is also due to the state of the prepuce and the frenulum. Complete **absence of prepuce** probably occurs very seldom. Even among the Orientals and Hebrews, who have continued to remove it for thousands of years, this artificially caused absence has never as yet become hereditary. Even if the absence of the prepuce were an effect of inheritance, it could not be prejudicial to the capacity for coition. Roubaud[1] asserts that the glans grows less sensitive, the act less agreeable, and consequently the carnal appetite less keen. Facts observed among our Hebrew fellow-citizens and in the Orient speak decidedly against this assumption.

More frequently occurs a superfluity of prepuce, causing **phimosis.** Even phimosis in the highest degree cannot have a damaging effect on the capacity for copulation; it can only interfere with the natural course, and make surgical help desirable. I must, however, call special attention to the fact that congenital excessive length of the prepuce is gener-

[1] Traité de l'impuissance et de la sterilité. Paris, 1876, p. 100.

ally accompanied by a defective development of the member itself, so that, in some measure, the prepuce is only too long for the abnormally small penis, and then we have to deal only with the diminutive size of the penis. There is no doubt that the natural growth and development of the erectile tissue is impaired by a prepuce that exerts any kind of an undue pressure upon the organ. Too small an aperture through the prepuce often causes sundry diseases, especially of a neurasthenic character. In recent times, observations of this nature grow in number, and surgical interference is quite frequently resorted to with excellent results.

In cases of congenital phimosis it happens now and then that the prepuce adheres to the glans even after puberty has been reached, and this would be a positive hindrance to coition.

In California I had an opportunity to observe a case of firmly adherent prepuce occasioned by a surgical operation for phimosis, when not enough of the prepuce had been removed, and, besides, the margin of the wound had not been stitched.

The **frenulum** is sometimes too long, sometimes too short. In the latter case it is a hindrance to erection. I have been compelled more than once to sever a frenulum that was too short. In one case the glans was drawn downward, and in another the frenulum tore repeatedly during coitus, causing great pain.

Not infrequently there is a natural inclination toward fissures on the surface of the glans and the inside of the prepuce, whereby a temporary difficulty in copulation may be occasioned. I have seen a

young university professor who, after every excess in venery, were it ever so slight, suffered from deep and gaping fissures on the surface of the glans.

Hypospadia of a high degree—*i.e.*, congenital opening of the inferior wall of the urethra—and the much rarer **epispadia**—*i.e.*, congenital opening of the upper wall of the urethra—may cause partial or absolute impotence. Hypospadia of the lowest degree—viz., when the orifice of the urethra is situated in the furrow of the glans, at the root of the frenulum—never interferes with copulation, but diminishes the chances of fecundation. In cases of hypospadia of a high degree, when the urethra opens as far back as at the perineum, and the member itself is very small, flattened, and bent downward, both copulation and fecundation suffer, as a matter of course.

Quite similar are the cases of **epispadia.** According to the degree of deformity, the member is at the same time shortened, flattened, and turned upward like a hook, so that introduction into the vagina succeeds only partially or not at all, and the injection of semen is accomplished with great difficulty. Exceptionally, impregnation may result in cases of either infirmity, even when of a high degree.[1]

Sundry circumstances may disturb the process of "descensus testiculorum," so that either one testicle remains in the abdominal cavity or else both. The former case is called **monorchidia,** and occurs oftener than the latter, which is called **cryptorchidia.** Neither of these conditions causes impotence if it is not accompanied by defective growth of the testi-

[1] Hofmann, Lehrbuch der gerichtlichen Medicin, p. 68.

cles. It is even asserted that such hidden testicles produce more sperm because they are in a warmer location.[1] Cryptorchidia is said to cause sterility, but not impotence.

These two assertions are contradictory. Godard, Hunter, and Curling have in cases of cryptorchidia found no spermatozoa in either testicles or vasa deferentia, nor in the vesiculæ seminales. Contrary to this, Taylor [2]knows four cases of cryptorchidia where there are children; Pelikan, one case; and Beigel[3] found sperma in the semen of one affected with cryptorchidia.

It is beyond doubt that monorchidia cannot be injurious to potentia cœundi or generandi, because it seems, indeed, to be hereditary. I myself knew a civil official in Europe, a monorchis with large penis, who was very vigorous in sexualibus until an advanced age, and late in life begat two boys, the younger of whom is also a monorchis. Each son has likewise a very large penis, and resembles his father in sexual vigor.

Young people afflicted with such defects usually become very unhappy the moment they are aware of their defect, because they believe they will have to renounce sexual enjoyment. In many places the popular belief accredits such monorchids with possessing extraordinary power.

As rare curiosa we have to call attention to so-

[1] D. Campbell Black, Human Anatomy and Physiology, Part VII, p. 6.

[2] Hofmann, op. cit., pp. 59, 60.

[3] Virchow's Archiv, Bd. cviii, p. 144.

called **hermaphrodites**, individuals who, by vicious conformation of the genitals, or, as Lydston[1] terms it, "aberrant and imperfect differentiation of sex," are hindered partially or entirely from indulging in intercourse; also the much rarer cases of partial or entire want of single parts of the apparatus serving as excretory ducts for the semen, such as the vasa deferentia, ductus ejaculatorii, and vesiculæ seminales. The rarest cause of impotence may be congenital azoospermia. The very infrequent ectopia vesicæ urinariæ, which may sometimes be mistaken for hermaphroditism, is of no practical importance for us. According to Vigne[2] the individuals thus afflicted very seldom attain the age of 17 years. Recently better results are obtained by improved methods of surgical interference.

ACQUIRED DEFECTS IN THE SEXUAL ORGANS.

We mean by this the permanent defects. The various diseases of the sexual organs will be treated later on.

The entire or partial **loss of penis or testicles** will be the first subject of discussion. In the Orient there are even nowadays people on whom, during infancy, a most atrocious act has been perpetrated—that of cutting away the entire external apparatus of generation. Such perfect *eunuchs* bring higher prices than those who are deprived only of their

[1] The Surgical Diseases of the Genito-urinary Tract. Revised ed. Phila., 1906, p. 515.

[2] Torday. Missbildungen. Wiener Klinik, Heft 1, 1901.

testicles. In Russia we have the *Skoptzi*, who, in insane fanaticism, voluntarily submit to such a mutilation.

Of course, copulation is out of the question in a case of complete absence of the external genitals; it is likewise impossible in the absence of the penis. Neglected venereal diseases sometimes destroy a part of the virile member, and malignant neoplasms sometimes make its removal a necessity. There are, besides, unfortunate accidents and traumatic influences that may cause loss of the penis. This is really a very pitiable condition, because the sexual appetite is left, while the possibility of satisfying it is gone. If, however, the traumatic action has left part of the penis, there is no impotence as long as the stump remains erectile. I knew a wealthy tradesman who had lost nearly the whole of the glans in consequence of a simple ulcerous disease which he had unwisely kept secret and neglected. After the wound was healed he had regular intercourse with his wife, but always took a long time to accomplish ejaculation. His wife complained that the friction of the skin and the cicatricial tissue caused her pain, wherefore she had always to apply a sufficient quantity of grease before copulation. The cicatricial tissue was not firm; in the flaccid condition of the penis it was very yielding. I never saw the stump during erection.

The **absence of testicles** may be due to various causes. First of all, they may have been removed surgically—an unjustifiable operation, still practised in the Orient, and formerly in Rome performed

"ad majorem dei gloriam;"[1] they may have required removal on account of disease or the growth of some tumor; or, finally they may have become completely atrophied from some cause or other, as, for instance, through syphilis, epididymitis, or pressure by a large hydrocele, varicocele, scrotal hernia, etc.

Some authors are of the opinion that, "there is a secretion from the testicles that is necessary for the normal development and the health of the male" . . . . and "there seem to be two parts to the testicles, the seminal gland and an interstitial part. If the interstitial part does not develop in boys, a natural eunuch is the consequence. Variations in the internal secretions of the testicles may be from normal to total absence, and all grades of developmental peculiarities be the result."

As Osborne[2] further emphasizes there is an interdependence of the internal secretion of the testicles and the thyroid gland. "If there is thyroid insufficiency, the testicles do not develop properly, and if the testicles are removed the thyroid remains small."

Nagel,[3] however, thinks that our reasons for an assumption of any function of the testicles other than the preparing of the semen are rather insufficient.

[1] Mantegazza, Gli amori degli nomini, vol. i, p. 175, says, "Man castrated himself and emasculated others, driven to this infamous mutilation by the most opposite reasons—the desire to triumph over human weakness and aspire to heaven, revenge, jealousy, luxury."

[2] Internal Secretions. Jour. Am. Med. A., Febr. 26, 1910.

[3] Op. cit., p. 41.

Zoth and also Pregel[1] seem to have obtained exact objective proof, by means of ergographic records, of the stimulating action of the testicular extracts upon the neuromuscular apparatus in man. They find that injections of testicular extracts cause not only a diminution in the muscular and nervous fatigue resulting from muscular work, but also lessen the subjective fatigue sensations. The natural direction in which we would look for evidence of the existence of an internal secretion on the part of the testes would be in their influence upon the sexual characteristics and sexual appetite. Most of the recent work has indicated quite clearly that the reproductive glands control the development of the sexual characteristics, not by way of a reflex nervous effect but by way of the blood; that is to say, through an internal secretion. The work, however, tends to show that the internal secretion is formed not by the reproductive elements proper, the spermatozoa or the spermatogonia, but rather by the so-called interstitial cells of Leydig, which lie outside of the seminal tubules. When a young animal is castrated completely the secondary sexual characters and the sexual appetite do not develop. If, however, the vas deferens is ligated, the sexual elements may disappear while the interstitial cells remain and increase in number. In such animals the sexual instincts and characteristics develop normally. The clearest proof of the importance of the interstitial cells in this regard is furnished by the experiments of Steinach. Making use of very young animals this

[1] Howell, Op. cit.

observer has transplanted the testes from their normal position to other regions. Such animals develop normally, show all of the usual secondary sexual characteristics, and manifest full sexual desire and potency at the proper period. When the transplanted glands are examined it is found that the sexual elements are lacking, but the interstitial cells are increased in amount. It would appear from this work that the sexual puberty is dependent upon the internal secretion furnished by these cells, and Steinach proposes to designate them collectively as "puberty gland." This observer reports further remarkable experiments in which young males (rats, guinea-pigs) were first castrated, and then had transplanted under the skin or in the peritoneal cavity the ovary from the female of the same species. Under such conditions the graft of the ovary takes, and, unlike the grafted testicle, both the reproductive cells and the interstitial cells survive. In such animals the secondary male characteristics do not develop, his genital organs remain infantile; he exhibits, on the contrary, the female characteristics, as shown by his size, the character of the hair, and especially by the development of mammæ and nipples. So far as the external characteristics are concerned, the animal is sought by the male as though it were a true female. It would follow from these experiments that the internal secretion of the interstitial cells in the ovary and in the testis has each its specific influence in guiding the development of the sexual characteristics. Many experiments and observations indicate that the internal secretion of the

ovaries are important, not only as regards so-called secondary sexual characteristics, but also in regards to the body-metabolisms in general.

If the testicles are lost before puberty, both sexual desire and capacity for sexual gratification are impossible; whilst both may be preserved for some time, possibly for a long time, if the testicles are lost after puberty. Such cases as are recorded where women have amused themselves with castrated men[1] refer to individuals who had been emasculated only a short time, or, at least, after puberty.

At the University of Vienna, a fellow-student of mine had an obstinate epididymitis caused by gonorrhea that brought on conditions in consequence of which one of the testicles had to be removed, whereupon the other testicle atrophied. This unfortunate young man practised copulation for some years after this, boasted of it, and quite ostentatiously courted the ladies. Gradually his power of copulating vanished, and after three years he withdrew from the society of women altogether, grew peevish and reserved, until one day he disappeared and was never after heard of. This case has left a vivid impression on my memory, and illustrates quite characteristically the influence of the virile power on the whole being.

Epididymitis and infectious or other inflammations of the vas deferens may cause permanent changes in the structure of these organs. Sometimes complete obliteration of parts of the vas

[1] "Sunt quas eunuchi imbelles ac mollia semper
Oscula delectent et desperatio barbæ
Et quod abortivo non est opus."—JUVENAL.

deferens may result, and thus the communication between testicle and seminal vesicles may be interrupted. If such changes take place bilaterally, the effect will come near to that of castration. Inflammatory processes in the region of the colliculus seminalis, mainly of a gonorrheal character, may result in a complete occlusion of the ejaculatory ducts, with consequent azoospermism.

Somewhat in contradiction with these conclusions are the results of some experiments on dogs by M. Fabrini[1] which would show that a complete interruption of the spermatic ducts would only cause a partial and momentary influence upon the functions of the testicles.

It is true, as Chetwood[2] states, that many of the cases having had double inflammatory epididymitis still continue to suffer from a recurrence of inflammatory attacks in the epididymis, and some of these continue to have vital spermatozoa in their seminal discharges, and consequently retain the capacity to impregnate their wives; but this is only possible where the occlusion is not complete. I had occasion to observe a characteristic case of bilateral occlusion.

A merchant 31 years old, somewhat obese, otherwise healthy in every respect, had several times gonorrhea and several attacks of epididymitis, somewhat hazy about dates and details. Having been a jolly good fellow since the age of 16, he paid little attention to "such trifles." At the age of 26 he began

[1] Semaine médicale, Paris, Jan. 22, 1902, p. 31.

[2] Recurrent Epididymitis, Journal of Cutaneous and Genito-Urinary Diseases, Oct., 1900, p. 450.

to notice a diminution of what he termed "the animal passion;" also that ejaculation required a constantly increasing effort. During the past three years he had been treated by various specialists, physicians, and quacks, his urethra has been dilated to French No. 33, irrigated, and irritated. At various times he took internally different doses of strychnin, iron, quinin, phosphor, damiana, cantharids and other more or less stimulating and tonic remedies. All kinds of organic extracts, from Brown-Séquard's fluid down to Hammond's famous Meduline, were given to him by mouth and subcutaneously; he was suspended, his prostata and his testicles were massaged, all variations of the electric current passed through his spine and the nerves and their centra in and around the sexual organs. All in vain, his sexual desire began to be but a recollection, and the ejaculations always happened at longer intervals, requiring always greater efforts.

The patient consulted me in February, 1896. The inspection showed a peculiarly wrinkled appearance of the glans, and both testicles, while of normal size, were of a more fibrous consistence, and of an almost homogeneous shape, the epididymis hardly being discernible from the testicle proper. Repeated microscopical examination of the ejaculated fluid failed to show any spermatozoids.

The patient was told his condition was incurable and that it could not be expected that the sexual libido and strength would ever improve, on the contrary were bound to diminish constantly. The unfortunate young man desired to know if he could marry. The answer was that this could be done honor-

ably only in case the lady in question were previously informed of the existing condition. This he declared to be out of question.

This patient is now married over thirteen years, a model husband, he and his wife to all appearance being happy. From time to time he inquires if any new discovery had been made to cure his disease. The erections continue to be fairly good, and he ejaculates about once in two months. The young wife is said to be glad that her husband is so clever in avoiding the troubles of paternity.

I examined the patient recently, found his prostate gland considerably enlarged, but of normal consistency and sensibility. One would really be tempted to assume that the prostate in some cases vicariates for the testicles.

Edward Martin[1] advises an operation for the relief of azoospermia, incident to bilateral obliterating epididymitis. He experimented at first upon dogs. The duct was divided and its upper end attached to an opening made in the head of the epididymis. The emissions of these dogs, which occurred days or weeks afterward, were swarming with motile spermatozoa. A man who suffered from azoospermia, as the result of a double gonorrheal epididymitis was operated upon next. The duct was split, and one side of this opening sutured to the borders of the wound made in the head of the epididymis. The second emission following this operation two weeks later was found to be full of motile spermatozoa. The operation is tedious but not dangerous, and

[1] Jour. of Cutan. and Gen. Ur. Dis., April, 1902, p. 178.

ought to be tried in every suitable case as the only treatment that could do any good.

Absence of one testicle, from whatsoever cause, leaves virility unaffected if the other testicle continues its functions. The Hottentots are said to amputate the left testicle of their youths before entrance into matrimony.[1]

Hydrocele of any origin, the syphilitic and tubercular included, seems to have no influence upon the sexual power. A hydrocele and **inguinal hernia,** if of a high degree, may encroach upon the integument of the penis, causing that organ to disappear from view completely, thus producing a mechanical impediment to copulation. Tumors, by reason of their size, form, and position, may unfit the member for introduction into the female genitals.

Injurious influences of a traumatic nature, more rarely diseases—as, for instance, those following gonorrhea—may produce **changes in the corpora cavernosa,** such as local obliteration of the meshy passages, nodi, and wheals or callosities. Under such circumstances the meshes will not all fill equally in erection, some parts remaining quite soft, whereby the member takes on a more or less bent form, and will thus become unable to penetrate into the vagina. Curschmann[2] mentions a pertinent and interesting case, not isolated in literature: A robust railway official, twenty-six years old, awakened one morning with a violent erection. He endeav-

[1] Mantegazza, Gli amori degli nomini, vol. i, p. 175.

[2] Impotenz, Band ix. 2; Ziemssen, Handbuch der speciellen Pathologie und Therapie, p. 530.

ored to bend the penis downward, when suddenly it gave way, caused great pain, and sank down. There was profuse bleeding underneath the skin of the penis, so that it was black and blue and almost as large as a fist when Curschmann saw the patient. After recovery it was discovered that by the violence practised the right corpus cavernosum had been torn, and, in consequence, at every erection the penis was bent upward and to the right, so that copulation became mechanically impossible.

Small fissures in the corpora cavernosa may be caused by violent motion during coitus. Such a case I had under my care in the year 1887. A restaurant-keeper, forty-one years of age, wanted, after a slight excess in Baccho, to do homage to Venus also. Both he and his wife were in a somewhat exultant mood, and probably proceeded rather impetuously. The husband told me that the erection was of unusual vigor, and just before ejaculation he suddenly felt a sharp pain, so that he had to discontinue the act. The erection subsided at once, but the appearance of the member was such that he was compelled to get medical advice. When I saw the man, an hour after the occurrence, the penis was much swollen, black and blue all over, only an irregular streak on the right-hand side having its usual color. I ordered cold applications and occasional painting with iodin. After ten days the swelling had disappeared. I could feel a somewhat hardened spot on the left corpus cavernosum, but there was no further interference with erection and copulation. Heinrich Ganz[1]

[1] Prager med. Wochenschrift, 1896, No. 26.

reports a case of rupture of the urethra under similar circumstances.

Finally, there are to be mentioned the so-called *penis-bones*. They are of very rare occurrence, and may arise through the ossification of single parts of the albuginea of the corpora cavernosa. In case they seize upon larger parts, they may prevent dilatation, and thus annihilate erection and the power of copulation.

Persistent changes in the mucous membrane of the urethra, such as strictures, frequently, but not always, cause impotence.

CONSECUTIVE IMPOTENCE.

The performance of coition requires all the power of the individual and, above all, a normal state of the whole body. The most various diseases can affect sexual vigor and even destroy it.

Of least account is virility in **acute diseases** of a serious nature. Sexual desire is heightened during the prodromal stage of most of the acute diseases as long as the approaching fever, which may be quite high, is only announcing itself by an incomprehensible agitation and general uneasiness. Such patients are sometimes carried along violently to sexual excesses. I have often watched this condition Thus, for instance, a man, twenty-six years of age, accomplished coition, contrary to his usual habit, three times in the night before scarlet fever declared itself, as he ascribed heaviness in his legs and a state of excitement to unsatisfied sexual desire.

During the illness, on the contrary, the sexual appetite is nil. During convalescence every other desire will make its appearance before this one, and its reawakening is rightly greeted as the sign of returning strength. The patient requires his forces for other purposes during attacks of acute diseases, and his temporary stagnation in sexual activity is a wise provision of nature; it would be absolutely wonderful if, unfortunately, other functions of the body, and principally that of digestion, were not impaired at the same time.

After a protracted, severe, and exhausting illness, during which the reproduction of spermatozoids diminishes or may be altogether arrested,[1] impotence sometimes lasts a long time. All the other consequences of the illness may be overcome before this sexual weakness, so that there may be a danger of its becoming permanent. *Diphtheritis*, which is sometimes followed by protracted paralysis and muscular atrophy, causes impotence now and then.[2]

The assertion is met with in old books, and has been copied into modern ones, that persons affected with **phthisis** are generally apt to commit sexual excesses (phthisicus salax). I most emphatically deny this. A phthisic person may have acquired the habit of frequent sexual intercourse in former times, and then, during his illness also, may go to excess for a time; but, surely, these are exceptions. As a rule,

[1] Rosenthal, Ueber den Einfluss von Nervenkrankheiten auf Zeugung und Sterilität. Wiener Klinik, 1880, Heft 5, p. 165.

[2] Hofmann, Lehrbuch der gerichtlichen Medicin. Wien und Leipzig, 1881, p. 66.

phthisics are not much inclined to physical love nor to any kind of sexual gratification, and this is in keeping with the condition of their physical strength. For the purpose of noting this feature I have for many years past carefully watched and examined numerous phthisical patients. Without exception and without regard to age, they all entirely renounce sexual gratifications without experiencing the least difficulty. Indeed, quite young husbands affected with phthisis practise copulation very infrequently even during the intermissions of their illness.

My distinguished colleague, Albert Abrams, assured me recently that his large experience bears out my opinion.

The majority of the men experienced in the treatment of tuberculosis, whom Peters[1] interviewed in this regard, were of the opinion that increased sexual desire is not a condition due to the toxins generated in the tuberculous; that such a desire (when present) is due chiefly to idleness.

Finger[2] considers tuberculosis to have been directly the cause of sexual impotence in several cases he observed.

Chronic diseases impair the sexual power proportionately to their effect on the rest of the body. Chronic diseases in the organs of respiration and of digestion affect virility only in the same measure as they debilitate the body in general and lower vitality. **Autointoxication** caused by various products of an undue fermentation in the intestines is a very

[1] Jour. Am. Med. A., Jan. 30, 1909, p. 416.
[2] Handbuch d. Urologie, Wien, 1906, 17te Abth., p. 961.

common cause of temporary weakening of the sexual power.

Autointoxication is a question of the utmost importance, physicians begin to understand it always more and more, a great deal of investigating is going on, and finally the subject is receiving the attention it certainly deserves.

We know that autointoxication causes depressed feeling and lowers the energy of the entire metabolism; it were surprising then if it did not dull the sexual desire, feelings, and strength. Swinburne[1] calls attention to **oxaluria** as a cause of prostatic or urethal disturbances and sexual weakness. My personal experience confirms his observations. It is absolutely necessary to make a careful microscopic examination of the urinary sediment in every one of the chronic troubles in the genito-urinary system.

Disease of the heart does not impair virility until it amounts to a serious disturbance of the circulation. In the first stage of the disease the patient is rather nervous and inclined to sexual excess. The same is true with those suffering from disease of the liver.

Virility is affected also by some general diseases. Impotence is particularly frequent, in fact a rule, with persons suffering from **diabetes,** and often constitutes one of the first symptoms of the disease, noticed long before the physical being commences to deteriorate. The seminal secretion is also said to stop in this disease, but I have repeatedly observed cases, where

[1] Oxaluria as a cause of prostatic and urethral disturbance. The Am. Jour. of Urology, Oct., 1906, p. 534–540, and The Annals of Surg., Sept., 1908.

ejaculation of normal semen occurred frequently, though erections were poor.

As a special enemy of the virile power must be mentioned **obesity.** In exceptional cases obese people may be very powerful in sexualibus. I myself have known such cases, but obese persons are usually fond of their comfort, in copulation as in everything else. They frequently prefer the pleasures of the table to those of love, and moreover, are not much troubled by sexual desire. They give off but a scanty secretion of sperm, often suffer from adipose degeneration of the testicles, and are apt to become completely impotent. Kisch found invariably that the sperm of nine out of ten obese men showed under the microscope only molecular detritus and sperm-crystals, but no spermatozoa at all. The deleterious influence of obesity upon the sexual strength is easier to understand at present when we know that "diminished activity of the pituitary gland conduces to obesity and sexual infantilism." In case of obesity of a high degree, especially when there is a *pendulous abdomen*, copulation may be mechanically impossible.

Belfield describes a form of impotence which may be due to a deficient secretion by the adrenal cortex. In the case he describes the retrograde puberty, impotence, diabetes insipidus were promptly relieved by the administration of suprarenal substance.

The various forms of **nephritic affections** certainly influence the sexual power out of proportion to the debilitating effect they have upon the balance of the system.

Anemia may be a cause of impotence, like any other disease carrying in its train debilitation of the body in general. If anemia is acute, it is generally accompanied by impotence, while anemia of a chronic nature causes at first only weakening of the sexual capacity. According to Roubaud,[1] *chlorosis* is also a cause of impotence, but the case he describes is such that I should certainly characterize it as neurasthenic.

During the last few years we have learned a great deal in regard to the clinical importance of *blood-pressure* in various bodily conditions. I have made it a practice to take the blood-pressure in every case of sexual debility. While my findings are far from being conclusive, I observed that high blood-pressure most frequently goes with sexual impotence, and that sexual excesses have the tendency to lower the blood-pressure.

It would seem almost incredible that a **severe cold** could affect virility seriously, though temporarily only, if we do not take into consideration the fact that the sense of smell influences the sexual appetite. In a man really vigorous sexually a cold, be it ever so severe, cannot annihilate virility, though it lessens the sexual desire. Schiff has removed the nervi olfactorii in new-born dogs, after which the male was unable to find the female. Mantegazza deprived rabbits of both eyes without any effect on copulation.[2] In man the olfactory sense has not so great a power as in animals, because a great share of influence over the center of erection has been allotted to

[1] Op. cit., p. 213.

[2] Igiene dell'amore. Milano, 1881, p. 277.

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other senses as well as to the developed faculty of thinking; nevertheless, the sense of smell is very important. There is an intimate relation between engorgement of the turbinate tissues and the sexual apparatus. Albert Abrams[3] had an asthmatic patient who could never indulge in coitus without suffering an asthmatic paroxysm. During the act, swelling of the nasal mucosa occluded his nose. Another of Abrams' patients would develop an attack of sneezing coincident with the attempt at intercourse.

In both instances, the sexual act was consummated by the previous employment of cocain to the nasal mucosa.

Impotence is very frequently a symptom of **disease of the** central or peripheral **nerve apparatus.** This is clear to any one even without a thorough knowledge of physiology. The practitioner sees typical examples almost every day. Nearly all diseases of the brain and of the spinal cord have great influence over the virile power—some only for a time, others permanently, according to the character of the disease in question. Some of these diseases cause at first increased sexual excitement, which, in the further course of the disease, is followed by diminished sexual power or absolute impotence. A given disease of the brain and spinal cord does not always have the same effect in this respect. Apoplexy of the brain, for instance, may cause frequent erections at one time and entire loss of sexual desire and power at another, according to the location of the lesion.

[1] Diagnostic Therapeutics, Rebman Co., N. Y., 1910, p. 229.

In the first stage of *tabes dorsalis* the patient experiences for the most part an increased sexual desire, in consequence of irritation of the nerve-fibers which innervate the sexual apparatus; but later on sexual vigor gradually diminishes until it is entirely extinguished. Cases are known, nevertheless, where tabes existed in a high degree and yet the patient was still in some measure virile.

From this little we may conclude that there are no absolute rules to be given about the state of virility in affections of the brain and spinal cord. The physician has to examine every individual case and determine his treatment accordingly. Moreover, in these diseases the medical man must direct his attention to other things; he has no time to think of sexual virility, especially when life is in danger; and, besides, the patients—as the ataxic, for instance—care very little for the sexual power, for, as a rule, the desires are silent.

Impotence seems to me still more insignificant in some forms of *insanity*, excepting those of perverse sexual sensation, of which we shall speak hereafter.

Lesions of the brain or spinal cord may affect virility according to the spot injured. In the literature of the subject we read of cases where injury of the cerebellum has brought about a loss of sexual power. In certain injuries of the spinal cord, principally those of the inferior parts, and especially in spinal concussion, priapismus has been noticed. It constitutes one of the most troublesome symptoms, and defies all remedies. Lallemand[1] reports a very

[1] Des pertes seminales, tome ii, 1re partie, p. 64.

characteristic case. Rosenthal[1] mentions a case he has observed in which there was a fracture of the fourth, fifth, and sixth cervical vertebræ, with paralysis and anesthesia of the legs and trunk, together with retention of the urine and feces, and priapism for seven days during life and thirty-six hours after death.

Those cases in which impotence is to be considered as a symptom of some disease of the entire nervous apparatus have more importance for us, because they occur more frequently, are of more consequence to the patient, and, finally, because therapeutic action is attended with more chance of successful result. In these cases no change in the nerve substance can be seen either macroscopically or microscopically. The pathological change consists simply in the altered capacity of nerve-action.

In the first place must be mentioned general nervousness, or, to call it by the name that originated in America, **neurasthenia,** or, as Rosenthal[2] calls it, depressive spinal irritation, all of which names are entirely appropriate. Neurasthenia has grown into a fashionable disease in this age of electricity, when every one belonging to the upper class has to hurry from early morning till late at night in order to accomplish his measure of work or of pleasure; when the everlasting hurrying begins in infancy and still continues during old age. By these psychical excitations, which exert such a frequent and lasting effect, the center of the vaso-constrictors particu-

[1] Ueber den Einfluss von Nervenkrankheiten auf Zeugung und Sterilität. Wiener klinik, 1880, Heft 5, p. 145.

[2] Op. cit., p. 142.

larly is kept in a state of irritation. Beard described the conditions very forcibly when he said[1]:

"The Indian squaw, sitting in front of her wigwam, keeps almost all of her force in reserve. The slow and easy drudgery of savage domestic life in the open air—unblessed and uncursed by the exhausting sentiment of love, without reading or writing or calculating, without past or future, and only a dull present—never calls for the full quota of her available force: the larger part is always resting on its arms. The sensitive white woman—preeminently the American woman, with small inherited endowment of force, living in-doors, torn and crossed by happy or unhappy love, subsisting on fiction, journals, receptions, waylaid at all hours by the cruelest of robbers, worry and ambition, that seize the last unit of her force—can never hold a powerful reserve, but must live, and does live, in a physical sense, from hand to mouth, giving out quite as fast as she takes in, much faster oftentimes, and needing long periods of rest before and after any important campaign, and yet living as long as her Indian sister—much longer, it may be—and bearing age far better, and carrying the affections and the feelings of youth into the decline of life."

Neurasthenia is either congenital or acquired. According to the rules of heredity, neurasthenic parents have neurasthenic children, or, rather, they have children naturally inclined to neurasthenia, which will tend to develop in them more and more

[1] Beard-Rockwell, Sexual Neurasthenia, fifth edition. New York, 1898, p. 59.

under the least favorable circumstances, and who, if their regimen is not strictly regulated, will exceed their parents in neurasthenia.

General nervousness with its manifold symptoms is by no means a rare disease. The symptoms are frequently held to be special diseases, and it is only an apparent extreme if Beard and his disciples trace most of the diseases back to neurasthenia. It is an established fact that this neurasthenia is of much more frequent occurrence in America than in Europe. Explanation of this circumstance suggests itself when we compare the mode of living on the two sides of the Atlantic.

Beard[1] gives the following definition of neurasthenia: "Neurasthenia is a chronic, functional disease of the nervous system, the basis of which is impoverishment of nervous force, deficiency of reserve, with liability to quick exhaustion, and a necessity for frequent supplies of force; hence the lack of inhibitory or controlling powers, physical and mental—the feebleness and instability of nerve action and the excessive sensitiveness and irritability, local and general, and the vast variety of symptoms, direct and reflex.

According to Arndt,[2] neurasthenia is increased or decreased excitability and irritability in conjunction with incapacity to resist external influence—*i.e.*, weakness in general.

The symptoms of neurasthenia are, according to Beard, the consequence of reflex irritations which

[1] Beard-Rockwell, op. cit., p. 36.

[2] Die Neurasthenie. Wien und Leipzig, 1885, p. 40.

pass not merely through the ordinary sensory and motory nerves, but also through the sympathetic system and the vasomotor nerves. The reflex irritation can start from any part of the body and pass over to another, but the brain and the digestive and reproductive systems are to be considered as the main seats. The symptoms of neurasthenia are inconstant and surprisingly interchangeable. Erb distinguishes between a "cerebral," a "spinal," and a "universal" neurasthenia; Beard was the first to recognize a "sexual" neurasthenia.

According to Beard, the sexual nervous exhaustion may be considered as cause, effect, or accessory to the other kinds of neurasthenia, but must, nevertheless, when fully developed, be distinguished from them just the same as general neurasthenia is to be distinguished from hysteria, hypochondria, and the various organic diseases of the nervous system with which it was confusingly mingled until quite recently. Beard considers sexual neurasthenia in general, and particularly in reference to its various complications, almost the most important of all the forms of neurasthenia. It must attract our notice that he further asserts that the clinically connected local conditions of sexual weakness in man, such as impotence, spermatorrhea, and the "irritable prostata," are to be looked upon merely as symptoms of sexual neurasthenia. This would, indeed, make matters easy, and the single word "neurasthenia" would explain many a thing that has appeared quite inexplicable until now. And here we come to the point where the modern urologist thoroughly disagrees with the

neurologist; and with right. Today we are able to explain many a case of so-called neurasthenia by showing pathological changes in various parts of the sexual organs, be it now the ampullæ, the seminal vesicles, the prostate, the ejaculatory ducts, or the region of the verumontanum and other parts of the urethra itself.

The more our means of investigation are perfected, the fewer cases of genuine sexual neurasthenia we meet. Goldschmidt's endoscope and Buerger's cysto-urethroscope by bringing the posterior urethra into real and splendid view show us many a change on and around the caput gallinaginis of which we could not have a proper idea before the advent of these instruments.

And who can tell at present how many and what cases of neurasthenia are due to the impaired and faulty internal secretion of the prostatic gland?

Thus we can at best, consider as symptoms of an existing sexual neurasthenia only those cases of impotence and spermatorrhea in which the organic conditions and their pathological alterations offer no hold at all for an explanation of the disease.

B. Goldberg,[1] of Wildungen, however, distinguishes three groups of sexual neurasthenics. First, those who show considerable pathological changes in the genito-urinary organs. Second, those in whom the anatomical changes are quite insignificant; and third, a group comprising the pure functional disturbances. Experience teaches that important pathological changes may exist at the same time, or

[1] Therapie der Gegenwart, 1900, Heft 10, p. 460.

cause sexual neurasthenia. If the functional disturbance does not improve with the gradual improvement of the organic disease, then we have two distinct diseases with which to deal. We must be careful not to confound real sexual neurasthenia with temporary neurasthenic symptoms caused by sexual diseases.

Beard states that the causes of sexual neurasthenia are: unfavorable social conditions, sexual excesses, immoderate use of alcohol and tobacco, special irritants, grief, and even climate; but, above all, he believes that the most prominent and predisposing causal force is modern civilization in regard to its wants and claims that are increasing from day to day.

While most authors claim that neurasthenia is rapidly spreading, Munsterberg[1] expresses his doubts by saying, "We may begin with the very justifiable doubt whether nervousness really has increased in our time. Earlier periods had not so many names for those symptoms and were not able to discriminate them with the same clearness. Above all, the milder forms of abnormalities were not looked upon as pathological disturbances. If a man has a pessimistic temperament idea, or imagines that he feels an illness which he does not have, or has no energy to work, even today most people are still without suspicion that a neurasthenic or a psychasthenic or a hysteric disturbance of the nervous system may be in its beginning. Earlier times surely may have treated even the stronger varieties of this kind as troublesome

[1] Psychotherapy, New York, 1912, p. 193.

variations in the sphere of the normal. On the other hand, there can be no doubt that, for instance, the Middle Ages developed severe diseases of the nervous system in an almost epidemic way, which is nearly unknown in our time."

C. W. Allen[1] while in tropical Mexico made very interesting observations in regard to climatic influences upon certain individuals, particularly blonds, and supposes it is the absence of pigment in the skin which permits the over abundance of sunshine to cause neurasthenia and impotence.

The attentive reader of the excellent work of Lallemand "On Spermatorrhea" will not fail to notice that it contains ideas approaching those of Beard, and I am inclined to agree with Lallemand rather than with Beard. Lallemand quotes observations where nearly incurable cases of spermatorrhea or impotence have followed insignificant causes—as, for instance, slight sexual excesses—which would have had in other individuals either no effect at all or, at least, an affect of no consequence. Lallemand explains this by assuming a natural nervous predisposition to what is now called neurasthenia.

Beard asserts that neurasthenic individuals are able to accomplish fatiguing mental work for years, and often during the whole period of life; so that, sometimes, nervousness and neurasthenia are associated with an enormous capacity for mental exertion. To illustrate this assertion, Beard says that it was by neurasthenic authors that the epoch-making works were produced; and names like George Eliot,

[1] Impotency in the Male. N. Orleans Med. and Surg. Jour., May, 1908.

Darwin, Heine, Spencer, Edwards, Kant, Bacon, Montaigne, Joubert, Rousseau, Schiller, and many more of the same rank illustrate beautifully the truth of the sentence that it is possible to produce works of genius and of consequence even with a limited quantity of nerve-substance and nerve-power, attended by a rapid consumption of the same. It seems to me fair, however, to question whether all the above-named celebrities were really neurasthenic, and also whether their neurasthenia was not more likely to have been caused by their colossal mental efforts than to have produced such works.

Beard's method of reducing to neurasthenia nearly all the pathological states in the system of reproduction would at once rid us of a great number of difficulties that assail every one who studies impotence. It would do away with the difficulty of arranging the different forms of impotency, according to some logical system; because we should have only to differentiate a neurasthenic from an organic impotence, and, moreover, the diagnosis would also be an easier task; but, alas, the facts oppose such a simplification, and we have nothing to do but to continue the old patchwork now in use as well as we can. We can agree to the consideration of neurasthenic sexual weakness as a phase of a spinal or general neurasthenia, and must look upon an independent or self-subsisting neurasthenia sexualis as a form of impotence occurring frequently enough.

Very often virility is affected by **diseases of the sexual organs;** this influence is in some cases a secondary one. Thus, for instance, will local affections on

and about the colliculus seminalis, or pathological changes of the canals or apertures discharging into it cause, as a first effect, irregular involuntary losses, or premature ejaculation of semen, and in this manner, indirectly, slowly, but surely, exhaust the sexual power, and lead to various forms of sexual neurasthenia.

Several diseases of the sexual organs have a direct influence on virility. Thus, *wounds and ulcers* of the penis are a direct obstacle to the accomplishment of coitus, whether they are of a specific nature or not. The same may be said of the condylomatous proliferations of a high degree, because every erection, and still more, friction against the female pudendum, causes great pain.

Some individuals suffer much from nearly continuous formations of herpes on the prepuce, the vesicles of which afterward turn into little sores. Uncleanliness is not always the cause of this disease; it is sometimes the consequence of an ulcus molle. Some people suffer from it without any apparent cause after every sexual connection, such vesicles forming on the member and preventing coition for a time. The very rare preputial calculus ("calculs du prépuce," Roubaud) may also form an obstacle to coition, but this is removable, and it certainly occurs only in consequence of great uncleanliness in connection with phimosis. Let me mention here that there are people who, seized by violent sexual desires, are capable of bearing even great pain; they feel no scruple in satisfying such imperious instincts, although thereby they harm themselves as well as others by increas-

ing their own suffering and propagating infectious diseases.

Gonorrhea also is in reality an obstacle to copulation; but it is an obstacle about which people of the above description care very little. The disregard of this obstacle is of so much greater frequency as, unfortunately, the sexual impulse is so much stronger during blennorrhea, particularly in its acute stage. This circumstance contributes greatly to the dissemination of the disease. In the chronic forms of gonorrhea the state of irritability of the urethra, and therefore of the whole sexual apparatus, exists only slightly or not at all, but is sometimes roused to unusually violent manifestations by the locally applied remedies, such as caustic injections, sounds, etc.

Other obstacles set up by gonorrhea to the accomplishment of copulation are the further complications and the higher degrees of development which the disease often produces, and the extension of the blennorrheic process, such as inflammation of the prostata, the vas deferens, the epididymis, and the vesicula seminalis. Any one afflicted with such a disease will, however, not readily yield to the temptation of coition as long as the pathological process is in its acute stage.

Virility is affected by the many diseases of the *prostata.*

Until a few years ago the anatomy, physiology and pathology of the prostate were not considered of much importance. In 1888, when the first German edition of this work was published, it took quite a while to search for literature on the subject, and when

all of any importance was collected, the reading did not take very long. I defy any one to attempt the gathering of all the scientific productions on the subject written since.

The differences in the anatomical description of the prostatic gland which we find even in text-books can easily be explained by the almost regular individual differences, and by the almost incredibly frequent pathological changes. Our real difficulties begin when we enter upon the discussion of the functions of the prostate.

Of course, the physiology of the prostatic gland is perfectly clear to various excellent physiologists and urologists, the trouble is only that there is such a diametrical divergence of opinions and even of results in the most essential experiments and deductions, so that we must come to the conclusion that some of the things that seem to be so clear to several scientists are not correct.

We must agree with Reynolds when he claims that we are unable to say definitely what the exact function of the prostate is, though it is now generally conceded that the physiological function of the prostate is almost exclusively a genital one. But even Nagel[1] when explaining the functions of the prostate in his handbook of physiology is rather guarded in his statements, just saying that the development of the prostate being characteristically different according to the different ages points distinctly toward its relations to the sexual activity.

We learn by our clinical experience that however

[1] Op. cit., p. 63.

things may be, the prostate has an important part in the sexual life and also in the act of micturition. In the latter regard its office may be of no importance under normal circumstances but jumps into great prominence as soon as pathological changes have taken place.

In acute inflammations we are surely tempted to consider the prostate to be a urinary organ, and are not surprised that once the name of orbicularis vel sphincter urethræ for both the prostate and the prolongation around the menbranous urethra was proposed.

The part which the prostatic secretion has in regard to the semen is, in spite of numerous interesting and meritorious experiments, not quite clear, and it is rather significant that even the chemical reaction of this secretion, and its importance as to the vitalization of the spermatozoa is not an undisputed fact, although we know that necrospernia is a frequent consequence of prostatitis.

Thus we may understand why the modern urologists feel compelled to return again and again to the study of the prostatic gland. Physicians told me repeatedly that when referring a case to a urologist they are almost invariably told the patient has prostatitis. But we know that prostatitis is the most frequent complication of gonorrhea, that gonorrhea is the most frequent disease, and that prostatitis is most difficult to cure and our fellow practitioners may easily understand and also forgive that the diagnosis of prostatitis is so frequently made.

So long as the gonococcus has not invaded the prostate the gonorrhea is amenable to treatment,

once in the prostate the way of invasion of important organs is open by the road of the bladder to the ureters and kidneys, by the road of the seminal duct, to the epididymis. Wolbarst emphasizes with right that the prostate must be examined in every case of gonorrhea before the patient is discharged and that the condition of the prostate must be ascertained from time to time in the course of the disease, and I am sorry that he does not tell us what he does to nip in the bud time and again "what might have insidiously become a chronic intractable gonorrhea." It was my experience that when the gonococcus once has invaded the prostatic gland, there is no more nipping in the bud to be done by the physician; nature may accomplish it if there is no interference by the patient's misconduct or too strenuous a treatment.

The symptoms are mostly clear in cases of typical acute prostatitis, and then a diagnosis is easily made; one can even go so far as to differentiate between a catarrhalic, a follicular and a parenchymatous form of inflammation, but as a rule the acute stage, the actual invasion of the prostate is not so typical, the symptoms are very light, the patient hardly pays any attention to them, occasionally telling his physician of an increased frequency in urinating, and of a final disagreeable sensation at the end of each micturition; the more or less developed symptoms of tenesmus. And thus it happens that the first invasion of the prostatic gland is almost regularly overlooked, and so much more regularly because cases of fresh gonorrhea that are properly treated, by carefully observing experts, seldom develop prostatitis.

With the exception of the not very frequent cases of aseptic prostatitis, the consequence of habitually interrupted coitus or masturbation, prostatitis is always caused by propagation of an inflammation in the urethra.

When we ask how does this involvement happen and what is the immediate agent causing it, how does this agent act and behave? we reach the biggest snag of the whole prostatic question. No doubt the gland is being invaded by a germ. In acute gonorrhea we have the wily gonococcus, and no matter what Albaran may say, it must be the gonococcus that invades the prostatic gland. What happens to the microogranism once located in the gland is at present hard to say. Some think the gonococcus may persist for many years imbedded somewhere in the prostate, and others are of the opinion that the gonococcus makes room for other forms of bacteria.

The question is not so simple as some of our fellow-workers think. The process cannot be tabulated so nicely as Notthaft has done, and I dare to say that the study of this phase of our subject is far from being clear. The task to investigate and to systematize the bacterial geneology of the prostate may seem very easy, is extremely attractive, but no doubt is worthy of a scientific Sisyphus.

More cases one examines in every direction, more smears one inspects under the microscope, more cultures one makes, more perplexing problems one meets. Dr. Philip Rahtjen of San Francisco, the well known biologist, was very enthusiastic when I proposed to him that we should go to work and find

out all there is to the living germs in the prostate. We were careful to obtain the real and pure prostatic secretion, and in every case several smears were microscopically examined, and at least two cultures were prepared on blood-serum, blood-agar, agar-glycerin or Wertheim medium. While we are at our task since October, 1909, and have fully investigated a great many cases, we know that we are far from knowing all there is to the living germs in the prostate. It would lead too far to enter into the details of our findings; they will be reported later, but we are even now sure of the following facts: In the search for pathogenic bacteria the microscopical examination of the prostatic fluid is not sufficient; cultures must be made, because a microscopical examination of the smear may show no pathogenic bacteria, and yet after 24 hours we see on the culture media an abundant growth of staphylococci and even gonococci.

The microscopical examination of the smears, mainly, however, the cultures prepared from the secreta are frequently surprising and very often not at all in conformity with the clinical symptoms. Gonococci, ordinary diplococci and staphylococci often appear to have a peculiar and intimate relationship to each other, and it is quite probable that the medium in which these organisms grow, whether that afforded by the diseased prostate, or any other, exerts a transforming influence and converts one form into another. This theory is so much more attractive as it would fully explain the frequent perplexing changes in the clinical symptoms of chronic prostatitis. We have further found that in the absence of

gonococci there appear almost invariably diplococci, morphologically like gonococci, but Gram positive.

In connection with gonococci there are always staphylococci present.

Dr. W. P. Willard of San Francisco, who made a close study of the Colon bacillus is of the opinion that many cases of originally gonorrheal prostatitis, that have existed for years, are kept active by a colon invasion. These organisms outgrow or replace the gonococci and keep up an infection of a low grade, which causes infiltration and gradual destruction of the glandular tissue. Willard has observed several cases of impotency of various degrees in patients affected in this manner, and after many examinations was only able to obtain the colon bacillus as the exciting factor.

Of the diseases of the prostate acute inflammation and atrophy cause temporary or permanent impotency. Chronic prostatitis, one of the most frequent consequences of gonorrhea, is also the most frequent cause of various sexual neurasthenic disturbances and of prostatorrhea; it invariably diminishes sexual inclination. The other diseases of the prostata have not been studied much in their influence on virility, as they generally make their appearance at an age when virility is of but small consideration.

Patients frequently consult physicians and complain of various forms of chronic discharges. Mostly they are told that there is no cause for worry as they have a "simple prostatorrhea." If we, however, consider the importance of the prostatic gland and its secretions, and think of the significance of the internal secretion of various glands, we must come to the conclusion that a prosta-

torrhea surely is not without a certain consequence, and ought to be remedied if possible.

Diseases of the *urinary bladder* are apt to increase sexual desire temporarily, catarrh of the bladder, for instance, being frequently followed by greatly increased libido sexualis, which degenerates now and then into priapismus and satyriasis. This increase in sexual desire is still more frequently met with when the neck of the bladder alone is diseased, and in such cases the ejaculation is, as a rule, accompanied with pain. Urinary calculi also nearly always cause increased irritability in the sexual organs. Roubaud[1] says that the very rare prolapse of the urinal bladder through the inguinal canal causes impotence, principally through the retraction of the penis occasioned thereby.

Strictures of the urethra have different effects on virility. They very often cause impotence, and are, moreover, always a hindrance to fecundation.

Superexcitation from disease of the sexual organs is generally followed by relaxation. The patient who suffers from gonorrhea is sexually excited; he could perform coition oftener than in the state of health if he were not withheld by the great suffering and the fear of the consequences; but when this state of irritation is past, reaction will set in. The unusual continence to which vigorous young men are forced by gonorrhea neutralizes the injurious influence of over-excitement of the nerves, and, possibly, of the specific action of the virus of gonorrhea on the sexual nerves. Sometimes we see, as Ultzmann[2]

[1] Op. cit. p. 255.

[2] Potentia generandi und Potentia cœundi. Wien, 1885, p. 24.

says, that such patients who have formerly been virile in a high degree become temporarily impotent after an attack of gonorrhea, especially when the disease is accompanied by catarrh of the bladder, prostatitis, or orchitis. Ultzmann thought that in such cases gonorrhea has had a paralyzing effect on the nervous apparatus of the prostata. This conjecture was admitted as perfectly well founded, and it was also supposed that the sexual nerves have become temporarily neurasthenic in consequence of the strain of the almost continuous state of excitement. Now we know that it is mostly chronic catarrh, irritation, inflammation, infiltration and what Buerger would call urethritis chronica cystica in and around the caput gallinaginis, the prostatic portion of the urethra, the prostate itself, and the vesiculæ seminales that are most frequently the origin of functional disturbances. The peripheric ends of various nerves in connection with the centers of erection are kept in constant irritation, and produce neurasthenic conditions, which in many cases outlive the original local disease.

The influence of such local diseases, as a factor in causing sexual neurasthenia requires further careful observation and study.

In spite of our modern and improved methods of examination we still meet a great number of sexual neurasthenics seeking medical aid who show no anatomical changes of any kind. But, it must be admitted that, the further we advance in the study of the deep urethra and the pathology of the various sexual appendages less frequently we see cases of genuine sexual neurasthenia.

The endoscope has helped us to a knowledge of a number of diseases of the mucous membrane of the urethra, among which the affections of the colliculus seminalis and of its adjoining parts interest us in the first place, as they exercise great influence on virility. Grünfeld[1] told us first that endoscopic observation of the colliculus seminalis in different individuals discloses varieties differing widely in color, size, consistency, and vascularity. These differences rest on a pathological basis. Finger's microscopic and endoscopic observations[2] were of the greatest importance; they form a true and valuable foundation for a pathological anatomy of the impotentia cœundi. His meritorious work was continued by others. Wossidlo,[3] whose endoscope is one of the best, published a report upon 103 cases, in which *lesions of the verumontanum* were prominent. All of these patients complained of various neurasthenic symptons.

Simultaneously came Swinburne[4] with his report upon disturbances due to disease of the verumontanum and its treatment with the posterior urethroscope.

Very promising and valuable contributions to the knowledge of the pathological conditions of the deep urethra are those by Buerger[5] who with his cysto-

[1] Die Endoskopie der Harnröhre und Blase. Deutsche Chirurgie, Stuttgart, 1881, Lief. 51, p. 172.

[2] Finger, op. cit., pp. 51 to 57.

[3] Zeitschrift für Urologie, 1908, No. 3, p. 243

[4] Annals of Surgery, Sept., 1908.

[5] On New Methods of Diagnosis and Treatment of Lesions of the Neck of the Bladder and Posterior Urethra. Am. Jour. of Dermatology and Gen. Ur. Diseases, 1911, No. 1.

urethroscope has placed in the hands of the modern urologist an instrument signally suitable for the examination of the posterior urethra and the neck of the bladder.

Buerger found two types of cystic disease of the neck of the bladder and the posterior urethra. The first and most common of these, he thinks, is undoubtedly an inflammatory process, the end result of gonorrheal inflammation, while the second presents itself in the form of simple lesions of retention, belonging to the involution of the senile period.

The size of the cysts varies considerably, having a diameter of about a millimeter up to 5 millimeters or more, and the mucous membrane upon which they lie, or better, are imbedded in, he found usually thickened and velvety.

Buerger found that the clinical symptoms in these cystic cases vary considerably, from a simple morning drop without any other complaint to frequent, even painful urination, to various neuralgic pains, impotence, premature ejaculation, etc. And his findings tally exactly with the extensive observations I made with Goldsmith's endoscope; and I would only add, that we can frequently find considerable pathological changes in and around these regions and have no clinical symptoms whatever, while the gravest cases of impotence may seemingly be caused by some trifling catarrhal swelling. Evidently the nervous systems of different persons react quite differently as a result of pathological changes.

Geraghty[1] of Baltimore, in confirming Wossidlo's findings calls attention to pathological conditions of the prostatic utricle and the mode of treating them with his cauterizing syringe.

Pain of various degree at the time of ejaculation is always a sign of some structural change in one or more of the organs participating in the ejaculation. So far, while many of my patients complained of more or less pain, I have never seen a case painful enough to compel the patient to refrain from coition. Wossidlo and Geraghty, however, both describe such conditions.

In all cases of *painful ejaculation* observed by me the pain was invariably more intense after more or less prolonged, or even after only relatively prolonged abstinence, and diminished or even disappeared when coitus was repeated after a shorter interval.

It is quite probable as Geraghty says, that the sudden distension of an inflamed utricular wall may produce the sudden sharp pain when the seminal fluid is thrown into this cavity. This would easily explain that when the seminal fluid becomes less concentrated the pain will also become less, not considering that repeated distentions will by themselves lessen the pain at each following one.

Continued investigations have thus proven that the various diseases of the sexual functions of man are not to be reduced to affections of the nerve-apparatus exclusively, but that they, even more frequently depend on structural diseases of the collic-

[1] A Method of Treating the Prostatic Utricle. Jour. A. M. A., March 11, 1911.

ulus seminalis and its neighborhood. We observe hyperemia, catarrhal swelling, hypertrophy, cysts, papillomata, thickening and various degrees of infiltration of the verumontanum. With anemia we generally find also a condition which I would call flabbiness of the whole structure.

Other diseases of the sexual organs do not affect virility. Cancerous or tubercular degeneration of the testicles does not impair the sexual power. I have often had opportunities to examine the ejaculated semen of persons afflicted with *tuberculosis of the testicle*, and never found spermatozoa therein; but the patients, subject almost without exception to frequent pollutions, were perfectly virile.

Physicians should, however, always bear in mind that several forms of genital tuberculosis are causing chronic and so-called incurable urethral discharges, and that not every chronic urethritis is due to gonorrhea and its complications. Even when patients show no symptoms of failing health or emaciation, a persistent urethral discharge is always suspicious, and the genital organs should be examined for tuberculosis, because some persons may suffer with advanced genital tuberculosis and still show no impairment of their general condition.

The opinion that the tuberculosis of the male genital organs is mostly ascending, gains more and more ground, von Büngner[1] recommends therefore high castration by evulsion of the vas deferens.

[1] Ueber die Tuberculose der männlichen Geschlechtsorgane. Beiträge z. klinischen Chirurgie., 1902, p. 1.

Keyes[1] thinks sterility to be frequent at the time the first testis is invaded, and recommends for such cases the removal of both epididymes.

Some older French authors, and among them Lallemand, claimed that *varicocele* can cause impotence. Confirming Lallemand's descriptions we find the testicle of the affected side, which is almost invariably the left one, somewhat enlarged and softened, while later on various degrees of atrophy may develop. The patients are seldom vigorous in sexual matters, and are very much disposed to gonorrheal and traumatic inflammation of the epididymis.

Lydston[2] reported a case of impotentia cœundi due to *cavernositis chronica.* The patient, above middle age, complained of curvature of the penis during erection. Lydston considers the sclerosing inflammation of the corpora cavernosa a local symptom of general arteriosclerosis. While arteriosclerosis may have been the etiologic factor in Lydston's case, I have found syphilis to have caused sclerotic alterations in the corpora cavernosa in three cases I observed since 1905. All three were men over fifty years old, the lesion was always in the dorsal part of the corpus cavernosum urethræ, antisyphilitic treatment arrested the process, and, by diminishing the induration, brought considerable relief. One patient referred to me by Dr. Steltzner of San Francisco was a man of fifty-nine years, and while admitting early luetic infection, refused proper

[1] Tuberculosis of the testicle. Am. Jour. of Urology, April, 1907, p. 149.

[2] Med. Fortnightly, St. Louis, May 11, 1908.

treatment, claiming that he was cured years ago. He went to Germany for help, but did not find it.

In 1912 I treated a man of sixty, who gave a somewhat hazy history of infection in youth, and had undergone during three years various treatments at the hands of several physicians; he finally refused to be circumcised, as even his layman's reasoning told him that such an operation could not possibly be of any influence upon the hardening in his penis and the subsequent curvature during erection. In his desperation he wrote to Dr. Ackermann of Wheeling, West Virginia, who referred him kindly to me.

It was almost with awe that several years ago I approached the question of the relations of **internal secretion** of the various glands and the sexual function. There is at present a tendency to blend the two principal theories that certain ductless and other glands either provide the blood with substances necessary for the normal functions of other organs, or produce substances which act as an antitoxin against noxious products of metabolism of other organs. Many cases of inexplicable weakening of the sexual power will certainly be better understood when we know more about this one, probably the biggest problem of modern medicine.

Albert Abrams kindly wrote the following statement: "One of the most important recent developments in medicine concerns the functions of the ductless glands, which have heretofore been regarded as negative factors in the welfare of the organism. It has been repeatedly demonstrated that the glands

in question elaborate specific chemical products known as hormones, which are manufactured in one organ of the body and are conveyed by the blood to another organ or organs where they stimulate physiologic activity by their presence.

"The hormone manufactured by the testes at puberty instigates the metabolic changes peculiar to the male at that period. This testicular hormone also influences osseous development insomuch as one finds in young men with atrophied testicles, and in eunuchs an overgrowth of the long bones caused by delayed epiphyseal ossification.

"Similarly, the hormone of the ovary creates changes peculiar to puberty in the female.

"Recent investigations concerning the hormones of the pituitary body are specially interesting.

"The pituitary gland consists of two lobes; an anterior glandular, and a smaller posterior body made up essentially of nervous elements.

"The hormone developed by the posterior lobe has a diuretic action and raises blood-pressure by vasoconstriction. Complete removal of the gland in dogs resulted in death preceded by a peculiar group of symptoms (cachexia hypophyseopriva). Partial removal of the anterior lobe caused increased deposits of fat, polyuria, glycosuria and diminished activity of the sexual function. Diminished activity of the pituitary gland conduces to obesity and sexual infantilism, whereas the hormone of the anterior lobe augments the katabolism of fat, the growth of bones and stimulates sexual development."

Ott[1] says in regard to the thyroid and the suprarenal the following:

"In myxedema there is a want of development in the cartilages of the epiphyses, an atrophy of the genital organs, ovaries and testicles, showing a relation between the thyroid function and the genital functions.

"Sexually precocious children have hypertrophied suprarenal capsules. Atrophy of suprarenal capsules is associated with want of pubic hair and of development of the genital organs. Hence the cortex of the adrenal is probably connected with the growth of the body and the development of puberty and sexual life."

There is a great number of **poisons, medicaments, and foods** which diminish virility temporarily or permanently. Some manifest their injurious effect after a short and moderate use; others do not show themselves until after a longer or immoderate use. In this respect we meet the most contradictory statements in medical works. Very often one author quotes the assertions of another. These contrasts are, however, easily explained if we take into account the difference of the effect of one and the same medicament on different individuals. Take, for instance, quinin, the remedy most generally used until recent times. The same dose given to two equally vigorous men may cause in the one scarcely a slight tinnitus aurium and in the other the most unpleasant effects.

Alcohol, especially, exhibits its action on different individuals differently. There are people who in a

[1] Op. cit., p. 404.

rather high degree of intoxication can accomplish the act of coition, while with others the sexual organs are completely paralyzed by the consumption of so small a quantity of alcohol that it would not affect at all the functions of the other organs of the body. Thus we see that in this respect it would not be safe to lay down general rules and apply them in all cases.

Alcohol in general diminishes the sexual power, according to the strength of the article consumed. Alcohol is least concentrated in beer, and yet beer is, as a matter of fact, very unfavorable for virility. Gallant ladies are well aware of this, and it is only an exception for them to serve beer to their lovers. Too hasty an ejaculation may be delayed by a moderate consumption of beer,[1] while an intemperate absorption of the same liquid will hinder erection.

But why is beer disadvantageous to coition? Alcohol is of consequence only when consumed in large quantities, and yet we see that very light qualities of beer are perhaps worse for virility for the time being than heavy beer. Lupulin cannot be of importance either, as the quantity is too insignificant, and in cases where the efficacy of lupulin is desirable, it is generally without effect. Therefore the effect of lupulin is not so prompt and sure as that of beer. I think that, in an immoderate consumption of beer, both alcohol and lupulin (?) are of less importance than the great quantity of liquid consumed, which causes frequent urination and has a relaxing effect on the parts under consideration. Dr. Lehmann, of

[1] Curschmann, op. cit., p. 535.

Munich,[1] ascribes the diuretic effect of beer to the greater quantity of liquid, assisted by the influence of alcohol upon the heart. It is noticeable that erection is slower immediately after urination than some hours later. This observation suggests that sexual organs active in erection may be temporarily disturbed in their function by the evacuation of large quantities of urine, repeated at short intervals.

A moderate consumption of beer is rather advantageous for the act of coition, and, in wedlock, where I ascribed the absence of children to a possible frigidity of the wife, I have advised the husband to take some beer before coition, because I thought that by thus prolonging the act the wife might be roused out of her reserve and become more liable to conception. The result has justified this supposition in one case at least. These observations would also help to explain the large families in countries where beer is the habitual beverage, as in Bohemia and Bavaria.

The effect of wine in this respect is exceedingly different, varying with the kinds of wine as well as with the individuals consuming them. Here again my observations have proved that wines with diuretic tendency affect the sexual capacity for the time being more than do other wines. Some strong, dark-colored wines, such as certain kinds of Californian, Bordeaux, Malaga, Dalmatian, Sirmian, etc., and also some of the stronger white wines, especially the Muscatel, if consumed moderately, have almost an aphrodisiac effect; while others, and particularly

[1] Die Ursache der bekannten diuretischen Wirkung des Bieres. Wiener med. Presse, 1887, No. 42.

champagne, exercise an almost paralyzing influence on the centers of erection, or, directly, on the apparatus of erection, as they increase the libido sexualis, but check the erection.

In brandy and liquors the quantity of alcohol only comes into consideration, and, though it may be larger than that in wine or beer, it tends to increase rather than diminish the sexual power, if the same time for subsidence has been allowed in both cases of consumption.

At any rate, the ancient Latins were right only as far as the woman is concerned when they said, "Sine Cerere et Baccho friget Venus," "Luxuriosa res vinum," "ut vino calefacta Venus, tum sævior ardet luxuries," etc.

Considering the first exciting and subsequent sedative effect of **coffee** and of **tea,** an immoderate use of the same might injure virility. Guelliot[1] speaks of sexual impotence in the male, and profuse leucorrhea in women as prominent symptoms of chronic coffee poisoning. I have observed that an average sized cup of good and medium strong coffee acts as a mild aphrodisiac in many cases, and mainly with persons who are not using this beverage in excess. No doubt that this one, as well as all other stimulating food or drink, may fail to have any effect in some cases.

Some authorities assert that **smoking** is injurious to virility, but it is very difficult to form a correct

[1] Compare Leszynski: Coffee as a beverage, and its frequent deleterious effects upon the nervous system, etc. Medical Record, Jan. 12, 1901.

opinion. Schtscherbak's searching investigations regarding the influence of tobacco on the nervous centers[1] have resulted only in the assertion that immoderate smoking, like the internal use of nicotin, undoubtedly affects the nervous centers; but it is difficult to determine what influence is exerted on the centers of the sexual functions. In acute intoxication with nicotin, copulation is out of the question, but when the symptoms of poisoning have passed, virility is exactly in the same condition as before. Chronic intoxication with nicotin, to which one may be addicted for many years with impunity, seems not to injure virility, as very great smokers may indeed be quite as great in sexualibus. A thirty-year-old Servian told me he had found that his virility was seriously injured when he discontinued smoking cigarettes. This might, however, be merely imaginary.

The habit of **snuff-taking,** now becoming less common, is more likely to injure virility, as it weakens the sense of smell, and the odor of woman plays an important rôle in sexual matters, as is well known. Galopin,[2] speaking of snuff-takers, says, "If they are gourmands, they deprive themselves of the bouquet of their dishes and wines; if they are young and vigorous, they deprive themselves of the pleasant odor of a beloved wife or mistress, as well as of a thousand pleasures which the olfactory sense of a clean and healthy man procures." But snuff users have little

[1] K voprosu o vlijaniji nikotina i kurenija tabaku na nervnie centri. Vratch, 1887, Nos. 4–9.

[2] Le parfum de la femme. Paris, 1886, p. 39.

chance with ladies nowadays, as they unquestionably diffuse a disagreeable odor about themselves.

There are **foods,** solid and liquid, that are said to cause temporary impotence, but, in my opinion, this rests more or less on popular belief only; and, after all, virility must be at a low ebb when it can be checked by eating Lima beans, lettuce, etc.

There are many popular means of subduing amorous desire for a time. In Bosnia the moon-flower, under the name of "Neven," is highly prized as a powerful anaphrodisiac. Women make their husbands take it in the form of medicine, and they also put the blossoms among the linen of husbands about to go on a journey.

In France **digitalis** is said to have similar renown, and Campbell Black finds this virtue of digitalis very comprehensible, as it stimulates Remak's fibers.

We meet with the most contrary statements about medicaments reputed to have an injurious influence on virility. Our best observations are on **morphin,** which, according to Levinstein,[1] after first increasing sexual excitability, affects it finally in the opposite manner. An injection of morphin always has, on persons who are not accustomed to it, the effect of increasing sexual excitement and vigor. Rosenthal[2] states that injections of morphin of medium strength (0.03–0.06 per day) produce unusual hilarity and affability, heightened sexual excitability, increased re-

[1] Morphiumsucht. Berlin, 1887, p. 93.

[2] Untersuchungen und Beobachtungen über Morphiumwirkung. Wiener med. Presse, 1886, No. 49.

finement of the sense of touch, etc.—all symptoms little known and appreciated.

In Persia opium is said to be used as an aphrodisiac.[1] This is in accord with the observations made on opium-smokers, who are extraordinarily vigorous sexually at first, their virility beginning to fade when the general marasmus always following this fatal habit reaches a certain degree. L. Passover[2] besides, observed that the long-continued use of morphin leads to atrophy of the genitals.

Morphin, opium, and cannabis Indica have long since ceased to be used for therapeutic purposes only, there being a large number of persons for whom the very extensive use of these drugs has become an indispensable necessity. Opium-smokers and hashish-eaters sing real hymns[3] of praise to these poisons. These poisons are, indeed, pleasant and sure means of suicide for unhappy people or people weary of life in this world. Their habitual use can be recommended to those only who desire to commit suicide. Paralyzing the inhibitory nervous centers in the brain, they probably thus increase virility at first.

Albert Abrams recommends that about eight drops of laudanum tincture be given previous to intercourse in cases of fear predominating the sexual act. It is sometimes just as effective as a large dose of bromid.

There are also the most contradictory statements concerning the influence of **arsenic** and its preparations on the virile power. Although arsenic has a

[1] Rosenthal, op. cit., p. 147.

[2] Wiener Med. Presse, 1893, No. 7.

[3] "Oh, just, subtle, and mighty opium!"

different effect on different individuals, and may therefore affect their sexual powers differently, yet I must state that in the very frequent use I have made of arsenic in various diseases, even for years continuously, I have never observed a diminution of sexual vigor. I never saw a change in the sexual power of men or in the amorous desire in women, even in cases where arsenic had some disturbing effect, or where it did not produce the desired change in the disease under treatment, and its use had, in consequence, to be discontinued. On the contrary, several of my patients, who owe the return of health to arsenic, have with their health also recovered their virility; so that I do not hesitate to recommend arsenic, in conjunction with other remedies, of course, in certain cases of prostration, and also in impotence when it has been brought on by such prostration.

Rosenthal[1] asserts that arsenic exercises an unfavorable influence on the sexual power after continued use; but this is so only with the inhabitants of towns, while the inhabitants of Alpine regions have children in spite of the consumption of considerable arsenic. This, indeed, seems too improbable. The same writer observed recovery of sexual sensibility at the beginning of the use of arsenic.

Lead-poisoning, especially if acute, occasionally causes impotence. As physician of a large association of typographers I had, for a number of years, the opportunity to convince myself of the excellence of the observations made by Tanquerel des Planches,

[1] Op. cit., p. 151.

and of those made more recently by Roubaud.[1] I never noticed a diminution of virility in chronic lead-poisoning that was not accompanied by some other effect on the nervous system.

Long-continued use of iodin can produce atrophy of the testicles, besides that of other glands; but such cases are exceedingly rare, and entirely denied by some very experienced syphilologists. I have recently had several cases where the use of potassium iodid had exerted a very unfavorable effect on virility.

Prolonged use of **mercury** also is said to lead to atrophy of the testicles. Roubaud[2] has observed this in the case of laborers who work with mercury.

Salicylic acid and its preparations unquestionably impair sexual vigor, but only temporarily. My observations have convinced me that men are temporarily more or less impotent during the use of salicyl and its salts, which are so frequently employed. The experiments made by Kolbe and Dr. Lehmann,[3] in Munich, to prove the harmlessness of salicylic acid, have not had any results with regard to its effect on virility.

Camphor, lupulin, antimony, niter, and the bromids are also said to have an unfavorable influence on sexual vigor. Krafft-Ebing[4] says in this respect, "Our nomenclature presents a large list of anaphrodisiacs, but when we practically try all these reme-

[1] Op. cit., p. 240.

[2] Op. cit., p. 285.

[3] Beitrag zur Frage der Gesundheitsschädlichkeit der Salicylsäure. Med.-chir. Rundschau. Wien, 1887, Heft 14, p. 549.

[4] Die Therapie der Geisteskrankheiten. Wiener med. Presse, 1891, No. 22.

dies we soon convince ourselves that they have no such virtue, or very little. This is true, for instance, of camphor, belladonna, and lupulin. Of somewhat more value are the bromids in large doses. No effect must be expected from doses of less than six grams.

"**Monobromated camphor** seems to be of quite exceptional value as an anaphrodisiac. Lupulin is not to be entirely disregarded; only it must be given in doses of over one gram each, if any effect is desired.

"Recently **antipyrin** has been employed as an anaphrodisiac, and in doses of two grams it is said to exert a sedative effect on the sexual apparatus. Hammond and a few others direct our attention to the anaphrodisiac effect of **sodium nitrate.** Quite recently I have treated painful sexual excitation with doses of three grams of sodium nitrate *pro die*, and have succeeded in reducing it to a minimum thereby."

Here I may be allowed to state that in the first German edition of this work, which appeared in 1889, I directed attention to antipyrin as a possible anaphrodisiac, saying, "Experiments made on animals having proved that antipyrin has an irritating influence on the inhibitory reflex centers, it would be very interesting to examine its influence on erectility."

Van den Corput has ascertained that, besides salicylic acid, quinin, menthol, phenol—indeed, almost all antiseptics—diminish sexual vigor in a marked degree. He considers that this fact may have its

explanation in the inhibitory influence which these substances exert on the formed elements of the blood and on the spermatic cells in the same manner as on the lower organisms. The microscope shows, moreover, that these substances render the zoosperms perfectly motionless. According to Van den Corput, the diminished sexual vigor is to be ascribed to anesthesia and paralysis of the centers which govern the sexual function, as well as to the sterilizing and antivital influence which the antiseptics have on the spermatozoa.

William J. Robinson[1] reports a well observed and unmistakable case of impotence caused by the excessive consumption of *bromo-seltzer*.

A. Rivière,[2] of Lyon, submitted two obese and arthritic men of thirty-four and thirty-six years, respectively, to the treatment with *Thyroidine*. Both patients lost considerably in weight, but suffered at the same time from sexual impotence, which did not leave them until some time after this organic extract was discontinued. I have observed a similar effect in a man twenty-eight years old, who took the Thyroidine tablets for a skin-disease.

It is reported[3] that the use of *suprarenal preparations* has a similar effect, rendering the maintenance of erection almost impossible; this influence being also transitory, passing off some time after the cessation of the use of the drug.

Dr. Arthur Strauss[4] claims that *heroin* in 0.01

[1] Journ. Am. Med. A., Aug. 18, 1906, p. 508.
[2] La Semaine Medicale, April 23, 1898.
[3] N. Y. Med. Journ., Oct. 19, 1901, p. 763.
[4] München. med. Wochenschr., 1902, No. 36.

doses acts as a good anaphrodisiacum. Becker[1] is of the same opinion.

INHERITED PREDISPOSITION TO IMPOTENCE.

There is an apparent inconsistency in speaking of inherited impotence, and yet the physician meets with many cases of sexual weakness and abnormal conditions of the sexual desire which after closer examination he cannot but trace to inheritance as the original cause. Hoffmann[2] says, in this respect, "It is a fact that there are men who from their birth either lack the incitomotor impulse which dominates over the sexual functions, especially erectility, or in whom it appears abnormally impaired."

It is quite conceivable that such a condition can occur in an otherwise normal state, this condition having been called by the ancient Canonists, who were very expert in such matters, "Natura frigida."

Those individuals are indeed very scarce who display complete inertness of their sexual life, although possessing sexual organs quite normal in development and function.

Krafft-Ebing[3] says that individuals possessed of weak sexual power, in whom the lack of sexual instinct can be traced to the cerebrum, are very rarely met with, and are probably without exception degenerate beings in whom may be found other disturbances in the function of the cerebrum, psychi-

[1] Berlin. klin. Wochenschr., 1903, No. 47.
[2] Lehrbuch der gerichtlichen Medicin. Wien, 1881, p. 53.
[3] Psychopathia sexualis. Stuttgart, 1886, p. 29.

cally degenerative conditions, and even signs of structural deterioration.

There are numerous families the male members of which are conspicuously weak in sexualibus. These are not always sickly people, but now and then are robustly built and of healthful appearance; most of them have very light complexions and high-pitched voices, and very often show no other weakness than that of the sexual organs and functions.

Sometimes we may see a man whose father was sexually very powerful, but who was begotten at a time when the father's virility was already on the decline—*i.e.*, when he was partially impotent in consequence of unwise management of the sexual power, though it may have been originally great.

Circumstances like the above will not surprise any one who is acquainted with the laws of transmission by inheritance, and who knows that, besides forms, qualities and habits also may be inherited. Even recollections are said to be thus transmitted, this assertion coming from a competent source, Exner. As fertility, for instance, and the early or late appearance of menstruation can be transmitted from mother to daughter, so also may a son receive from his father, by way of inheritance, sexual power or weakness.

Haeckel has attempted to formulate laws of inheritance, and, among other things, he says, "In all organisms with separated sex, the primary and secondary sex-characteristics are inherited one-sidedly—*i.e.*, the male descendants resemble the

father in the aggregate of the essential sexual characteristics while the females resemble more the mother."

Just as there is a great difference observable in the sexual impulse in different nations, so there are very great differences to be noticed in the ardor with which the sexual instinct announces itself in different families. There are sundry links of connection whereby nature subdues the different degrees that might otherwise be too striking. These combinations of physiological and psychological phenomena are commonly called *the temperament*, and we all know that children have generally the temperament of one or the other or even of both the parents.

An innate sexual weakness shows itself frequently, yet not always, in the conformation of the genitals. Although the structure may be quite normal, they are nevertheless of an abnormal flabbiness and paleness. The erectile tissue is not very firm; the prepuce—if there is not a positive phimosis—is thin and moves with difficulty over the glans. Such individuals are generally unassuming, and make true and devoted husbands; nothing in them could incite them to act otherwise.

In most cases this weakness can be traced back to childhood, when **incontinentia urinæ** existed, and there is no denying the connection between sexual weakness and incontinence of urine. This connection Lallemand discovered with that perspicacity peculiar to him. I have always found that children suffering from incontinence of urine had unusually

small genitals, and when I found an adult affected with the above disease, he invariably was either quite or almost impotent.

Men who suffer from congenital weakness of the sexual organs are not inclined to excesses in venery, as has already been stated; but with them the most severe consequences may be brought about by sexual indulgence to an extent not considered immoderate with others. In such persons insignificant excesses, or onanism practised for a short time, will result in frequent, and to a certain degree incurable, involuntary seminal losses together with a great enfeeblement of every sexual power.

The different grades of sexual weakness are innumerable, and while one man may scarcely show any signs at all, another exhibits from the very beginning the most decided sexual decrepitude. We shall therefore be right in asserting that the different degrees of sexual vigor, or of resistance against excess in venery, rest principally on hereditary differences; for sexual vigor or weakness is oftener inherited than is usually admitted.

The individual differences in sexual feelings and sensations are perfectly obvious. One individual may live for sexual enjoyment alone, all his actions keeping in view that one main object—viz., sexual gratification, which he enjoys to a degree of ecstasy. Another may remain almost indifferent in regard to love and woman, may consider coitus a necessary evil, and while performing it may be thinking of some other affair.

You may meet with individuals who, with robust constitutions and well-developed genitals, have from their youth shown comparatively little taste for sexual enjoyment—individuals who are not easily tainted by the bad example of onanism, and who, later in life, exhibit a certain reserve in respect to the other sex. With some, and they are probably rare exceptions, this absence of sexual desire has even reached the point of disgust. Such men are shocked by a somewhat licentious expression; they are amazed at the excesses of others, and look upon love merely as the means of bringing forth children. This congenital disinclination for sexual pleasure is called **frigidity,** and may become an obstacle to virility, or it may render copulation possible only under specially favorable circumstances.

Krafft-Ebing[1] ranks this frigidity among the neuroses that have their seat in the brain, and calls it anesthesia sexualis, absence of sexual instinct, which renders ineffectual every organic impulse starting from the organs of generation, as well as every fancy, every visual, auditory, and olfactory sensation that such individual may experience in this one direction.

Only congenital frigidity can prove a serious hindrance to the development of virility, while frigidity which is sometimes the result of a certain mode of education readily yields to the first sexual desires that assert themselves positively; here principles, resolutions, and vows give way.

[1] Op. cit., p. 25.

Sometimes we see whole families in whom education has implanted principles that will ever be an obstacle to the proper development of the sexual instinct, and thus, indirectly, of sexual vigor; though it frequently happens that one or the other member of such a family turns out to be a regular black sheep in sexualibus.

Here we must also consider the "only" and the "favorite child wrongly brought up." Brill[1] says: The only child, "a morbid product of our present social economic system," usually an offspring of wealthy parents, who, having been themselves brought up in luxury and anxious that their children should share their fate, refuse to have more than one or two children. By their abnormal love they not only unfit the child for life's battle, but prevent him from developing into normal manhood, thus producing sexual perverts and neurotics of all descriptions.

Again, there are individuals who, with vigorous constitutions, normal development of the genitals, and very energetic sexual desires, nevertheless become temporarily impotent, where we can find no other cause than an inherited general or sexual **nervousness** which, at the given moment, either excites the inhibitory centers of erection to an abnormal activity or sets the nerve-centers of erection out of function. Persons of this category are mostly from families where cerebral and nervous diseases are hereditary; albeit Beard asserts that children of

[1] Psychanalysis, Saunders, Philadelphia and London, 1914, p. 291.

neurasthenic parents are generally unaffected in that direction. The children will probably remain healthy when parents suffer from acquired neurasthenia; but when this disease itself is congenital or has appeared in the place of some other hereditary disease of the brain or nerves, then there is no doubt that such conditions are transmitted from generation to generation. No one can assert that there are no neurasthenic children.

In general, the disposition to neuroses shows many varieties. There are persons who can make enormous exertions in mental, physical, and sexual matters without being affected by neuroses, while a high degree of neurasthenia will visit others after only a slight effort in these directions. Therefore the different injurious acts must be considered as bringing about the occasion for the disease, while the positive or effective and real cause must be looked for in the congenital predisposition to nervous diseases. Perfectly robust and vigorous persons may be affected by this predisposition in a very high degree. The special predisposition to neurasthenia may be so intense that moderate, nay, even infrequent, intercourse has an injurious effect.

A similar condition is observed in epileptics, though very seldom, it is true. I have known such an unfortunate one who had an attack after every ejaculation of sperm. Continued use of potassium bromid quelled the sexual activity and stopped the attacks; but whenever a pollution took place, it was followed by an epileptic attack, however large a dose

of potassium bromid or sodium bromid had been taken. In such cases, which occur but rarely, castration may be suggested.

Of the limited number of forms of congenital impotence we have yet to mention one—viz., **perverse sexual sensation.** This disease is mostly congenital, the severe forms always; while the lighter forms may also be acquired. The subjects are generally persons affected by psychopathia, who can satisfy their sexual desire only in a peculiar manner. Such persons are not impotent in the true sense of the word, as erection is not lacking with them, but is often very vigorous, and yet they must be called impotent because they are not capable of performing coitus in the normal way.

Krafft-Ebing gave in his well known work, which we have repeatedly quoted, an exhaustive description of sexual psychopathy, and he classes the perverse sexual sensation (which he calls the paresthesia of sexual sensation) together with the sexual neuroses having their seat in the brain. Magnan[1] endeavored to classify the various forms of diseased sexual instinct, and, localizing them in the central nervous system, distinguishes four groups.

Keeping in view the object of this work, we shall be very brief in discussing this disease, though it is both important and interesting to every physician. Numerous observations and investigations were required to lead to a knowledge of this form of disease;

[1] Des anomalies, des aberrations et des perversions sexuelles Paris, 1885.

a study carried on during centuries was necessary to protect many an unfortunate being from punishment because of disease. Even in our day there is much to be learned before a correct opinion can be formed of many a case of this sort. On the other hand, we must guard against being misled by a false love for humanity. Society is in the right to protect itself against dangerous individuals, and it is justified in destroying persons who assuage their amorous longings in murder and other acts of cruelty.

Krafft-Ebing holds that, in paresthesia of sexual sensation, the spheres of sexual fancy are perversely accentuated by the association of feelings which otherwise would physiologico-psychologically awaken disgust, being accompanied by pleasurable sensations; this association may reach so high a degree as to become passion. The result will be perverted actions. This occurs the more readily when the pleasurable sensations, having reached the height of passion, inhibit or overpower adverse ideas with corresponding unpleasant sensations; also when these latter cannot be roused at all on account of lack or loss of the moral, esthetic, and righteous perceptions. I am of the opinion, however, that Krafft-Ebing goes too far when he says, farther on, "We must declare as perverse every manifestation of the sexual instinct which is not in accordance with the aims of nature—*i.e.*, with propagation." At any rate, Krafft-Ebing does not mean to say that any and every copulation not undertaken for the purpose of propagation must be declared as a manifestation of a

perverse sexual feeling; for then there would be few people in this world who were not, are not, or may not be affected by paresthesia of sexual sensation as thus defined.

If the perverse sexual sensation is congenital, it is in most cases accompanied by particularly vehement or impetuous manifestations of the amorous desires. This abnormally increased sexual desire, which Krafft-Ebing terms hyperesthesis of the sexual sensation, is seldom a disease in the true sense of the word, and its explanation is, in my opinion, to be found rather in the circumstance or fact that abnormal sexual desires can be gratified only occasionally or with difficulty. Besides, the affected individual revolts, in proportion to his moral strength, against the satisfying of the ever-increasing lust—say, for murder or other lusts incomprehensible to men whose volition or desires are in a normal condition. The individual is unable to control himself only when these perverse sexual sensations have reached the point when they must be called hyperesthetic. Then a crime is committed.

Persons thus affected procure satisfaction of their lusts by the most remarkable means. It is hardly possible to introduce order or a systematic classification into the sundry forms of this disease, because the longer we observe and investigate the more new forms present themselves. It might, however, be attempted to establish four groups of perverse sexual sensations, according as the satisfaction is looked for in perverse acts:

1. On persons of the other sex;
2. On persons of one's own sex;
3. On animals;
4. On inanimate objects.

In the first group we should have to place first of all lust-murder and similar phenomena, as, for instance, different acts of cruelty to females. It is a fact long known that cruelty and voluptuousness are sometimes associates; a telling witness is the novel "Justine," by Marquis de Sade. Here the monster pretends even to pose as a type with his perverse lusts. It seems to me extravagant, however, when Krafft-Ebing speaks of voluptuous kissing approaching biting in a chapter made up of lust-murder and allied phenomena. It is only by individuals who are decidedly psychopathic that real cruelties are performed for satisfying sexual lusts, and the lust-murderers who use the knife and the dagger are all without exception suffering from mental aberration.

Several years ago I watched a case of this nature. The mother of a poor, fourteen-year-old boy, B., noticed that the body of her son was covered with black and blue spots, particularly the arms, buttocks, and thighs. After an examination, the boy confessed that his fifteen-year-old friend, P., son of an aristocratic and rich family, had induced him by gifts of money to allow himself to be pinched. When the little tormented fellow found the pains too great he began to cry and scream, whereupon his torturer commenced striking him with his right hand while he

moved his left quickly to and fro in the left pocket of his trousers. When the cruel boy was afterward brought under my notice, I learned that he suffered from epileptic fits (epileptics are frequently subject to perverse sexual sensations). He was, on the whole, a well-behaved, peaceable, and talented child, but occasionally very disobedient, headstrong, and passionate. I convinced myself besides that he was an onanist. When alone with me he confessed that torturing his friend, whom he liked personally, afforded him a special delight, and that the ejaculation which he brought about at the same time was much more pleasurable than when caused by masturbation without his tormenting any one. The grandfather and an uncle on the mother's side died in an asylum; the mother was a sufferer from hysterical attacks. The father was known as a high liver; two brothers and sisters died at a tender age of what the mother called "Fraisen" (convulsions). At that time I expressed the opinion that the boy, whom I watched for some time, would meet with a sad fate in spite of all the care and treatment that he was receiving.

A good and well investigated example of a similarly predisposed child is the celebrated case of Jesse Pomeroy.[1]

The most common form of perverse sexual gratification is that which manifests itself in love for one's own sex. The men who love men and the women who love women, the "urnings" by birth, are probably but few, but more common are the pederasts and

[1] Med. Record, June 20, 1903, p. 967.

the priestesses of Lesbian love from necessity and lack of something better. (From numerous reports received recently, it seems, however, that Germany emulates the Near-Orient, and that urningism and bisexuality are very frequently observed there.) The impossibility of satisfying sexual desire in the natural way in educational institutions, convents, prisons, on board ship, etc., leads many persons to such perverse acts. More frequent than is generally thought is pederasty between husband and wife, to prevent unwelcome progeny. Some persons practise it with prostitutes in the hope of avoiding contagious diseases.

This is the kind of perverse sexual sensation which, more than others, can be and is acquired by people who are not predisposed by inheritance, but who, in consequence of blunted senses for natural charms, sink step by step, and finally find pleasure in loathsome and disgusting acts. Impotence often leads men to this vice, and hence it is generally old people who are addicted to it.

Percy[1] of Galesburg, Illinois, threw some light upon this phenomenon when he presented his paper of sexual perversion accompanying prostatic hypertrophy, asserting truths that have been observed in a great many cases, but seldom or never properly explained. He believes, and I know he is right, that the old prostatic, who shows aberrant sexual activity, is in a large proportion of cases suffering from a psychosis rather than senile dementia, to

[1] Journ. Am. Med. A., July 2, 1910.

which the symptoms are usually attributed. Under the influence of the irritation from his enlarged prostate, he may commit all forms of sexual crime, and after removal of his prostate his functional sexual aberration disappears and he remains cured.

Percy emphasizes that this phase of the diseased prostate opens up the possibility of a more rational study of the pelvic environment of the prostate gland in the sexual perverts among men, old and young. Many old prostatics are in insane asylums, many of them are in the government and state soldiers' homes, as well as in the various county almshouses. The strain of sexual excesses from early life until old age, the intimate connection maintained between the prostate gland and the sympathetic and the cerebrospinal nerves, the unknown secretory function of the prostate gland along physiologic lines, these all make prominent the fact that with the hypertrophied prostate can be had a class of symptoms referable to the sexual system, where the mental life of the sufferer carries him close to the border where insanity has its dominion, and which can be corrected by the aid of surgery.

In the Near-Orient pederasty is very common. Even Moses had to decree capital punishment for those guilty of this crime. Some authors think it is frequent there because of the fact that in Oriental women the genitals relax at an early age and become rather capacious.

If love for one's own sex has for its cause a congenital perverse sexual sensation, the subject will usually

show something peculiar in his character and appearance. His mode of thinking and of feeling is changed so as to correspond to that of the opposite sex. Most of these individuals whose perverted senses are due to inheritance betray their inclination by their conduct, often also by the garments they wear. The males have a liking for the occupations of females, and *vice versa*.

Some authors, as Gley and Magnan, endeavored to explain this phenomenon by assuming the presence of the sexual glands of a male associated with the brain of a female. Whatever the explanation may be, it is a proved fact that the perverse sexual sensation of an urning is absolutely independent of the will, and that many such persons have gone through the most dreadful struggles, but could not escape their fate.

Krafft-Ebing, basing his conclusions upon his experience, contends against the assertion of Tarnovsky, that a real urning—*i.e.*, one afflicted with congenital perversion of the sexual life—may, through education, be freed from his morbid sexual inclination and led to a normal sexual life. Krafft-Ebing admits that a good education will act here in the same manner as in a man with normal feeling but sensual, and will enable the individual to strive toward mastering the impulse, avoiding pederasty, and counterbalancing the desire, but only so long as this perverse desire does not assert itself with abnormal strength.

In his monograph on "Human Energy," Albert Abrams speaks of the present tendency to refer all

phenomena to a sexual basis, and odd and even numbers can be regarded as the mathematical sexes.

Abrams, based on his studies of human energy, conceives a normal predisposition to bisexuality which in the process of development changes to monosexuality.

Homosexualists are found practically everywhere, and many of them, ignorant of their inversion, seek advice for psychic impotence.

These inverts may be:

1. Absolute, when their sexual object is always of the same sex;

2. Amphigenous, when their sexual object may belong to either sex;

3. Occasional, when recourse is had to homosexuality when normal sexual gratification is inaccessible (Brill).

The diagnosis of homosexuality is often difficult. The homosexualist may show no hereditary taint nor any overt clinical anomaly in the mental or physical sphere. In other words, to all appearances, he may be like a normal individual and secondary sex characters may be absent. It may take months of painstaking psychanalysis before the inversion is discovered.

Abrams says: "There are typical and atypical men, and sexual differentiation is never absolute. There is a permanent bisexual condition, however vestigial and rudimentary. Humans will eventually be subjected to a biologico-physiological differentiation of polarities."

The same writer, by aid of his visceral reflexes, contends that the homosexualist can be recognized at once by the polarity of his discharged energy.

M. Rencurel[1] has observed on the island of Madagascar a distinct class of unsexed men, called Sarimbavy, who have neither hetero- nor homo-sexual feelings.

The third group of sufferers from perverse sexual sensation are the so-called Sodomites, people who gratify their lusts with animals. Sodomy was part of the religious cult of several ancient nations, including the Egyptians.

There are various causes which may lead a human being to sodomy. Generally it is weak-minded persons, cretins, imbeciles, or idiotic people who, in their sexual excitement, have intercourse with animals. This excitement may occur periodically. In exceptional cases, also, persons apparently psychically sound may, for want of something better, abuse an animal if the occasion is offered and if they feel sexually excited. Very seldom is it moral degradation that induces a man or a woman to seek an animal for the gratification of amorous desires, but frequently elderly unmarried women use dogs for various unsavory purposes.

I had an opportunity to observe a case of sodomy. In a small provincial town a thirty-year-old man, an army officer, was caught in the act of gratifying his lust with a hen. One hen after another had perished in the house, and efforts were being made to discover the cause. When he was asked in court how it came

[1] La Semaine Médical, 1900, No. 48.

that he had turned into a cock, the defendant suggested that the smallness of his genitals made intercourse with women impossible. An examination proved the assertion to be well grounded. The individual was psychically normal. Unfortunately, I neglected at the time to make a searching examination and to investigate the past history of the case, as the subject had no special interest for me at that date (1877).

The fourth and last group of perverse sexual sensation consists of those who satisfy their lusts on inanimate objects, and, of course, does not include the different kinds of onanism with manipulations on lifeless things. The observations in this direction are not always quite reliable. It may be mentioned merely that in most cases articles of women's toilette, such as linen, night-caps, shoes, etc., have occasionally the power to excite sexually and to satisfy individuals of perverse sexual feelings, who are, as a rule, by inheritance predisposed to mental diseases. Krafft-Ebing[1] says, "In other cases the sexual desire is roused by the sight of a woman's underwear, and is satisfied by their manipulation." If the center of ejaculation is in a state of irritable weakness, the mere putting on of such clothes suffices; otherwise masturbation must lend its help. Again, some individuals have to tear these articles to pieces in order to cause ejaculation.

Tarnovsky speaks of a psychopathic individual finding sexual gratification in the manipulation of peltry. Again, isolated cases have been observed

[1] Op. cit., p. 48.

where statues were appealed to for sexual gratification. Very instructive are a number of cases reported by Albert Moll.[1]

Ghastly and horrible is the defilement of corpses, of which even as ancient an author as Herodotus has spoken. One cannot easily imagine that any person in sound mind could be capable of such an act.

And now, at the conclusion of our discussion on the inherited and congenital forms of impotence, we have to mention some isolated causes of psychopathic conditions by which the sufferers may be rendered temporarily or permanently impotent, or at least sexually weak. In the first instance, idiots possess very feebly active sexual life, which is wanting entirely in idiocy of high grade. Sometimes the sexual instinct appears periodically, and then it is of a very violent character; the idiot, resembling then a wild beast, seizes without warning the nearest female, even though she be his own mother.

Finally, for the sake of completeness, we should note that impotence and heightened sexual impulse accompany some mental diseases.

NEURASTHENIC IMPOTENCE.

Under this collective name we shall discuss all the forms of impotence dependent on a gradual degeneration of the sexual nerves and their centers. The present state of science does not disclose the character of this degeneration.

Before Beard every symptom of general neurasthe-

[1] Untersuchungen über die Libido sexualis. Berlin, 1897.

nia used to be named and described as a distinct disease. In like manner the symptoms of neurasthenic impotence were described as special forms of disease and as special forms of impotence. People formerly spoke, and still do speak, of irritable weakness, psychical and relative impotence. Since the name "neurasthenia" has become so fashionable, and as the neuro-pathologists employ this collective name for forms of diseases that were hitherto designated by distinct names, we follow their example and describe under the name of neurasthenic impotence all forms of sexual weakness the origin of which we cannot trace to any structural change in the organs of erection and secretion, or which cannot be ascribed to any distinct appearance of disease in the body or in the so-called psyche.

A clear distinction between those forms of impotence that arise merely from an affection of the nerves or nervous centers of the sexual apparatus and the other forms of impotence are of the greatest importance in the development of therapeutics.

Beard's fame has disturbed the peace of mind of our authors. Every day new names were and are being invented and dished up for the already perplexed practitioner. Every author has a newfledged name for the old phenomena of disease, and our hopes that these new names would not live to an old age are being invariably realized.

Impotence as a consequence of sexual neurasthenia either has its origin in a congenital predisposition or else is acquired. We have already spoken of the congenital forms, and shall now give our attention

mainly to the acquired forms of sexual neurasthenia.

Neurasthenic impotence is less often caused by disease than by bad management of the natural sexual power—*i.e.*, by **excess in venery,** either for the time being or habitually, by onanism, and occasionally by abstinence of longer or shorter duration.

Every man's virility has its limits, and these must be respected, for daily experience teaches us that impotence is most frequently caused by abuse. At the same time we must insist that the expression "excess in venery" has been misapplied without limit by most of our authors. To form a correct opinion in individual cases, and to distinguish between sexual excess and normal though frequent use, one must, first of all, possess personal experience in the matter, and must have observed the history of the sexual life in a great number of cases. Even the most extensive experience will not, in all cases, enable us to decide whether or not excess has taken place. Lallemand says,[1] "I call abuse every abnormal use of anything. Concerning the generative organs, I understand abuse to be every irregular, premature, or other action which cannot result in the propagation of the race. There are no doubt many connecting links between these abuses and sexual excesses."

Lallemand, therefore, distinguishes between an abuse of the sexual power and excess in venery, and we shall retain this very sound distinction, as it will afford a special clearness to the subject under discussion. This is the more desirable because the two expressions thus separated to define very different

[1] Des pertes séminales, tome i, p. 315.

things have usually been confounded and made the object of the most diverse and remarkable views.

Suppose an individual to have enjoyed coition without exceeding his natural power and without having had either the desire or the possibility for propagation, then, strictly speaking, he may be said to have committed an abuse of his sexual power, but certainly not an excess. I believe that a medical man need not concern himself about the abuse of virility so long as there is no excess connected with it. Let each be his own judge, and if any one requires a judge, let him address himself to his confessor.

If we choose to call an abuse of the sexual power every act of coitus that has not been undertaken with the possibility or even the intention of propagation, then abuse of virility will be carried on as long as there is a normal and virile man in the world, and we need not feel alarmed about it. If coition, however, were to be accomplished only when a woman is to be impregnated, then most men would become impotent from continence, and a great many would become insane. My conviction is that the physician is concerned with excesses in venery only because they alone injure the body.

Lallemand[1] defines excess in venery in these few words: "L'usage poussé au-delà des besoins réels," (usage carried beyond real wants). This definition, however, admits of more than one explanation, since the meaning "real wants" is indefinite. Is a man actually to wait until the sexual instinct

[1] Op. cit., p. 489.

awakens without any action of his own? If so, many men engaged in serious occupation would never come to sexual gratification. The pleasures of love would then hardly be reserved for any one except the man of leisure and the idler.

I think a better definition would be this: Excess is coition for which an *effort* is required. Coitus easily performed and for which the individual does not require long preparation can never be called excess, even if no "real want" is to be satisfied.

For the explanation of the specially injurious effects of sexual intercourse for which more or less effort is required, we must look to those cases where copulation or even excess is attempted or accomplished with uncongenial, nay, repulsive, mates. It is simply incomprehensible that Deslandes and Hunter could say that copulation with a woman, not rousing any special feeling in the man, is not so hurtful as when passionate love accompanies the act. Every day's experience convinces us of the contrary. Men who, for some reason or other, give too frequent proofs of very ardent love to a woman really disliked, suffer comparatively much more from it than those who give to a beloved or, at least, sympathetic being proofs of their love by still more frequent embraces.

It must also be observed here that those forms of impotence that arise from sexual excess, and particularly from too frequent coition, are mostly of a slighter and transient character, and comparatively easy to cure. Only after protracted abuse may those conditions occur that lead to real and some-

times an incurable form, the so-called paralytic impotence.

Man, as an animal gifted with reason, has reached special excellence in various spheres. In many a province of knowledge and art he has left marks of his inventive genius. In most things it took him thousands of years to pry into and lay open the secrets of nature. Some fields are still left fallow by his investigating power; he has never felt a desire to turn his attention toward them. He possesses, however, quite *perfect knowledge* of the means *of abuse of his sexual power*, and he knows how to commit all kinds of sexual excesses. This knowledge he acquired at so early a date that even the very oldest of monuments of human culture tell of it as of something that had existed since the most remote antiquity. Modern culture, in spite of all the lamentations of tiresome, old or hypocritical moralists, is not to be blamed for the almost universal abuse of the sexual power. This has been transmitted to us, like many other detrimental inheritances, by preceding ages, and our time suffers under it neither more nor less than it does from many other bad qualities, perverse notions, and unsuitable institutions handed down to us by our ancestors. Moreover, we find among uncultivated nations the most remarkable and cunningly invented sexual perversities. The charm-rings in use among some of our arrant rakes are mere toys in comparison with the so-called "ampallang"[1] of a few savage tribes. The only merit that can be claimed

[1] Mantegazza, Gli amori degli uomini. Milano, 1868, vol. i, p. 108.

by our present time is that we have laid bare and shown in its true light the weakness of man in committing excesses in venery, and that we have exerted ourselves in discovering remedies for checking this devastating evil.

I am convinced that the united efforts of all the better elements of our society will succeed in preserving the nobler part of it from excesses in sexual gratification; and, though I do not expect to see an end of the excesses in venery, I hope to see onanism curtailed in the number of its victims, though it may be only in the better circles of society. This latter expression, "better circles," I wish, however, not to be understood in the sense commonly attached to it nowadays.

In general, and leaving out of question the perverse manifestations of amorous desire of which we have already spoken, it is found that excesses in sexual enjoyment may take place in two distinct ways. There is excess in copulation, and that of self-abuse or onanism.

It is hard to determine at which point of natural coition normal indulgence ends and abuse commences; and to fix on a certain frequency of sexual intercourse seems merely ridiculous. Regarding the frequency of copulation to be allowed we shall not easily agree; for, as there was a Martin Luther who allowed two conjugal acts per week, we have also an Acton who will allow one per week, and a queen of Aragon who demanded six per day. The Talmud prescribes one act of coitus per day for a man in comfortable circumstances, who is strong and has no

heavy work to perform. It allows two per week for a mechanic, and only one per week for scholars and laborers.

In the consideration of this question there must be kept prominently in view the great and various differences in individuals. Just as the digestive power differs in different men, and the act of thinking is not of the same rapidity in all, so also is the sexual capacity of very different grades. The appetite of one person may be perfectly satisfied by a small quantity of food, anything beyond that causing discomfort or nausea. Another person digests much larger quantities of food without inconvenience. A third, after coitus, may be disabled for a fortnight, while a fourth, after coition repeated several times at short intervals, can hardly await the next happy hour of love. I do not think I am in error in making the assertion that there is no excess so long as no unusual effort is required, no special means is made use of for rousing sexual passion, and no feeling of fatigue or faintness is experienced, regardless of the number of copulations, even if repeated at short intervals.

In the determination of sexual excess, a despicable, narrow-minded way of moralizing has come down from author to author, these gentlemen seeming to have forgotten that they are of the medical and not of the clerical staff. Such hypocritical sermonizing will certainly convert no one. As long as there are lovers there will be excesses in the estimation of the authors, but not resented by nature. Nature punishes only such as act contrary to her laws by em-

ploying various means to rouse desires and to irritate the strained nerves to immoderate activity.

Since virility is not of the same degree in all individuals, the *limit between normal use and excess* in them must also be different. Without regard to age or the state of health, the disposition at the time being is of extraordinary influence. That which was moderate indulgence ten years ago may be excessive to-day; and even what might have been accomplished easily and without fatigue a few days or a few weeks ago may be hurtful now. So also what may have seemed quite normal with one woman may have to be considered as a decided excess if committed with another woman.

Inquiring into the *reasons* that induce a man to *commit sexual excesses*, we cannot, after what has been said above, accuse age, amativeness, temperament, etc., as Lallemand does; for such manifestations of the sexual instinct as are produced by youth, temperament, or sensuousness cannot be called excesses. The inducements to excess in venery are only few; in the order of their frequency they are: masculine vanity, love, sensual women, different conditions of irritability of the sexual organs, and hyperesthesia of the sexual centra, which may pass into maniacal conditions and become a veritable satyriasis with priapismus.

Masculine vanity is the commonest cause of sexual excesses, as Lallemand[1] has already observed. In wedlock and out of wedlock the man feels the desire to impress the woman with his power. He starts

[1] Op. cit., p. 614.

from a principle that is correct in itself, but he very often carries it out in a faulty manner. Over-exertion in sexual matters seldom impresses the woman favorably, and inevitably leads to humiliation; and besides, the descent from the pedestal of a hero often leads to dissatisfaction in marriage, and may induce the wife to seek elsewhere that which she has learned to like and which her husband can afford her no longer.

Love may sometimes give occasion to excess. The desire to unite with the object of love as often as possible may overtax the sexual organs. Love is decidedly a powerful stimulus, but, like all stimuli, it loses its power in time. Love may have lost its stimulus, but may still live if the cause lies only in the giving way of virility. When love, however, has lost its stimulating power, although the man has retained his vigor, then love has simply ceased to be love.

Voluptuous women may now and then be the cause of sexual excess, but it must be said that in general over-sensual women are the exception, and novels and anecdotes know more about them than does actual life. Almost without exception, woman grows unduly sensual only in commerce with sensual men; but if once she is so, then woe to the man whom she holds under her sway, if he has not the courage to wish her good-by in time.

Occasionally skin-diseases about the genitals cause too frequent erections by external irritation. If we except gonorrhea and its sequelæ, quite as unfrequently there may occur irritation of the verumontanum or in its vicinity, causing untimely erections and thus provoking excesses.

Some persons have naturally the disposition to love always and much; they do not feel happy unless they are in love, and when they are they commit so-called excesses, which in reality are not to be so regarded, but which should rather be considered as manifestations of their sexual power. Indeed, we see that such fortunately disposed natures receive no harm whatever from these apparent love-extravagances, as they endure mental and physical exertions exceedingly well. Such natures are oftener met with in southern countries than in northern, oftener belonging to the better educated classes than to the uncultivated. They are mostly of a temperament easily roused, generally superficial, and in common life are called light-minded people, but sometimes deserve a better name, since they accept life as it is. As a rule, puberty shows itself in such persons very early, long before it appears in other individuals of the same nationality. Mantegazza[1] says, "To precocious puberty correspond luxury, polygamy, and libertinage." The coincidence of early puberty and excesses in southern nations, may find its explanation in the fact that persons entering upon the possession of their sexual power before they possess full responsibility are more apt to commit sexual extravagances.

Again, *abundance of power* will be sure to *lead to excesses*, as authors understand them; but these, in my opinion, are not excesses so long as the right proportion with the force is maintained. Decidedly enviable are those so fortunately gifted by nature,

[1] Gli amori degli uomini, vol. ii, p. 233.

whom we might call with Mantegazza[1] "grandi-amatori" (great lovers), and of whom he says, "The great lovers are frequently weary, but in their weariness there is not a shadow of ennui."

Excesses in venery are generally committed by men of a noble character, who subordinate hygienic considerations to the pleasure of sharing the highest delight with a beloved creature. Hence it is generally genial natures endowed with artistic talents that worship sensual pleasures and often fall a victim to them; while egotistical and mean natures calculate in numbers and are stopped in love's intoxication by the thought, "That might hurt me." It is, however, very strange that those individuals that take so little care for the preservation of their virility are often the very ones who keep it until an advanced age, while those who have always husbanded their power so economically often lose it prematurely. The force of habit plays here an important rôle. Some descend from much to little, and others from little to naught.

I beg leave here to advance an opinion which is in opposition to the views of most authors—viz., a strong and healthy man may, by means of reasonably active gymnastics of his sexual power, increase it considerably without damaging his health, since a vigorous metabolism is capable of rapidly replacing all such losses. I should hesitate to express this opinion in a book subject to the chance of being read and misunderstood by laymen; but, in a work written for medical men exclusively, I feel it my duty to

[1] Fisiologia dell'amore. Milano, 1882, p. 383.

state the bare facts unadorned as experience has shown them to me, and thereby obtain the result, perhaps, that some doubt may introduce itself into the realm of common petty ideas of narrow minds.

A gland that has seldom been excited to ordinary, and never to energetic activity, will never yield the same quantity of secretion as one that is never overtaxed, but is roused frequently and vigorously. Exactly the same may be said of the muscles of the apparatus in question, which, by reasonable use, may be strengthened and rendered capable of performing their functions. The glands and muscles active in sexual intercourse, all of which are secreting or at work through the influence of the nerves in action, are subject to the same laws as the nerves themselves, and will consequently be assisted in their secretion and strengthened in their activity by moderate and even stronger irritation, though they would be weakened by too strong an irritation.

It is certain that the nervous system is strengthened by every inducement to action as long as the action required is within the limits of performance without effort. Too much, however, is here more damaging than too little, and the happy mean is to be followed.

Too little irritation is apt to render the nerves and their centers inert in reaction and weak in functional power; thus, the genital glands which they innervate will be made indolent in secretion and the muscles of erection weakened and stunted. Again, too much irritation affects badly the co-operating nerve-appa-

ratus, and causes first a state of excitation and then of relaxation. This is the reason why men who are habitually excessive in venery are for a time specially powerful, for the sexual nerves are in a state of excitement; but this condition gradually changes into a state of weakness, which, in its turn, passes over into a state of paralysis if rest does not intervene in time. "Lasting immoderate irritation of the nerve, without a time of rest sufficient for recuperation, gives rise to lassitude at first, and then leads to diminution of the excitability by exhaustion of the nerve; and yet the nerves are possessed of extraordinary endurance with respect to the most various irritations."[1]

Decrease of the sexual power is for one who commits excesses in venery a sign, given by a sometimes kind nature, that it is time to retreat. Unfortunately, this sign, though noticed by most offenders, it is true, is wrongly interpreted, and may even cause impatience or anger. A struggle against nature begins; moral, physical, and even medicamental excitants are brought into service, but even these subsidiary forces leave the individual in the lurch, as the combat is an unequal one, and impotence is the result.

Now, instead of looking for help, the impotent man gives way to the general belief that there is no herb growing for impotence. The physician often supports this belief by sending the unfortunate patient away with a few well-meant phrases of solace,

[1] Landois, Lehrbuch der Physiologie. Wien und Leipzig 1893, p. 673.

instead of proceeding first to a correct diagnosis and then to the determination of the appropriate treatment. Thus, then, the patient is generally either driven into the clutches of the advertising quack-sharks, where the damage done to his purse is the least of the risks to run; or he is left to himself; recourse is had to new and stronger excitants; he torments himself to bring about coition; these fruitless efforts aggravate the evil; they dull the nerves and their centers more and more, until, finally, they exhaust them, so that paralytic impotence results.

In order to comprehend the pernicious effect of habitual excesses in venery, we must first of all consider more closely the **after-effect of the sexual act.** According to most authors, man, after copulation, is in a state of exhaustion, the duration of which varies in the opinion of these authors. Now, generally speaking, this is not so. A robust man who is in possession of his full sexual power is, after coition, not exhausted or depressed at all. He keeps generally perfectly still, because the action of the heart and of the lungs has been accelerated and must now be moderated, and because he still holds the object of his love in his arms and ruminates upon the past happiness. Those individuals who feel exhausted after copulation had better not commence at all, and the authors who uphold the idea may possibly give expression to their own experience. With a man perfectly vigorous sexually the Latin phrase "Læte venire Venus, tristis abire solet," applies only to the same extent as in the case of a gourmand who

enjoys a good appetite, and thus regrets, after a meal, that it is not to commence. The discovery made by Beard, that the pernicious consequences of coition often do not show themselves until the third day, must be characterized as at least peculiar. This discovery our American neuropathologist claims to have made on a patient who was unquestionably neuropathic, and, moreover, suffering from spermatorrhea. A man who feels the effects of copulation three days afterward ought to be forbidden sexual intercourse.

Now, although I deny that coition must of necessity be followed by a state of exhaustion, yet I must grant that coition implies or necessitates the *spending of a certain amount of force*. In the first instance it means a bodily exertion; secondly, the work performed by the nerves and their centers is considerable; and, thirdly, on the part of the male the loss of substance must be taken into account. It is certainly not the *bodily exertion* that causes the pernicious consequences of immoderate copulation, for we know that all bodily exertion is rather beneficial to the health of man. Is it the undue effort of the nervous system, or is it the excessively great loss of substance? Certainly neither the one nor the other alone, but both combined, with the co-operation of other influences which we shall be in a better position to explain when we know more about the secrets of internal secretion.

To prove that the excessive loss of sperm causes the bad effects of sexual excesses, a *comparison of these effects on the two sexes* has often been made. It has been asserted that women suffer more rarely

than men from the evil consequences of sexual excess. This assertion is not in accordance with daily experience, which teaches us that sexual excesses have on women a more serious and more lasting effect than on men. We need only to observe very young married couples. The recollection of every physician will show him the pale and fatigued face of the wife beside the comparatively fresh, though somewhat emaciated, face of her husband.

Attention must, however, be called to the fact that women very soon accustom themselves to sexual exertion, and then even excesses are more easily endured by them. Besides, if the woman feels a disinclination for a man, she can, without participating in the act, simply endure it. If disinclination on the part of the man can cause in him relative impotence, disinclination experienced by the woman may produce a kind of frigidity, so that while giving herself up to the act she can remain perfectly indifferent. Here we have, then, the key to the assertion of some men who declare women in general to be sexually greedy; while others—especially scholars, for whom the ladies have often no liking—declare them cold and insensible.

The *loss of substance* certainly plays a rôle of some importance, and it is not only the circumstances preceding and accompanying the ejaculation, and certain processes going on in the nervous system,[1] which cause the evil effects of sexual excesses. This

[1] Curschmann, Die functionellen Störungen der männlichen Genitalien. Handbuch der speciellen Pathologie und Therapie von Ziemssen, Band ix., Hälfte 2, p. 476.

may be understood when we consider that evil consequences of a greater magnitude follow the loss of sperm from spermatorrhea than from sexual excesses. In some cases of spermatorrhea of a high degree the loss of semen is unattended with consciousness, and we can hardly imagine any accompanying influence that could primarily affect the nervous system.

Paget[1] thinks that the morbid condition in the nervous system, and more especially in the spinal cord, caused by excessive coition is analogous to the condition which is observed in muscles after excessive efforts. The comparison between muscle-atrophy and paraplegia might be very instructive if sexual excesses ever caused paraplegia.

In this comparison by Paget of muscle-action and nerve-action I consider only the following observation correct, in which he says, "I cannot explain to myself why excessive coition infallibly causes loss of sexual vigor with certain persons, while the same excess causes in other persons no manner of disturbance. But the same different effects are observed in respect to muscle-effort, and remain also without explanation. A given amount of muscle-exertion that exhausts one individual and leads to muscle-atrophy develops the power in another, and increases the capacity and vital energy of the muscles at work."

What are the real **consequences** of immoderate coition? As far as my knowledge reaches, there is

[1] Acton, Fonctions et désordres des organes de la génération, p. 237.

only one really serious effect, but that brings in its train a series of other evils: it is sexual impotence.

No one doubts that excesses in venery cause impotence. Those who have not denied themselves the enjoyments of life know that after such excesses there occurs a time during which desires lie dormant. With weaker natures such a time follows sometimes after very few excesses; even after a single night of revelling, there ensues a longer or shorter period when coition would be an impossibility. This condition cannot be called impotence, for it is *physiological*, similar to the state of fatigue, and is caused by the spending of the provision of sperm and the exhaustion of the sexual nerves and their centers. With sexually weak men this state lasts longer than with stronger ones. It will last longer after repeated excesses, and these pauses growing ever longer pass sooner or later into a permanent inability, which we justly call impotence. These pauses are certainly a wise provision of nature; they are, in a measure, bars placed in front of the impetuosity of youth. Without these bars there would be many more impotent persons than there are.

After sexual excesses the spinal cord is no doubt in a state of hyperemia. Hence the state of irritation in the centers of erection that continues after the excess, and the fatigue of the overtaxed nerve-substance which is plainly seen after the cessation of the hyperemia. After many such states of lassitude, which may pass away more or less rapidly, there ensues a state of exhaustion which may be permanent. This constitutes impotence. Impotence following

sexual excesses is in the great majority of cases a state of exhaustion of the nerves and nerve-centers concerned—a kind of sexual neurasthenia of different grades.

In the main, excesses in venery cause only sexual neurasthenia; while onanism causes, besides sexual neurasthenia, derangement of the organs of secretion, and especially of those of ejaculation. From this arise primary morbid pollutions, which finally produce impotence. The same is true of continence, but in rare cases only.

Neurasthenia sexualis arising from sexual excesses shows, like every other form of neurasthenia, quite peculiar phenomena, and its symptomatology resembles that of general neurasthenia in many points. As already stated, there are to be seen signs of exhaustion of different grades. Sometimes the desires of the patient are in marked contrast with his force. At times positive satyriasis may be observed in completely impotent men. Such individuals practise mental and actual onanism, as they are no longer capable of performing the sexual acts so ardently wished for.

Again, the sexual apparatus may still be comparatively apt in function, but the subject is nevertheless impotent because of a sexual **frigidity** which is not an unusual consequence of sexual excesses. The feeling of satiety which is observable after nearly every sexual excess, but which generally disappears rapidly, becomes permanent in some cases, and the individual, who still has erections now and then, is nevertheless impotent, as he is apathetic toward

the female sex. This state, it is true, is commonly observed only in persons who have never had a well-developed sexual instinct, and who, in spite of this, allowed themselves to be incited to excesses. The same state may, however, appear in persons of a strongly developed sexual impulse, who have committed repeated excesses with persons whose physical qualities were not worth such an effort. Such frigidity is particularly noticed after manifestations of power performed with a view to pecuniary gain and in husbands who sometimes perform their conjugal duties for years, and conscientiously, but with reluctance.

Another form of impotence is noticed in the track of excesses in venery continued for years, in which the sexual organs may continue to be capable of function. After years of excesses there arises a state of **satiety for ordinary sexual pleasures,** a torpor of the sexual emotions for normal and natural satisfaction. A perverse sexual sensation develops itself quite gradually. The patient is incapable of performing the sexual act in a natural manner, but can still indulge in cunilingus, fellatio, pederasty or other wayward acts to satisfy his perverse lusts. This form of impotence in consequence of sexual excesses is oftenest observed in old men, the majority of whom have some psychical affection. All the perverse actions of sick and also of insane persons are merely an extraordinary augmentation of normal phenomena, emotions, and acts arising from psychological and physiological origin; and similarly we can trace, in the forms of perverse feeling, a highly abnormal

exaggeration of phenomena observed in healthy persons.

It is generally known, though not so generally admitted, that the original taste in sexual matters undergoes manifold changes with increasing age and after numerous sexual enjoyments. As there is a great difference in the individuals, it is impossible to establish a general rule or law, and I shall therefore attempt only to represent the process in the manner in which it generally presents itself for observation.

In the first place, we must entirely exclude the early years of ardent desires that come before completely developed sexual maturity. These are the years of sexual blockheadedness and awkwardness; the individual is without taste, and not at all particular in the choice of altars on which to make his sacrifices to Venus, although he dreams of ideals. When, however, that sexual bulimia, as we may call it, is over, taste appears, and the individual grows particular within the limits of his taste. This taste is good or bad in the opinion of his fellow-men, but, judged from his own standpoint, it is always good. The taste remains then generally settled during the years of the greatest virile power; but when riper manhood approaches it begins to deteriorate. The individual grows less and less particular, and will carry on commerce with persons he would formerly have rejected with contempt. This corruption of taste is the reason why elderly gentlemen often associate, for the time being, with slovenly and unattractive servant-girls. Closer examination will prove the error

of the generally accepted opinion that elderly gentlemen are dainty in their choice, and that only the want of a better chance can make them less particular. Of course, due consideration is to be paid to the rôle played in this respect by education, the different conditions of wealth, rank, and other circumstances.

The abnormal exaggeration of this physiological degradation, as I would call it, in the sexual taste, is often the origin of perverse sexual sensation. The class of individuals who have thus become perverse comprises many of those who, after a long, honest, and exemplary existence, come, in their old age, into conflict with the law, as pederasts, exhibitionists, or ravishers.

In a few isolated cases, and especially with sexually weak individuals, continued excesses lead to **paralytic impotence,** as already stated. This is equivalent to complete paralysis of the sexual nerves and their centers—a condition which certainly occurs very seldom in young persons.

Besides the states already described, excessive venery causes transient feebleness in the entire body and disturbances in the functions of single organs. After a real excess in venery the individual feels weary and exhausted, may be nervously agitated for a time, and may be visited by vertigo and fainting fits. However, all these symptoms generally vanish after a few hours' undisturbed sleep following a strengthening meal. The individual will experience no further consequences.

I never saw or heard of ejaculations mixed with

blood; although Lausac[1] asserted that the causes of it may be urethritis, prostatitis, epididymitis, also sexual excesses, or prolonged continence. I believe, however, that this is probably of exceedingly rare occurrence, may be observed in cases where the seminal vesicles, the prostatic gland, or the colliculus seminalis are in a state of acute or chronic infectious inflammation, and will hardly ever appear in normal individuals. We know now that gonorrhea cannot arise from protracted coitus or sexual excesses, as Lallemand[2] seemed to believe. Nor can I believe that sexual excesses can cause degeneration, suppuration, or induration of the cerebellum.[3]

Some individuals committing frequent excesses in venery, if they are strong, accustom their nature to these excesses after a time. Such wanton persons may commit great excesses almost with impunity for a long time. They consider themselves heroes in sexual matters; but, nevertheless, they steadily lose flesh in spite of an appetite that may be quite excellent. Sometimes it is noticed that sexual excesses seem to favor the development of obesity. I have known a man, thirty-two years old, who was continually losing weight during continence and a state of good health, while he gained in weight when he was doing his utmost sexually. As the conditions leading to obesity are now better understood, we can easily explain why this should be so.

[1] Untersuchungen über die Hämatospermie. Med.-chir. Rundschau. Wien, 1888, Heft 3, p. 95.

[2] Des pertes séminales. Paris, 1836, tome i, p. 586.

[3] Black, On the Functional Diseases of the Urinary and Reproductive Organs. London, 1875, p. 112.

Sooner or later the sexual power is sure to diminish noticeably after sexual excesses, even with individuals of great resisting power, and temporary impotence will then for a time prevent further excesses. This dallying with one's sexual power I have observed frequently, and have received many reports of the same kind from my patients.

I never saw the fearful consequences of excesses as they are described in books. I never saw a single case of frequent pollutions or spermatorrhea caused by excess in venery. Considering that I have observed a great number of such wanton persons, and a still greater number of patients suffering from spermatorrhea, I may be justified in the assertion that immoderate coition without onanism cannot cause spermatorrhea. Among Oriental nations, where polygamy is the rule, and occasions for excesses are constantly presented, premature impotence is often noticed, but spermatorrhea very seldom. Abnormal pollutions and spermatorrhea arise now and again in the train of impotence, but never directly after excesses in venery, however long these may have been practised. This is the chief difference between the effects of onanism and those of excessive coition. Some modern authors are of a different opinion, but it strikes me as peculiarly characteristic that Löwenfeld[1] reports the histories of thirteen cases of neuroses, etc., in consequence of abstinence, and not one to support his assertion that excesses in venery cause "at least pollutiones nimiæ." Furthermore, it is only a contradiction when this kind of pollution is

[1] Op. cit., p. 65.

regarded as a physiological sign of health,[1] and also as a pathological consequence of sexual excesses.

The consequence of excess in venery is always and without exception impotence, this impotence putting a stop to further excess.

It is difficult to obtain a clear idea of the manner of action of the pernicious effects of continued sexual excesses, because we are denied the possibility of watching the pathological changes caused by these excesses. Virility enfeebled by habitual excess does not make itself felt by any kind of trouble in the sexual organs, and sometimes, though no change in them is visible, the individual is impotent.

Although the rest of the body may be quite normal in its functions, we see that some persons suffering from sexual debility lose weight while others become pinguid; the individual tissues in all cases showing more or less flaccidity. This degeneration of the forces, this general sinking, is due to the changes in the general metabolism, and to a certain extent also to the injurious effect produced on the mind by the consciousness of impotence. The changes in the general metabolism are easy to be explained on the basis of our present knowledge of the internal secretion of the various glands.

The condition of sexual nerves in cases of paralytic impotence can be attributed only to the consumption of their nerve-power; whatever that may mean. While the question has scarcely been studied at all, and lies in great darkness before us, we can only say, *Continued excesses in venery lead sooner or later to impotence, with a rapidity varying in*

[1] Ibidem, p. 165.

proportion with individual differences; and impotence brings very often in its train other unpleasant consequences. If some authors state that there are men who commit excesses in venery with impunity, we must remember that what these men have committed were not excesses in the true sense of the word.

It is amusing to read the statement that some cases have been noticed where single excesses in venery have caused death. No doubt long-continued sexual excesses may cause temporary disturbances in the functions of other bodily organs, but permanent derangement certainly can occur only in weak and sickly individuals, since the sexual organs invariably refuse obedience in proper time.

The assumption that sexual excesses may directly cause atrophy of the testicles, for example, is certainly erroneous, since impotence is always primary; while atrophy of the testicles is only secondary in consequence of impotence.

It used to be the custom to impute everything to sexual excess: a death whose cause was not clearly discernible was attributed to sexual excesses; if some one became insane, sexual excesses were blamed for it. Even in case the father and mother had been insane, inheritance had nothing to do with it. If a man died suddenly in an ill-famed house, sexual excesses were accused, and one forgot that the man had quite as good a chance of dying suddenly in his conjugal bed, though he rarely may have made the proper use of his matrimonial rights. If any one should wish to convince himself of the exaggeration that was usual in these matters until a few years ago,

has only to take up Bourgois' book,[1] for instance, where he can read literally, "Dissolute persons are so frequently subject to spinal diseases that the special name of dorsal consumption or phthisis, tabes dorsalis, has been given to them when they originate from sexual excesses." Dr. J. A. Spalding, of Portland, Maine, goes even further, and relates the history of a group of four cases of optic atrophy following sexual excess. All four subjects gradually lost useful vision in spite of treatment, though they did not become totally blind. As no other mortal ever had the chance to observe such consequences of sexual excesses, and Dr. Spalding, on the contrary, found four such phenomenal cases, we have to look toward the Portland climate or imagination for an explanation.

Recently Moczutkowski tried to resurrect the old idea that tabes dorsalis is caused by excesses in sexualibus. We can only agree with Möbius[2] who did not show very much respect for Moczutkowski's queer way of reasoning and his jumping to false conclusions on the basis of falser premises.

In no other disease has cause so frequently been mistaken for effect, and *vice versa*. Authors too often ascribe many pathological states to sexual excess, without noticing that these morbid states, together with their supposed cause, have a common and deeper origin in an inherited pathological predisposition. Thus, then, the effect was mistaken for the cause.

[1] Les passions dans leur rapports avec la santé et les maladies. Paris, 1877, p. 144.

[2] Neuere Beobachtüngen über die Tabes. Schmidt's Jahrbücher, 1902, Heft 1, p. 6.

Generally speaking, real excess in venery seldom occurs, and is not often the cause of impotence or of a general physical degeneration. In case extraneous circumstances do not prevent an individual from accomplishing his own ruin by sexual indulgence, nature, as a rule, will refuse him the means for continuing his excesses. Not all women will consent to excesses; again, the individual, if somewhat energetic, may restrain himself from further excesses.

As an illustration of the frequent "post hoc ergo propter hoc, reasoning the following clinical history:

Before the great San Francisco fire, caused by a very interesting though insignificant earthquake, a man of thirty-one (if my memory is correct, because the records were burned) consulted me for absolute lack of erectile power, and gave following history: Married when about twenty-eight years old, he loved his wife, and, as he said, overindulged in sexual intercourse, though I think he did not more so than most newly married people do. In the seventh week of his married life, one morning after an intense coitus the erection did not abate, the priapismus lasted nearly a week, and the man never had another erection during the following two years. This patient admitted syphilitic infection to have taken place three years before marriage and showed traces of former luetic lesions. Lohnstein[1] reports a similar case.

While I have my suspicions that the *priapism* in my case was due to some pathological changes of or near the centers of erection, I am not ready to claim that syphilis is always at the bottom of priapism.

[1] Blum, Sexual Impotency in the Male, The Amer. Jour. of Urology, February, 1913, p. 103.

Terrier and Dujarier[1] report on forty-eight cases of priapism collected by them, and find that prolonged priapism frequently follows excessive sexual intercourse. Many times it develops without apparent cause and suddenly. Some times the real affection is preceded by recurring attacks of transitory priapism. Of the forty-eight patients thirty-one recovered, of these five died subsequently of leukemia. Two of the patients died during the attack. Sexual impotence was the usual consequence. Local inflammatory processes, tuberculous and others, neurasthenic conditions, traumatic lesions mainly of the spine and the perineum are most frequently to be blamed, while syphilis was the cause only in one of the forty-eight cases.

We may safely assert that sexual excesses as such hardly ever cause priapismus.

We shall meet with altogether different conditions when we make **excessive onanism or masturbation** the subject of our discussion. If onanism[2] causes degradation of the physical force and impotence much more frequently than excesses in venery, we find the explanation in this difference of all the conditions.

It is only an exception when excesses in venery can be practised before the individual has become pubescent, for he generally lacks the means and occasion therefor; onanism, on the contrary, may be practised by an undeveloped child, as, unfortunately,

[1] Revue de chirurgie, May 10, 1907.

[2] Common usage in all countries has established the meaning of the word "onanism" without any regard to what Onan, according to the Bible, really did.

is frequently the case. Of course, every sexual excess committed by an individual before puberty is ever so much more far-reaching in its consequences.

Nature is seldom able to hinder the onanist in his destructive work until it is too late. The onanist wants no erection: he can without it bring about orgasm and ejaculation. The onanist need not wait for time of leisure or for a special place or occasion. He can satisfy his desire in bed under the warm covers, almost under the eyes of his parents and teachers, in the closet, in any dark corner. Some have acquired such dexterity that they can ever add new injury to the weakened sexual organs, which are almost continuously in a state of irritation, by clever manipulations of the penis by the hand introduced into the pocket of the trousers. This can be done at school, at church, at the theatre, at balls and other entertainments, or during a walk in the street or a ride in a carriage.

The recovery from this condition is more difficult to accomplish, and the ability to desist from further injuring the sexual power is more difficult to acquire, in this case than in the case of excessive venery. The individual is not able to avoid seizing the opportunity to practise his vice. It often takes a long time for the onanist to get a clear understanding of the evil consequences of his actions; but when he does discover his error, a fearful struggle arises between the pernicious, almost overpowering habit and the enfeebled juvenile, who may be a mere child. This struggle is so hard and dreadful that even a vigorous and energetic man might succumb.

There is yet a weighty circumstance that renders

excesses in onanism far more fatal than excesses in venery. The one who commits excesses in venery is ever enamored, feels seldom any remorse about the excess he has committed, but is rather inclined to look upon it as a triumph of his irresistibleness and power. He is satisfied with himself, and draws immeasurable joy from the inexhaustible treasury of love. He is most of the time happy, and his joyous mood contributes largely toward the preservation of a healthy condition of his body. The reverse of this is the case with the onanist: he is always in conflict and exceedingly dissatisfied with himself; he is ashamed of his doings, and regrets to commit what is commonly called a "vice." Hence the onanist is ill-humored and melancholic, this state of the mind having an influence which almost without exception produces an injurious effect on the functions of nearly all the bodily organs.

This one harmful factor in onanism was usually under-estimated and by some authors even ridiculed, but is now, the influence of the mind over the body being better studied, also better understood.

Finally, it must be stated that it is not at all settled whether coition and masturbation are equivalent acts. I doubt it very much, because I know that with individuals accustomed to excess in venery the commission of a single act of onanism leaves them in a weaker and more dejected state than a great excess in copulation. I think that, after all, the circumstances preceding and accompanying ejaculation, and, most of all, certain processes in the nervous system, must be of more consequence in

onanism than in copulation, and that these "circumstances and processes" require a greater effort to be brought about by onanism than by coition, and consequently produce greater fatigue. Hummel[1] thinks that the climax of excitation in masturbation is higher than in the normal intercourse, and for this reason more of an insult to the "cerebro-spinal centers."

Every medical man who thinks about this matter must ask himself whether those authors are right who call onanism a vice. I do not think they are: for if we take into consideration the circumstances under which one falls a prey to onanism, and, moreover, the almost insurmountable difficulties encountered in resisting or overcoming the bad habit, we unquestionably must come to the conclusion that onanism should with more justice be called *a disease*. In the same manner in which one may fall sick without any fault of his, he may fall into the grasp of onanism and be unable to tear himself away even with the greatest effort.

The most common form of onanism consists in moving with *manu propria* the prepuce backward and forward over the glans until ejaculation is obtained. Sometimes the onanist produces friction of the prepuce against another object, as, for instance by lying on his stomach and rubbing against that upon which he rests, thus causing the prepuce to move over the glans; less frequently there is mutual onanism practised between two men. This

[1] Nervous and Mental Effects of Masturbation. N. Orleans Med. and Surg. Journal, April, 1909.

kind of onanism occurs most frequently among persons affected with perverse sexual feelings, but who have not yet sunk to pederasty. Still less frequently there is mutual onanism between man and woman; yet it occurs often enough, and seems to become a regular expedient in matrimony in some countries, whereby the increase of the family is avoided. Lingua et labia are then often used in the place of the hands. Thus we see that Freeman's[1] definition: "Masturbation is the acquiring of all the sensations of sexual intercourse, including the orgasm without the aid of a second person," does not cover the subject.

Onanism as a manner of satisfying the sexual instinct is very widely spread. It is practised by almost every young man when he becomes pubescent, so that one might be tempted to look upon onanism as a physiological act; and this so much the more when we realize how eagerly monkeys and other animals practise it.

Onanism is not without its vindicators; only they have not the courage to speak aloud and publicly in behalf of their belief. In a small circle of pupils I once heard a very popular professor say that onanism moderately practised has its advantages, particularly for students, as money and valuable time are saved, all unpleasant connections and obligations are avoided, no one is made unhappy, and there is no danger of contagious diseases. If considered from a low and egotistic standpoint, these reasons

[1] Maurice Freeman: Some Features of Masturbation. Am. Journ. of Dermatology, Apr., 1911.

might be correct, if only the onanist were capable of keeping within moderate limits; but it is this excessive onanism that renders it so particularly hurtful. The onanist's resolutions of restraint may be compared to the "serments d'ivrogne." Just as the drunkard, sitting with the last of the number of glasses that he vowed should not be exceeded, continues to allow himself just one more, "always the last," so the onanist bargains with himself, and his "last time" becomes centuple, in spite of his vows, oaths, and promises.

Although we have really to deal with the bare facts only, we feel interested in the causes of this universal practise of onanism, because, while obtaining a knowledge of the cause, we may get a knowledge of the remedy.

There is no doubt that onanism is of very old standing, surely as old as the human race. Over the whole extent of human history there is no lack of statements, or at least hints, about onanism. Hebrews, Greeks, Romans, all were acquainted with it. It may be quite true that in olden times onanism was not so common, but civilization cannot be accountable for the difference; for in those times the young people did not lead sedentary lives; it was easier for them to procure natural sexual gratification, if they were not already pederasts. Pederasty, however, always goes side by side with onanism. Again, the intercourse with venal women was not dangerous, because there was no syphilis in those times.

If onanism has not already become a habit, it is

out of the question so long as the sexual instinct can be satisfied in the only natural way, in the arms of a responsive woman. This is, besides, the manner more in accordance with feelings of love; it is the more pleasant, the nobler act. When, however, this mode is denied, then with virile men erections occur, and from the temptation of feeling and fumbling about the genitals there is no great distance to masturbation. The present social regulations cause ever-increasing difficulties in the obtaining of a wife, and we should not be surprised to learn that onanism is really much more common at the present time than during any part of antiquity. Onanism is probably not practised by the monkey when living in liberty where he can go after his mate; nor by the bull nor the stallion that has enough of cows or mares brought to him; nor with the dog not led with a line by his master. Apes and other animals fall into onanism only when proper mates are not obtainable.

There are many writers who assert that the cause of the wider and wider spreading of onanism is to be found in the ever-increasing corruption of morals, or, as some like to consider, identical with enlightenment. We will grant that onanism has been "ever spreading," though there is no proof of this, but we must repel the reproach laid at the door of modern culture or civilization. Modern culture has nothing to do with our bad social conditions and crazy views derived from medieval times which are the chief causes of onanism. These conditions and views came down to us from the time of the greatest religious

intensity; and they remain in force, not because of our modern culture, but in spite of it. We can only hope that when this culture becomes common property it will free the world from these fetters that hinder free action, and then onanism will be shown its proper place. Certainly it cannot be denied that the present mode of education of our children offers many moments favorable to onanism; but this very mode, too, is an inheritance from the dark ages.

Children learn onanism mostly through *seduction*, and, as a rule, one child learns it from another. A single so-called black sheep often suffices to corrupt all the others in a family, institute, school, etc., whereby the frequency of onanism in boys' and girls' institutes finds an easy explanation. The younger a child is, the easier it is to allure it, even those who at first resist seduction finding later on a taste for it. It occurs, though seldom, that coarse, uneducated bad adults, even teachers, find a pleasure in misleading immature children to onanism. In the literature of the subject we read of cases quite incredible. Thus, there are nurses and nursery-maids who understand how to quiet screaming children by playing with and sucking the child's genitals. It is to be remarked that the little screamer is easily and quickly silenced, but thereby a state of irritation in the sexual organs is caused, and the child induced to pull and play with them, and finally to practise real onanism. This is the more injurious the younger and weaker the child is.

Rarely, *unwise parents*, in their anxiety for the child, clothe their warnings in such awkward language that it draws the child's attention to sexual matters.

I regret to be obliged here to add that occasionally *the study of certain subjects* may lead to onanism, and, unfortunately, it is, strange to say, principally the instruction in a subject that is generally thought to further morality. In the sentences and passages to be memorized words are used which quite evidently have reference to sexual matters. Immature children are served with little stories of the most piquant contents, which are for them the first hints of sexual things. Dull children think no more about them, but sprightly and intellectual children will ponder over these legends. Dried-up old pedagogues are not aware of the kind of thoughts that present themselves to the child when meditating on certain stories. Then, again, we have in our high-schools the Latin and Greek classics with their often vulgar and blunt language. It is well known how eagerly and assiduously the passages of an erotic tendency are read and the greatest linguistic difficulties overcome, even if such passages are skipped by the professors.

Withal, however, I do not mean to say that a youth should be brought up in ignorance of all sexual things. I do think that, by all means, a child has the right to be exempted from obscene ideas as long as he is sexually unripe and his nature does not assert itself. However, when puberty has arrived, and has announced its presence by unmistakable signs, then I think the youth should be told all the truth, without allowing him to be excited by piquant reading. Youth may find that piquant which leaves a man of mature age perfectly indifferent.

What are we to say or to think of a medical man advising mothers to endeavor to accustom the pre-

puce of their boys to remain behind the corona glandis?[1] As this can be accomplished only by moving the prepuce repeatedly back over the glans, such mothers would, in plain words, masturbate their sons.

Bad example is the most frequent cause of the spreading of onanism, and causes the greatest injury, because it brings under the sway of onanism quite immature children who up to that time did not feel the least movement of sexual desires. If an individual is not made acquainted with onanism by comrades, books, or in any other manner, he will enter the age of puberty without any erotic thought, and is what is commonly termed "perfectly innocent." Notwithstanding this innocence, he may, in one moment, be overtaken by onanism. Sometimes violent erections cause him to touch the genitals with his hands, and thus he learns onanism involuntarily in some measure.

Certain movements, performed for some other purpose, may induce onanism. I have a vivid recollection of the history of a youth in whom I was quite specially interested, and who involuntarily committed an act of onanism. He was an industrious student, sixteen years old. During his studies he would take the most comfortable positions, and thus, lying one day on his stomach over three chairs, being lost in thought over his reading, he swayed his body to and fro, without noticing the erection. To his great surprise he experienced a most pleasant sensation in his genitals, quite new to him, but at the same time he felt a strange moisture. It was sperm,

[1] A. Theod. Stamm, Dr. med., Dr. phil., Die Verhütung der geschlechtlichen Ansteckung. Zürich, 1886, p. 63.

which he first took for urine. By such ways onanism may be induced in quite immature individuals, or individuals who have scarcely attained puberty. The incident at first is agreeable; its dangers are either unknown or the subjects are not willing to believe in any. Youths, however, who are well aware that the evil habit injures them, have seldom the courage to rid themselves of it, and finally the bad consequences make themselves felt.

We have now seen that the principal cause of this general spreading of onanism is innate in human nature itself, and is most commonly seduction. If, then, we speak of further causes of this disease, we shall understand thereby rather the occasions that help in the development of the germ. They do not cause onanism, properly speaking, but rather its immoderate practice.

The leader in these causes of onanism is the *sedentary mode of life* to which our youth is generally condemned—*the want of outdoor exercise*, the curse of the present customary mode of education. We must admit, however, that conditions are gradually being improved, principally in the United States.

Habitual and even occasional constipation, at the bottom of so many pathological conditions, is undoubtedly and frequently causing conditions inciting to onanism.

Flogging on the bare back or buttocks is apt to incite to premature activity the sexual organs, or, rather, the nerves which lead from the center of erection through the spinal cord. This alone ought to be reason enough to induce us to abrogate as much as possible the brutal and absolutely unnecessary

whipping of children. On some future occasion we shall show that such blows applied on the back and buttocks constitute a brutally empiric aphrodisiac.

Then, too, we have *lascivious reading and pictures* which, heating the imagination, for the time being incite the sexual instinct in the highest degree, and must be the cause of many excesses in onanism. Theaters, balls, and other entertainments where young men come in direct or indirect contact with the female sex are rather effective preventives against immoderate onanism, in spite of the demonstrations of all the misanthropic or thoughtless persons who never see anything beyond the sphere of their rooms.

I must raise my voice against those numerous authors who denounce riding on horseback as a cause of onanism. Riding, if done properly, like every bodily exercise, is not conducive to onanism, and whoever asserts differently gives a proof of his want of knowledge on the subject. Lallemand was the first to invent the story of the evil influences of horseback riding, and while modern authors seize every opportunity to ridicule his views, they also stick to most of his antiquated mistakes.

As determining causes of excess in onanism I must denounce *idleness* and loitering about, which occasionally become habits even with very assiduous youths; also going to bed too early and arising too late, especially lying in bed awake in the morning. Again, *stimulating foods and drinks* may prove to be determining causes for excesses in onanism.

Another powerful cause in the propagation of onanism is the temporary or permanent impossibility of

procuring a suitable and ardently coveted mate. The concupiscent desire increases, and finally even an energetic man of character may succumb. Again, *uncleanliness* may cause an accumulation of a sebaceous mass between the prepuce and the glans, inducing continual itching, and thus the hands will be induced to manipulate the member, this possibly ending in onanism.

As other causes of onanism may be mentioned stone in the bladder, various kinds of irritation about the promontory and the neck of the bladder, and certain *cutaneous diseases*, and especially phimosis with and without balanitis. Oxyuris worms also, by setting up an itching or irritation about the genitals, may cause onanism. Since Lallemand, however, too much stress has been laid on the frequency of these causes of onanism.

Some authors blame the working of *sewing-machines* for causing onanism. The possibility of this cannot be denied, but, as Dr. Decaisne[1] says, a good deal of willingness is necessary.

In the last instance we shall mention too *tight garments* as a cause of onanism. These may, by means of friction, lead indirectly to onanism, but only if the genitals are already in a state of irritation.

In some exceedingly rare cases an inherited neuropsychopathic predisposition may, in very young children, cause premature awakening of the sexual instinct. The inevitable result will be onanism.

The **consequences** of onanism never tarry long in showing themselves. Since, in most cases, unde-

[1] Fournier, De l'Onanisme. Paris, 1885, p. 67.

veloped individuals are given to excess in onanism, the whole organism soon suffers from the excitement and the continual loss of sperm. These stimulations are too frequent and too violent for the undeveloped nervous system. The change of substance in the body is rapid enough, so that recuperation from the frequent loss of substance would not cause much disturbance in the system if the individual were not in great need of all his force and all the energy of his metabolism for his growth and further development. Hence we see that delicate and sickly individuals suffer under excess in onanism a great deal more than strong and healthy ones.

First *anemia* is produced, under the influence of which the digestive activity suffers, and, consequently, the whole body. Again, the shock resulting from the practice of onanism enervates the whole system, and, less frequently, causes in the nervous system a state of excitability. The nervous system has but little power of resistance, and the shock is repeated very frequently.

Many forms of *neurasthenia* have their origin in onanism. With young children onanism may even cause far more profound disturbances of the nervous system. I have seen a boy nine years old suffering from epileptiform attacks arising from onanism only; the attacks ceased upon the application of an ingeniously arranged bandage. I doubt, however, that onanism can cause real and permanent epilepsy. The effect of onanism upon the nervous system is specially pernicious in cases where children begin onanism before there is any sperm. Here there can

be no question of loss of substance. The time of production of sperm is in such cases considerably accelerated.

The assertion that onanism causes tabes dorsalis is certainly an extravagant fancy. To attempt to prove such an assertion by stating that of one hundred and nine cases of tabes, ninety-seven of the patients confessed to onanism, as Fournier[1] claimed is a mistake. Fournier's report proves only that of one hundred and nine people at least ninety-seven have practised onanism at some time, and that most of them are ever ready to look upon any disorder in the conditions of health as a result of this wretched habit. The consequences of onanism are serious enough; there is no necessity to add anything from sheer fancy.

As to the special effect of excesses in onanism, we state, in the first place, that the *sensibility of the sexual organs is heightened*, and, in time, to an excessive degree. Very soon a hyperesthetic form of sexual neurasthenia develops, which, by itself, can cause impotence.

Edward Martin[2] says, 'Masturbation unquestionably determines at first acute hyperesthesia and hypermia of the prostatic urethra. This is ultimately followed by a chronic congestion and by almost complete anesthesia of the same region." I, for my part, never was able to observe chronic congestion and any degree of anesthesia together, but

[1] Op. cit., p. 125.

[2] Impotence and Sterility. Hare, System of Practical Therapeutics, vol. iii, p. 662.

always found that, whenever there was congestion, hyperesthesia never was missing. Observations made recently with the aid of Goldsmith's endoscope only confirm this view. Hypertrophy, however, is frequently accompanied by anesthesia.

Besides, excess in onanism, in a much higher degree than excess in venery, is a cause of a gradually increasing *frigidity and aversion for the other sex.* This aversion is at the same time a cause and a consequence of impotence. The patient is impotent because he feels an aversion for the female sex, and he is averse to the female sex because he feels himself impotent. In the midst of the absurd and crazy social institutions of our time such people often assume the rôle of heroes of virtue, and are set as examples for others who have the misfortune (?) to be somewhat virile. Again, excesses in onanism are more frequently the cause of perverted sexual sensation than are excesses in venery.

The augmented sensibility of the sexual organs is the chief cause of the involuntary emissions during sleep which invariably follow excesses in onanism; these pollutions are finally followed by spermatorrhea, and have impotence as their consequence. A relaxation of the entire sexual apparatus occurs simultaneously with the over-excitement of the sexual nerves and their centers. In this enfeeblement, as a matter of course, the muscular apparatus of the ductus ejaculatorii participates, whereby a further condition arises tending toward excessive pollutions and spermatorrhea. Of course, enfeeblement of the whole organism and weakening of the sexual organs

go hand in hand and keep nearly apace with each other. Sometimes the rest of the body still presents a quite satisfactory state, while there is already great disturbance in the functions of the sexual organs. This is the case chiefly with onanists of mature age who are affected by hereditary low sexual power of little resistance.

Finally, it is asserted that excessive onanism may cause *atrophy of the testicles* Such cases being described by Curling and Albert,[1] I will only point to their extraordinary scarcity, without giving expression to my doubts. It is more probable that atrophy of the testicles did not occur until onanism had caused impotence.

The most frequent and therefore best observed diseases caused by excess in onanism are immoderate **pollutions** and consequent **spermatorrhea**. Knowing, as we do, that onanism is an evil of long standing, we shall not be surprised if Moses knew of the pollutions.[2] According to his regulations, a man who had an effusion of semen was unclean for a whole day, and likewise the woman who may have been lying with him.

Too frequent pollutions are the most common causes of impotence, and we may, therefore, say with some authority that onanism is the cause of impotence in the great majority of cases. Of one hundred persons suffering from pollutions there were at least

[1] Hofmann, Lehrbuch der gerichtlichen Medicin. Wien, 1881, p. 63.

[2] Trusen, Darstellung der biblischen Krankheiten. Posen, 1843, p. 9.

ninety-nine addicted to excessive onanism, so that all other causes together hardly ever come under consideration.

If a healthy, robust person, in full possession of his sexual power, does not in any wise satisfy his sexual wants, and if the glands preparing the sperm do not cease their action, an ever-increasing quantity of semen collects in them, causing a very great tension, particularly in the seminal vessels, and this leads to so-called physiological pollutions.

Now the question arises, How frequent may these be before they should be called excessive? Some authors have even pretended to fix the limits within which pollutions may be repeated. This is, however, not admissible, since the sexual organs do not act with the same energy with all persons, and the number of pollutions during a time of abstinence cannot be the same with individuals who were accustomed to daily intercourse, and with others who indulged only once a week. Therefore we have to consider as decisive not numbers but the circumstances that accompany and follow the involuntary loss of semen. Besides, the great divergence in the frequency considered normal by different authors is sufficient proof of their unreliability.

A pollution may be called normal under the following conditions: it must, first of all, occur during sleep—*i.e.*, during absence of consciousness and will-power; it must be accompanied by a vigorous erection, erotic dreams, and by the natural sensual gratification; it must cause a sensation of well feeling and relief, but not of faintness, depression, headache, or

other similar troubles. If any one of these conditions is missing, the pollution must be considered morbid.

We shall, with Curschmann,[1] classify morbid pollutions as follows:

I. *Morbid pollutions occurring during sleep.*

a. The pollutions are *more frequent* than is normal according to the peculiarities of the individual and the natural state of his semen secretion. The accompanying phenomena are unchanged, but the patient feels afterward faint, low-spirited, and is sometimes troubled with headache, etc.

b. The *number* of pollutions reaches such a height that they appear for this reason alone as pathological. The pollutions may occur every night, or even more than once in one night. Moreover, they may occur sometimes directly after coitus, and even in a bed shared with a woman. The accompanying phenomena still resemble those of normal pollutions, but the consequent pathological sensations are still more marked than in group *a*.

c. There is very great frequency, but an *absence of the phenomena accompanying normal pollutions*, such as erection, erotic dreams, and voluptuous sensations. The ejaculated semen is very small in quantity, and in quality a thin liquid. In this group of morbid pollutions the psychical shock and the loss of substance are both insignificant, and yet the consequent phenomena are very grave.

[1] Die functionellen Störungen der männlichen Genitalien. Ziemssen's Handbuch der speciellen Pathologie und Therapie, Band ix, Hälfte 2, p. 467.

II. *Morbid pollutions in the waking state.*

a. The pollutions take place while the individual is awake, *in consequence of trifling mechanical irritation*, such as friction by a tight garment, riding on horseback or in some conveyance.

b. The so-called diurnal pollutions happen even under the impress of *psychical influence*. Finally, as the last form:

c. The patient loses semen during *micturition or defecation*.

In reference to the above and similar classifications it must be remarked, however, that loss of semen during the waking state occurs frequently without coming under the head of an aggravated state of morbid pollutions. Spermatorrhea, particularly following an obstinate gonorrhea, is to be considered a case of this kind.

Most authors distinguish between pollutions and spermatorrhea, but their definitions of spermatorrhea are quite varying, the limit between pollution and spermatorrhea being fixed differently by different authors. Since, however, these distinctions are of no value in therapeutics, we shall, with Curschmann, give the name of spermatorrhea to those forms of pollutions that are of a high degree and take place during consciousness. Roubaud[1] gave the name pollutions to those losses of semen which are accompanied by venereal orgasm, and spermatorrhea to those that are unaccompanied by sexual desire or erection or voluptuous sensation. Older authors have described by the name spermatorrhea a state

[1] Op. cit., p. 327.

in which sperm is said to flow continuously. Since we have no trustworthy report of any such case, we cannot have any faith in the above statement, although we admit the possibility that, if the organs of ejaculation have ceased to act, the sperm may flow off as it is secreted. We must lay special stress on the fact that although morbid pollutions occur very frequently, yet those of a high degree which deserve the name of spermatorrhea are exceedingly rare.

To Lallemand is due the merit of having directed the attention of the medical profession to this disease of morbid pollutions, which till then had been well-nigh neglected, and we can gladly overlook the exaggerations to which he may easily have been misled. Modern authors profit by his investigations, and yet ridicule the man who has written his name indelibly on modern pathology and therapeutics of pathological sperm effusion. This keen observer has studied and described the nature of this disease so precisely that the authors of to-day can only express in other terms what has already been said by Lallemand. If they deviate essentially from his path, they are generally in the wrong. His method of cauterizing was up to a few years ago the alpha and omega of the local treatment of this disease, although variously modified and named. It would be an injustice if we were to blame him for seeing in every one of his patients an individual affected with spermatorrhea, and for having an unlimited confidence in his method of cauterizing. Some of our celebrated specialists have similar weaknesses.

And now it seems as if we were again called to go

back to Lallemand. An authority like Wossidlo[1] comes to the conclusion that lesions of the verumontanum are often found in patients suffering with pathological pollutions, prostatorrhea, spermatorrhea, impotence, insufficient erections, or premature ejaculation. Wossidlo made the experience that in many cases, all treatment fails until local measures are applied through the endoscope directly to the verumontanum; a proceeding which I kept on advocating since 1889. The results obtained are almost in direct proportion to the improved methods and instruments.

Lallemand unquestionably deserves the credit of having proved that excessive loss of sperm is a disease or, at least, a symptom of disease, which can and must be treated. Of what use to a man who suffers from weakening pollutions is a physician who, following the example of renowned clinicians, laughs at him and sends him home with some insignificant and useless prescription? You should witness the despair that takes hold of such an unfortunate being when he sees what little importance the doctor attaches to his condition, which, he feels, is sapping all his physical and mental strength.

It is a poor consolation to say that only the minority of the patients asking for advice about losses of sperm are really suffering from pathological pollutions. Such assertions coming from competent men[2] are apt to make the physician careless or indifferent in the treatment of this disease, and to induce

[1] Zeitschrift für Urologie, 1908, No. 3, p. 243.

[2] Curschmann, op. cit., p. 495.

him to consider these pitiable persons as imaginary sufferers. I am, on the contrary, of the opinion that such patients, with but few exceptions, are in great need of medical help for these excessive pollutions, which may not kill them at once, but which cause an irreparable loss of general and sexual force. The sooner such patients consult the physician, the more wisely they act, because chronic evils are more difficult to treat; and it is a pity that because physicians are taught to look with lofty disdain upon such matters, considering them to be trifles, the bulk of the sufferers who are compelled to differ in opinion, are driven into the welcoming arms of the advertising charlatans.

I agree absolutely with Eulenburg's[1] opinion. He says, "I believe that a pollution is no more to be considered as normal than a cough or vomiting, and that even the so-called normal pollutions originate really in some unusual and exceptional irritation, which may be comparatively light, but which acts upon the center of ejaculation."

It has already been pointed out that onanism is nearly the only cause of morbid pollutions. Cases, however, may be met with in which morbid pollutions are also caused by acute inflammatory conditions in the urethra, such as gonorrhea, inflammation, and tumors of the seminal vesicles, chronic inflammation of the neck of the bladder and of the pars prostatica urethræ. Phimosis, various diseases of the rectum, such as piles, fissures, eczema, and other cutaneous eruptions of the rectum and its

[1] Sexuale Neuropathie, Leipzig, 1895, p. 55.

vicinity, are, since Lallemand's time, accused of being the cause of morbid pollutions. Such causes as these are seldom observed and taken into account, although the accumulation of smegma in consequence of phimosis, the presence of oxyuris vermicularis in the rectum, or other diseases producing irritation in or about the genitals, may easily cause erections and also nocturnal emissions. We have already seen that such diseases are causes of onanism, and, indirectly, of pollutions.

It is a disputed question whether *obstipation and difficult defecation* are capable of causing pollutions and spermatorrhea. It seems very plausible that the pressure of hard and voluminous scybala and forced contraction of the rectum may force out some seminal liquid. There is no doubt that masses of feces which have collected in the rectum can cause erections and nocturnal emissions in consequence of the pressure and incitement they may exercise on the sexual organs. It is more than doubtful, however, that with a healthy man the difficulty in connection with defecation is able to press sperm out of the seminal vessels. We would rather agree with Curschmann's[1] view, which he expresses thus: "Theoretically considered, the opinion made reference to—viz., pressure from the rectum on the seminal vesicles—is not so plausible as it would at first appear. These vesicles are so placed between the bladder and the rectum that they have free motion, and can thus easily give way to pressure coming from the rectum, so that the latter would be more likely to exercise

[1] Op. cit., p. 488.

any action on the closely joined and well-fixed ducts and their orifices than on the widely diverging blind ends of these formations. But pressure on the orifices of the seminal ducts would rather have a closing effect than otherwise."

The explanation of the origin of this liquid would have far more anatomical probability if applied to the prostatic humor. The prostata, as is known, is firmly fixed in the pelvis, and so placed between the fundus of the bladder and the expansion of the rectum, situated immediately above the anus (and particularly well-developed toward the front), that the hard feces must almost of necessity be pressed against the prostata by the pressure of the sphincter ani. I had repeated opportunities of examining microscopically sperm-like liquid which different men emitted during difficult defecation, and which they believed to be semen. In but few cases could I find any seminal filaments, and in these cases I also discovered other evidences of spermatorrhea.

Very seldom are morbid pollutions produced by *general diseases*, as anemia, general debility, and neurasthenia. By the side of all these causes, which rarely come under observation, onanism remains almost the only cause of morbid pollutions that invites closer medical attention.

Why does onanism cause pollutions? We have already answered this question. The conditions that make onanism more likely to cause morbid pollutions are the youthfulness of most onanists and the facility with which they can, at any time and in any

place, indulge in their evil habit. Excessive onanism, or onanism in general with individuals whose power of resistance is still low, causes, almost without exception, a state of slight inflammation about the ductus ejaculatorii. This inflammation produces in the vessels that convey the sperm an irritability of so high a degree that it is altogether out of proportion to its cause, and this irritability is, with rare exceptions, the cause of the morbid pollutions. The congestion probably never reaches such a point that a catarrhal secretion could be ascertained.[1] A slight swelling and reddening of the pars prostatica urethræ can always be traced, and upon this fact we may establish, with the greatest plausibility, our diagnosis of excessive onanism, if we exclude any previous gonorrheal inflammation of the urethra. It must, however, be remarked that the pollutions, if they last a long time, cause by themselves chronic inflammation of the caput gallinaginis. This swelling and reddening will generally disappear as soon as the morbid pollutions begin to pass over into that stadium which is commonly called spermatorrhea. In this the caput gallinaginis turns pale and atrophies. This same cause probably induces the relaxation of the orbicularis muscles of the ejaculatory ducts which is followed by a dilatation of the same, and, finally, by spermatorrhea.

These local changes are probably the immediate cause of the pollutions, but neither can, with any reason, be considered an independent disease, as

[1] Fürbringer, Eulenburg's Real-Encyclopädie, Bd. xiv, p. 596.

they are merely symptoms of the disease consequent on onanism.

We have seen that the pollutions are caused by the *irritation* as well as the *relaxation of the spermatic passages*. An attempt has accordingly been made to distinguish two forms of morbid pollutions. However valuable it may be in therapeutics, this distinction cannot be accepted as valid, but must give way to the assertion that the states of irritation and of relaxation are different stages of one and the same disease. The former always precedes the latter, but both occasionally exist at the same time.

When once the pollutions have become chronic, then we have also to deal with the *influence of habit*, which is sometimes quite incomprehensible in the case of many organs, and offers an obstacle to the cure of pollutions even when their causes have been removed. There are individuals who are *naturally predisposed* to morbid losses or effusions of semen, in whom they are caused by the most trifling excesses.

The *diagnosis* of morbid pollutions is an easy task, but the diagnosis of spermatorrhea is frequently more difficult. It is absolutely indispensable that the semen be examined microscopically, whether discharged by ejaculation or otherwise, and the patient himself must be subjected to an examination with the endoscope.

The results of such sperm examinations from morbid pollutions are of great variety. Spermatozoids are found in variable quantity, being absent only in spermatorrhea of a high degree. In the same patient suffering from morbid pollutions there are found, at

one time, quite well-developed spermatozoa, appearing dark in the field of vision and provided with long tails, while at another time almost nothing but young formations with light, water-colored heads and short tails. A remarkable fact is that after a pause of several days between pollutions you will find the seminal filaments very sparing in the ejaculated semen, while the filaments appear more numerous in sperm from pollutions repeated after short intervals.

I have made numerous microscopic examinations of sperm coming from pollutions. It has been mostly sperm from prisoners, and only in a few cases from private patients. These examinations have convinced me that the spermatic fluid of morbid pollutions does not differ from semen ejaculated otherwise, in the quantity or in the form of spermatozoa, if we exclude the comparatively rare cases of spermatorrhea of a high degree. The difference is only in the lesser vitality of these filaments.

The filaments in sperm ejaculated during intercourse are partly alive after a lapse of forty-eight hours, if the fluid has been preserved under favorable circumstances; those from pollutions are, without exception, dead after a few hours. Even spermatozoa coming from pollutions which the majority of authors would call physiological have much less vitality than others discharged in coitus, for instance. This can easily be demonstrated by the examination of semen from the same person, but discharged at one time in pollution and at another in coition. My experiences in this line are not in conformity with

Fürbringer's[1] views on the relations of the products of the prostata to the seminal fluid, though recent and at this time unfinished experiments have caused some doubts in my mind.

The result of *endoscopic examinations* has been spoken of already, and we here add merely that, since the urethra of a patient affected with spermatorrhea and pollutions is very highly sensitive, the introduction of a sound or of an endoscope necessitates the greatest care and gentleness possible.

The result of an endoscopic examination is negative only when the morbid pollutions are caused by hyperesthesia of the sexual centra—a case which is certainly very rare, since an individual whose ejaculatory organs are in good condition may lie the whole night with an erection and be visited by erotic dreams without suffering any loss of sperm. The result of an endoscopic examination may also be negative if the morbid pollutions have appeared among the sequelæ of some nervous disease; but this also would be true in the beginning only, because, if the pollutions continue during a longer period, changes about the ductus ejaculatorii begin to make themselves noticed. On the whole, the cause of pollutions has very seldom to be looked for in the direction of the centra, because, in the great majority of cases, the excessive losses of semen are occasioned by local disease.

In most cases of morbid pollutions the *exterior appearance of the sexual organs* points to morbid

[1] Die Störungen der Geschlechtsfunctionen des Mannes. Wien, 1895, pp. 8, 9.

changes. The penis and testicles with their surroundings have generally a flabby, withered look; the testicles hang lower than they should, and are sometimes sensitive to even light pressure. Almost without exception there is a diminution of the warmth, sensitiveness, and irritability of the exterior sexual parts.

The *general state of health* and appearance of the patient are more or less sickly in proportion to the grade of disease. Here and there you may see persons having a very healthful appearance who are nevertheless affected with excessive morbid pollutions. When you set your eyes on such a miserable, pitiful being, who, although gifted with some power of resistance, nevertheless ends by losing health and sexual power, you involuntarily ask yourself whether he can possibly be the object of such poor raillery as may be read in Niemayer's "Manual of Special Pathology and Therapeutics."

The patient is sickly in appearance, and presents the picture of exhaustion in most cases—without exception in cases of a high degree. The chief disorders or troubles make themselves felt in the digestive organs and in the nervous system, the deleterious influence on virility being constant and finally destroying it totally.

In this diminution of virility and in the incessant pondering over the loss of semen, repeating itself without remission and driving the patient to despair, is most often to be found the cause of the changes in the character which are nearly always observable in such patients.

Although a rational investigator cannot, even by a thorough study of the pollutions, discover any advantage in this kind of discharge of sperm, yet there have been among authors ones who, while arousing a horror of every copulation outside of wedlock, have gone so far as to speak of the pollutions as a wise provision of nature.

Thus there arise the questions, are the pollutions necessary, and are they of any advantage to man? "No" is the answer to both questions. I will not speak of the wasteful spilling of the precious fluid which had better be used for the creation of new human beings, since it would be a real misfortune for mankind if all sperm were so used. The waste of sperm has its cause in the course of nature; but another circumstance claims our attention. The sexual power of man is one of those few real pleasures of our existence, and the pollutions deprive many a one of a considerable share of these enjoyments, which are in any case only sparingly meted out. Pollutions should never be allowed to exist in any one, for they can have only one of two things as their cause: either they prove a real want that is not satisfied, or they are the symptom of some disease. In the former case the individual concerned should do his utmost to obtain his share in the enjoyments of life; in the latter case the sufferer ought to seek help, as it is his duty to do. The main cause of the lack of spirit and the helplessness of these sufferers lies in the present views of the leading professional spirits. If they show any feeling for these pitiable individuals, it is a

sympathizing shrug of the shoulders at best, or it may be a scorn, since life is not at stake.

My conviction is that pollutions will soon be cancelled from the list of physiological functions, and treated as *a pathological symptom*. I am so much the more inclined to this view, as I am not aware that pollutions have ever been noticed in animals.

The injurious effect of sexual excesses on the functional capacity of the sexual organs is an admitted fact, and has been generally rather exaggerated than underestimated, as is the case to-day. Many men of the medical profession, who felt it incumbent to play the rôle of moralist, have at all times decreed the most horrifying chastisements on disobedience to the sixth commandment of God. These gentlemen of such high morality have too often encroached upon the legislative power, but, luckily, they were not invested with executive power, and hence it comes that many members of frail humanity, so sinful ever since the time of Adam and Eve, continue unpunished, most of them meeting with punishments far less severe than those ordained in the penal codes of the above-mentioned legislators.

On all sides and at all times has it been emphasized that nature resents every infraction of her laws. This is essentially correct, but it is remarkable that most of the authors look upon such infraction as equivalent to excess only, and few of them state that not excessive indulgence alone but also excessive **continence** can harm the body and the sexual power. An explanation of this omission is chiefly to be found in the fact that real continence is prac-

tised so seldom. It is well enough to exalt absolute continence, but its great rarity makes talking of it a positive waste of time. Thus I have no great faith in absolute continence, and believe the continent, with very few exceptions, to be onanists. Accordingly, I do not wish to speak of absolute, but only of relative, continence.

In theory it will be easy to understand that sexual faculties not kept in sufficient practice are weakened thereby, and this for several reasons. Every gland, and consequently also the sexual glands, requires a certain amount of excitation of its nerves in order to produce energetic action. Every muscle, and consequently also the muscles of erection, can become strengthened only by exercise. All bodily functions demand appropriate gymnastics, the sexual functions no less than any other. It is quite noteworthy that authors even in our time are rather loath to advance these truths, and they forget in some measure that "continued inactivity of nerves diminishes their irritability even to annihilation."[1]

A robust man with well-developed virility and powerful sexual instincts will never be in danger of making too sparingly use of his procreative power, at least not voluntarily. Such is more likely to occur with people who are originally poorly provided with sexual strength and desires; and these are the very ones who cannot afford to do without reasonable gymnastics in sexualibus, just as weakly children require bodily gymnastics more than stronger ones do.

[1] Landois, Lehrbuch der Physiologie des Menschen Wien und Leipzig, 1893, p. 674.

Lallemand[1] expresses this very appropriately when he says, "No one will think that a delicate child ought to be kept from gymnastics because it shows in comparison with its comrades less inclination and aptitude for all kinds of bodily exercises."

Since the sexual power plays such an important rôle in human life, it would seem natural that some efforts should be made to strengthen it. We are yet, however, at a great distance from practical and unprejudiced views. Some seven years ago the International Congress for the Prevention of Venereal Diseases in Brussels, and right after that the German Society for the Prevention of Venereal Diseases, then the American Society of Sanitary and Moral Prophylaxis, later the Georgia and a number of other State Medical Societies passed resolutions declaring *absolute sexual continence* to be *not injurious*. That ought to settle this question, just as many other questions were settled forever and ever by the Tridentine and other councils. Too bad we cannot burn the unbelievers at the stake.

Absolute sexual continence is not frequently to be encountered. Most physicians have very little or no experience in the matter, and it hardly makes any difference on which side of the question they vote.

It is practically proven that continence, whether absolute or relative, induces a weakening of virility. This fact, which is in accord with theory and proven by practice, may seem to contradict the very common experience that powers injured by sexual excesses recover during continence. This contradic-

[1] Pertes séminales, tome ii, p. 255.

tion, however, is merely apparent, because in impotence resulting from sexual excesses the cause is not in the diminished secretion of the sexual glands or in a lowered capacity of the muscles, but in the temporarily weakened state of the nerves. During moderate continence the over-strained nerves and their centers have the necessary time to become calmed and strengthened; the glands and muscles cannot be injured in their capacity for action during a time of rest that is of only short duration. Continence is certainly not of equal importance with sexual excesses, not because it is less pernicious, but because of its greater rarity.

The commonest consequence of absolute or relative continence is weakening of virility. Sometimes this weakening is preceded by a stage of great irritability of the sexual organs, during which too frequent pollutions may set in and become permanent. Thus nature helps itself, but, of course, not without injuring the organism in another direction or way, since pollutions are never unattended by pernicious consequences. In general, the sexual instinct disappears gradually if not roused from without.

Absolute continence is so seldom the object of medical observation that we cannot say anything definite about the phenomena accompanying it. In this we also find the only explanation for the song that Acton sings in praise of continence. As to those who are approximately continent, daily experience informs us that they are seldom endowed with marked virile power, and I believe that they are naturally possessed of a low degree of sexual power,

because a duly gifted man neither will nor can be continent. Weakness and incapacity are sometimes arrayed in the garment of virtue. "In any case there is a close connection between the activity of the generative glands in a pubescent individual and the degree of his libido."[1] Nowadays there are probably few who still believe the obsolete fable that sperm once secreted can be reabsorbed and then be of special benefit to the body. Elsewhere we have already stated, as far as our knowledge extends, what the internal processes during continence are, and what becomes of the sperm stored up in the glands that prepare it.

The cases that are oftenest observed and that afford the clearest proofs of the weakening influence that continence exercises upon virility are those in which robust men are compelled to observe continence. In this respect I have been particularly favored by having the opportunity of making my observations during the partial mobilization of the Austrian army when a part of it was for a time stationed in Bosnia. Nearly all the officers, friends of mine, vigorous young men, told me that at first it was hard to submit to the abstinence forced upon them by the social circumstances; but after a time it was comparatively easy to bear. Even the young gentlemen were not surprised at their ability to abstain, but their astonishment followed soon when one or another obtained leave of absence and expected to do wonders when at home. Instead, he had rather to remain on the defensive at first, at least, until the

[1] Krafft-Ebing, Psychopathia sexualis. Stuttgart, 1886, p. 30.

novel excitations had again animated his sexual organs to new activity.

Edward Martin[1] mentions prolonged continence as one of the causes of atonic impotence in cases where the instinct is strong and where the mind has long been given up to amorous desires. This author thinks the reason for it lies in the "prolonged congestion which does not receive its normal physiological relief." The same author states further that "in some cases the organ is so poorly developed that a successful intercourse is well-nigh impossible. This is generally observed in those who have been continent. In such cases local exercise may act as beneficially as it does upon other parts of the body." Loewenfeld[2] relates a number of cases where abstinence has caused various neuroses, hallucinations, and even conditions bordering on real insanity.

It is to be regretted that in our complicated constitution abstinence is never conducive to the development of sexual strength, though it may be borne with relative impunity by some individuals. Having stated the truth, we care but little for the indictment of the "holier than thou" people.

Preaching can certainly do no good, and it would be necessary for the social conditions to change radically, before a man could really "blush for his own sex" or be influenced by the far-fetched thought that he is in a special case "violating the sex of his

[1] Impotence and Sterility. Hare, System of Practical Therapeutics. Philadelphia, 1882, vol. iii, pp. 661–663.

[2] Sexualleben und Nervenleiden. Wiesbaden, 1899, pp. 41 to 50.

mother."[1] The man who is able to "appreciate his virginity preserved to an advanced age as a pearl of great price," may be very virtuous, but Scott is surely mistaken in his poetical opinion that any woman would ever have reason to sing: "O happy she whose lips he presses! O happy she whom he caresses!" I am afraid that even James Foster Scott[1] will fail in his garrulous effort at perfecting mankind, as man has never been improved by scolding.

"What we as physicians are called upon to do is to combat, with all the strength that lies in our power, not only the evil, but the fatuity of those who pretend to be piously unaware of its existence."[2]

Having now discussed the more frequent causes of neurasthenic impotence, we shall treat separately a few of the more prominent *forms*.

All kinds of sexual excess lead frequently to the different grades of *paralytic impotence*. Complete paralysis of the sexual nerves and centra occurs probably rather seldom as long as the rest of the body keeps healthy and robust. In senile impotence it is constant. More frequently we notice the other numerous forms of sexual neurasthenia, every one of which may pass over into paralytic impotence.

In the first instance we have the so-called **irritable weakness,** which is on the confines between diurnal pollutions and sexual neurasthenia, but dif-

[1] James Foster Scott, The Sexual Instinct. New York, 1900.

[2] Bierhof, A Study. Philadelphia Monthly Med. Journal, July, 1899.

fers from morbid pollutions chiefly by the absence of any material change in the sexual organs. The irritable weakness consists generally in a highly exaggerated sexual irritation, but with which erection does not keep pace, for erection is either incomplete to start with or it becomes complete only after long exertions. In either case, however, the ejaculation is precipitate and in advanced cases occurs even before the introduction of the penis into the vagina. This disease must not be confused with a precipitate ejaculation with incomplete erection that may occur quite normally with most men after an unusual abstinence, and due to overdistension of Henle's ampullæ and the vesiculæ seminales.

We need not add anything about the disagreeableness of this disease, but it is the clearest proof of the incorrectness of the assertion that the pleasure lies in the ejaculation alone, which opinion has been shared and upheld by many authors. Premature or precipitate ejaculation deprives the man, and still more the woman, of the due pleasure; it may, moreover, be an obstacle to conception, because with the few motions of coition, or even their entire absence, there is no orgasm caused in the woman, this being generally a condition essential to conception. It is curious that Finger[1] tries to prove by such pathologic conditions that the center of ejaculation is more resistant than the center of erection.

If the precipitate ejaculation is caused by disease of the ampullæ, the seminal vesicles, the ductus ejaculatorii or of the colliculus seminalis, it remains

[1] Op. cit., pp. 6 and 36.

constant and repeats itself without exception at every coition. If the precipitate ejaculation is based upon irritable weakness as a form of sexual neurasthenia, then it is varying like all other neurasthenic diseases. The ejaculation may then take place, at one time before the penis enters the vagina; at another time it may occur after a few movements; again, the coitus may be accomplished quite normally, and at some other time ejaculation may even be delayed.

In purely neurasthenic cases of irritable weakness we shall not find that exaggerated erethism of the urethra which Ultzmann[1] speaks of, and which can always be noticed when the "irritable weakness" is caused by organic changes about the colliculus seminalis.

There are neurasthenic individuals who have precipitate ejaculations with one woman, though they can have quite normal coitions with other women. Most neurasthenic persons get over the first attempts at coition with a new acquaintance with difficulty only, and the first are generally unsuccessful attempts. Such men must first get accustomed to their new acquaintance. Their very vivid imagination must first be somewhat pacified; then they recover their normal condition for the time they associate with that same woman. This, however, is not lasting with most neurasthenic patients, because they soon conceive an aversion for the

[1] Potentia generandi und Potentia cœundi. Wiener Klinik, 1885, Heft 1, p. 25.

woman in question, and their disease is thus the cause of their inconstancy.

The irritable weakness attended by organic changes in the sexual apparatus should, in my opinion, be classed rather with morbid pollutions. It has its cause nearly always in excessive onanism. Such individuals, besides, suffer almost without exception from frequent pollutions.

Excessive onanism, pollutions, sometimes onanism habitual though not excessive, are in like manner capable of causing neurasthenic irritable weakness. It is not onanism exclusively that causes this form of disease. Sometimes a congenital predisposition to neurasthenia, or other neurasthenic disorders, cause temporary or permanent irritable weakness. At other times the cause may be mental onanism and excitement immediately preceding coition. There are, besides, single forms of irritable weakness that originate in or arise from an oversensitiveness of the glans; this is the case especially with individuals whose glans is entirely covered by an easily retractable prepuce, and is exceedingly sensitive to touch.

When considering and estimating such conditions, it must not be forgotten that whenever there are signs of increased irritability of the nerves, we are nearly always in the presence of the first stages of deterioration of nerve energy. From all the above circumstances we must infer that it is not true that all forms of impotence through irritable weakness are "spinopherous or preponderantly spinal."[1]

[1] Eulenburg, Sexual Neuropathie. Leipzig, 1895, p. 28.

A rather common form of impotence is that kind of sexual neurasthenia which is generally called **psychical impotence,** which might with more propriety be named *hypochondriac impotence.* We very seldom see a purely psychical impotence in which the sexual organs and their connection with the central organ as well as the entire nervous system, are perfectly healthy. There may be very impressionable individuals who are apparently healthy in every respect, and yet may become temporarily impotent simply by the effect of the thought that they are impotent, or by the fear of not being able to give satisfaction in a certain case. Such individuals are evidently healthy in appearance only; but, like a hypochondriac who suffers from an evil that is real, though he magnifies it, so also is the psychically impotent man afflicted with some organic defect which only careful examination may reveal. Then it is found without exception that these are neurasthenics suffering from psychical impotence, and are generally people who have weakened their sexual organs and burdened their conscience through onanism or some other mismanagement of their sexual power. They need intense excitement to obtain an erection necessary for coitus. Their centers of erection must be blunted and their inhibitory centers just as sensitive, since a mere thought is often sufficient to excite the latter and paralyze the former.

In psychical impotence it must further be remembered that every thought likely to divert the mind from the act in contemplation can also prevent erection altogether or overcome it if already begun.

Hence it is a matter of course that anxiety, fear, shame, or any other feeling that may engage the mind cannot be favorable to erection; and the thought alone that one may not be able to accomplish coitus can become a hindrance to erection. Neurasthenic patients, also described under the name of hypochondriacs, are not very capable in matters of sexual functions on account of their ever-present ill humor and anxiety.

It would be a great error if we were to assume that only weakly and sickly persons can be affected with psychical impotence. We see often enough quite robust and vigorous men subject to occasional attacks of psychical impotence. It renders them exceedingly miserable; they cannot get rid of the idea that they are impotent, and in the end positively become so, if some incident, or sensible advice does not convince them to the contrary.

The phenomena of psychical impotence are manifold and variable. We could not expect that it would be otherwise in any neurasthenic disease. At one time the patient may have vigorous erections, but they come at the wrong time; then, when the occasion presents itself, there arrives instead of the erection the thought of the impossibility of the accomplishment of coitus. At another time the erection is there when wanted, but fades gradually as the patient proceeds to the act, or at the first movements. Quite remarkable is the circumstance that this form of impotence may also effect quite strong and vigorous individuals, but only on the occasion of new sexual connections.

There are many men, and I am inclined to include here all *bon-vivants*, who experience great difficulty in accomplishing the first coitus with any woman It is remarkable that in this disease—for a disease it most certainly is—a man may feel a great preference for a woman, wish most ardently sexual union with her, and yet remain impotent when in her arms; while on the other hand, he may, on leaving her, go straight to an undesirable woman who inspires no love, and accomplish the act without the least difficulty, and even repeat it. The only reason is that in the latter case old acquaintance makes him feel at home and excludes any apprehension of mishap. The cause cannot be a sense of too intense love or reverence, *bon-vivants* not often being influenced by such feelings.

The want of responsiveness in a new acquisition has sometimes a disadvantageous effect on the man; nearly always it is the apprehension of a failure that makes men who are generally expert impotent for the time being. To this is added, in illegitimate sexual connections, the chance of unfavorable circumstances, such as want of time, rest, convenience, and responsiveness. These men generally recover their former vigor perfectly after having once succeeded with a new acquaintance, and they then console themselves with that proverbial German saying that nearly always proves true, "Aller Anfang ist schwer."[1] If a man has cohabited for a long time with one woman, the beginning with another is attended with some difficulty; hence the trouble experienced in the

[1] "The difficulty is in the outset."

first matrimonial infidelity, which often drives a husband back to the arms of his better half.

Inexperienced young people may in the beginning of matrimony remain psychically impotent for some time. This inexperience must, however, be of a high degree, if a mixed form of impotence is not at the bottom of the trouble. Cases of impotence caused merely by inexperience are no doubt very rare, whatever books may have to say on the subject. Such people are generally young onanists, or they may have grown old in intercourse with public women without having an idea of proper coitus.

In this great variety of phenomena of neurasthenic diseases it will not be surprising if still other forms than the ones mentioned present themselves for observation. It would lead us too far if we should attempt to enumerate here all the phenomena of sexual neurasthenia. There are so many that one life is too short for the study or observation of them all. You may fancy you have exhausted the subject at one time, and yet new varieties continually crop up.

We shall here describe but two more groups of sexual neurasthenia. These are generally designated as temporary and relative impotence.

By the expression **temporary impotence** is meant a condition in consequence of which a man may within short intervals of time be now virile and now impotent. The individual is utterly incapable of understanding how he became impotent, as only a few days ago he had all the necessary virile power. He now searches after every and any possible cause, and accuses liquors, tobacco, physical and mental

exertions, etc. Of course, here we do not consider that temporary impotence which follows in the wake of bodily indisposition, nor that one which visits particular individuals after the commission of sexual excesses, as it is in the nature of things that the energy of the sexual impulse is in an even proportion to the provision of spermatic fluid on one hand, and with the stored-up energy and elasticity of the nerves on the other. The proportion is even up to a certain degree; beyond that it becomes reversed.

With man the sexual instinct luckily does not make its appearance periodically, as it does with animals. Most authors assert that in spring it is most intense, and prove this assertion by birth statistics.

Persons affected by intermittent impotence are as a rule sexually over-excited, and most so when they are in a stage of impotence. This sexual excitement is not a real orgasmus venereus, always leading to an erection; but rather a state of agitation caused by mental onanism, a debauchery of the thoughts, as Lallemand calls it, "Licentiousness of the mind which is in marked contrast to the impotency of the executive organs." The more agitated such a patient is, the more his penis shrinks, the less he is capable of copulation. Then, all of a sudden, when the sufferer has resigned himself to inaction, erection appears and coition may be performed, and sometimes even repeated. This form of transitory impotence may also come to quite healthy individuals during great agitation.

Relative impotence designates in general a condition in which an individual can accomplish coition

only with one or certain mates, and is completely impotent with others; or a condition in which an individual cannot accomplish coition with one or certain women, and is perfectly virile with others.

Strictly speaking, there are few persons who are not relatively impotent, for only few can accomplish the act with all persons. In the same way the stomach may revolt against certain things; so may the nose. The specific odor of one person may be absolutely objectionable to another. The difference in the chemical elaboration in different individuals imparts a certain odor to the whole body, and also to separate parts of it. This may often be the cause of sympathy or antipathy between persons of different sex. This state is to be called morbid only when a man is incapable of accomplishing coition with a certain woman, although he is desirous of doing so, and has a liking for her.

We read in older works on impotence—and many modern ones have copied from them—various miraculous stories of how excessive love, a state of intense rapture, has rendered the poor lover impotent. French authors particularly exhibit a very poetical conception of this state.[1] Such stories cannot, I suppose, be relegated altogether to the realm of myth, but occur, no doubt, very seldom, such a state of agitation, not at all in accord with our modern way of feeling, being generally of so short duration that no assistance of the medical art is required.

The case is very different with regard to feelings that are the opposite to those of love, as aversion or

[1] Roubaud, op. cit., p. 377.

even hate. These are not of a nature to inspire a man with amorous lusts by the side of the object of abhorrence. We are more particularly interested in cases where these extreme feelings are not active.

There are many husbands who are impotent out of wedlock. With most of these gentlemen virility has not been duly developed to begin with. With many it is a kind of depravity and habitual pampering that has rendered them thus, and they would be perfectly virile out of wedlock, if time and circumstances in regard to other women were analogous. It is a similar sort of depravity if a man can accomplish coition only in certain positions or after certain preparations. Among old bachelors, who pluck forbidden fruit only, there are some who must always have their lady-loves in full dress.

After all, there is certainly no harm in a husband's impotence outside of wedlock. It is rather preferable for both himself and his better half; but it is a very different case when a husband is impotent with his legitimate wife. This, Ultzmann[1] asserts is a very disagreeable affair. Such relative impotence may exist from the very beginning of matrimony, or it may arise in the course of time. At the beginning of matrimony it never occurs in what we commonly call love-marriages, and only seldom in marriages of convenience. Occasionally the personal odor of a woman may be disagreeable to a man, "le parfum d'une femme" (Galopin). This may go so far as to prevent erection. In such a case, sound reason would demand neither more nor less than a divorce.

[1] Op. cit., p. 25.

In the course of matrimony psychical and physical *differences* arise between husband and wife, especially in cases where the wife ages before the husband, these differences often inducing a relative impotence. Sometimes the cause of such relative impotence is in the circumstance that the husband has entered upon extra-matrimonial relations, which seem to him preferable, so that his enjoyment at home diminishes. All these are cases where the physician may have advice to offer, but no help.

There are cases, however, where the wife may be wanting in her duties toward the husband. She may not be sufficiently responsive, or she may have a repugnance for sexual intercourse. Enjoyments not shared are in sexualibus less than half-pleasures. Thus, the husband feels less and less desire to repeat fruitless efforts, and looks elsewhere for indemnification.

PROFESSIONAL IMPOTENCE.

"Desidiam puer ille sequi solet; odit agentes."—OVID.

That vocation may have great influence on the sexual power of a man was known to the ancient hygienic legislators, as Moses, Mohammed and others. In this respect certain vocations stand in bad renown, and especially those which require principally mental exertion.

In general we find the notion widely spread that the higher an individual stands intellectually, the less will be his capacity for sexual functions. La Fontaine's "un muletier à ce jeu vaut trois rois" has

passed from the French books into the Italian. In my opinion this almost proverbial saying is not quite in accord with the truth. I admit that for a short time the victory may remain with the "muletier," but after a certain time the brutish instincts of the "muletier" will be appeased, his fantasy will not be able to take the place of the real wants, and then the "roi" will undoubtedly be the better man.

There is no doubt that in sexualibus the intellectual man stands above the peasant, for instance. Any one who has an opportunity to watch these country people in their hymeneal life will soon discover that, although the peasant may perform extraordinary feats at first during his matrimonial life, he, nevertheless, later on grows very neglectful in his conjugal duties. Of course, the hard work brings here physical fatigue, and there is little imagination at work. Again, the attractiveness of these honest countrywomen diminishes rapidly.

Heavy bodily work bringing about bodily fatigue, and intense mental exertion causing mental fatigue, are not favorable for the sexual power of man. Entire inactivity would be favorable, it is true, if we mortal beings did not grow weary in the *dolce il far niente*, which soon leads to devious roads and to excesses which then undermine sexual vigor.

We must admit that in single cases great bodily fatigue may stimulate the sexual appetite. Recently the theory was forwarded that this is an atavistic phenomenon, dating back to the times when the primeval man obtained his mate by a long and fatiguing pursuit. However, it still remains the

rule that those occupations in which labor is performed without fatigue and accompanied by a certain amount of mental exercise, and those mental occupations that are relieved by the requisite amount of physical exercise, are the callings that present the most vigorous men.

The Talmud treated the members of the learned professions to an exceptional favor by granting them the privilege of intercourse with their wives once in two or three years, while the wives of others had a legitimate claim upon their husbands at least once a week. Bookworms are generally weak in sexualibus, as has been known for thousands of years. Many a one may, like Rousseau, have received from some experienced lady the confidential advice, "lascia le donne, e studia la matamatica," without making so much ado about it. Part of the cause is in the sedentary life of these men, which is not conducive to health; and part is in the over-exertion of the brain, that is apt in the course of time to aggravate the neurasthenia which exists often *a priori* with men who are inclined to mental efforts. This, then, will in the end bring about a new diminution of the sexual power. Besides, intense mental activity exercises the thinking parts of the central nervous system to the detriment of the sensitive and motor parts.

If *artists and scholars*, as painters, actors, authors, physicians, professors, etc., are sometimes reported to be not disinclined to love, or to be sensual, this is no proof of the contrary, because the presence of sensuality does not imply that of sexual strength.

Withal, we see that highly intellectual and learned men are often possessed of a considerable wealth of children, so that Nordau's[1] dictum, "From common men we obtain the conservation, from great minds the intellectual advancement, of our species. The same individual cannot be equally capable of producing both thought and children," merely repeats a popular dictum not supported by fact. The best thought has come from people who have also produced children; while but few impotent men can console themselves with the fancy that their weakness has not prevented them from producing at least good thought.

Some authors advance the idea that people who attach great importance to an excellent table, the so-called *epicures*, possess but little sexual impulse. For my part I must state that I have observed the opposite condition only—the so-called great eaters are also great worshippers of the fair sex until the time when the superfluous quantity and the wrong quality of nourishment induces obesity, and obesity grows from day to day more hostile to Venus.

In all ranks and conditions of life there are to be found people with extraordinary virility, and others with weak sexual power. It is a matter of course that people who are preoccupied by cares, ambition, or any other unusually absorbing state of mind, have little time to spare for love and sexual affairs. They consequently have a weaker sexual impulse than others who devote a great part or even the whole of

[1] Max Nordau, Die conventionellen Lügen. Leipzig, 1886, 12, Auflage, p. 123.

their time to pondering over sexual matters. This is the reason why great workers, whether physical or mental, endure sexual abstinence very easily; but only in case they have been abstinent to begin with. Scholars, for instance, who have only in the course of time taken to study, cannot stand absolute continence even during uninterrupted study. They are seized with vertigo and uneasiness in the midst of the most intense mental efforts, these evils not abating until sexual satisfaction has been obtained. I have had occasion to watch more than one case of this nature, and the patients have always experienced good results by following my advice—viz., to give up absolute abstinence.

Finally, I must once more refer here to the notion that has descended from Hippocrates to Lallemand and Roubaud. In spite of Hippocrates and his followers, I repeat that *riding* cannot exercise an injurious influence on the sexual power. A single glance given to cavalry will convince to the contrary. Not to mention my own experience with cavalries of different countries, I will point to the fact that where horse-rearing is carried on and horseback-riding is very common the number of births, both legitimate and others, is rather above the average, and the morality of such places is somewhat light. In consideration of all this it is obvious that riding is no hindrance to the development of the sexual power.

SENILE IMPOTENCE.

The energy of the bodily functions diminishes with the advance of age. The sexual function, being one

of the last in its development, is also the first usually in the file of the functions that gradually desert the body, growing by degrees weaker. Old men consequently are impotent according to the course of nature, and yet there are very old persons who can still accomplish something remarkable in sexualibus.

We must admit a difference in old people, considering more the condition of the body than the number of years. Appearance alone often deceives, as we may see old persons whose bodies have preserved all their forces but the sexual. The reverse is hardly ever seen, with the exception of those pathological cases where in decrepit old men there is a sexual impulse quite out of proportion. There are perfectly vigorous old men, as there are also quite decrepit young people. Every physician has opportunities of observing men of seventy or more years who possess excellent power of assimilation of material and also quite energetic sexual functions.

Chouryguine,[1] who dissected the sexual organs of twenty-one individuals fifty-five to eighty-eight years old, found various and considerable structural changes in the blood-vessels, the nerves and their endings, the tunica albuginea, and the corpora cavernosa. These alterations alone could explain the ensuing sexual incapacity without any regard to the condition of the sexual centra in the brain and the spinal cord. The degenerative changes, however, did not always correspond with the age of the individual, and were sometimes found in relatively young men. The autopsies of old men made by

[1] Vratch, Dec. 18, 1897.

Duplay, Dieu, and others show that even octogenarians may have *well-developed spermatozoa*, which, however, does not prove that they are virile, but only that they may be so. After all, sexually vigorous old men are *exceptions*, because the functional capacity of the sexual organs generally begins to diminish with the fiftieth year, continuing to decrease until the sixty-fifth year, when it is generally extinct.

As the greatest *individual differences* prevail in this respect, it is quite impossible to set a fixed time for the beginning of physiological senile impotence. Nor is it possible to determine in every case why such or such an individual has grown impotent in early life while another is still perfectly vigorous at an advanced age. It is noticed that in some families a premature impotence and in others a tardy extinguishment of the sexual power is, so to speak, hereditary. Some individuals who have been healthy and strong all their lives remain sexually vigorous to a good age. Again, other individuals are seen who have always used with prudence their sexual power, and possess otherwise the requisite qualities, preserving their manhood to an advanced age. Too frequent excesses, especially in onanism in youth, and over-careful husbanding of the sexual power are the greatest enemies to the preservation of virility. It is extinguished earliest in individuals in whom it has never appeared with impetuosity, and who, on account of this feeble desire, have acquired renown for virtuousness. It disappears latest in those who may now and then have given rein to their impetuous im-

pulse, but without going in their enjoyment beyond a reasonable measure—who have, in a word, given off at all times only what they could easily spare.

Normally the extinguishing of the sexual power takes place gradually, the act can be performed less and less frequently, and while the erections may be quite vigorous at times, it requires more and more of an incitement to reach the final orgasm. I was repeatedly consulted by old men who claimed that desires and erections were satisfactory, but ejaculation of semen could be obtained only with great efforts or not at all. In such cases the advice must be: hygienic life in every respect, improving of bodily conditions, and safe husbanding of the remaining sexual ability.

Only a superficial observer will be surprised at seeing one individual quite impotent when old, after having solicitously spared his sexual power all his life, and another, known as an epicurean, who still possesses a certain degree of sexual vigor in spite of his advanced age. Medical science must not be unfair toward such exceptions, which are frequent enough. It must not thoughtlessly follow the dictum of the past, and deny them every sexual power, together with the right to make use of it. I am aware that these old veterans will not care for the well-intended but strict prohibitions of too scrupulous medical authorities. I know they will, all the same, put into practice their right as much as possible and feasible, and I will frankly oppose my opinion to those scruples and say that old people run no risk in satisfying real sexual wants.

Malchow[1] evidently is of the same opinion, as he says: "There is nothing that will give such life to both men and women and make them feel and remain young, as the conviction of their own virility and sexual activity; nor is there anything to compare with the salutary effects of reasonable sexual exercise."

Of course, I am not including here those pathological cases of an increased or reawakened sexual impulse in old age after it had become extinct. I am speaking here only of preserved sexual vigor in advanced age. I believe that satisfying real sexual wants can be but advantageous to old age, as it contributes to stimulate the energy in the assimilation of material; it buoys up and makes the heart rejoice; it helps to keep up cheerfulness, which is generally reduced in old people, and therefore may properly be considered as a means of favoring longevity. Malchow calls it "the rejuvenating influence of conscious possession of an ability for the expression of love."

As to those cases in which death occurred soon after some old gentleman had entered into married life, or those cases of sudden death before, during, or after coition, nothing is proved by them, since we hear every day of persons dying slowly or suddenly without having thought of marriage or of sexual intercourse for a long time past. Again, we also see men rejuvenated by the side of young wives and living to an advanced age. At any rate, those old men who are still in possession of a good remainder of

[1] The Sexual Life, Mosby, St. Louis, 1913, p. 299.

their sexual power have a better prospect of a long life than those who in a decrepit state are condemned to a virtue which is not always voluntary.

Modern authors are beginning to conform to these ideas. Edward Martin,[1] for instance, knows "of one man who at the age of seventy-eight has begotten a child, and who states that his erections are as vigorous as in youth, and that he performs the sexual act frequently and satisfactorily. This man's powers are possibly kept alive by his marriage with a young and vigorous woman."

[1] Impotence and Sterility. Hare, System of Practical Therapeutics, vol. iii, p. 661.

CHAPTER V.

DIAGNOSIS.

ALTHOUGH the causes are manifold, yet all the forms of impotence have this in common, that the diagnosis is in the first instance based upon the *subjective* sensations and observations of the patient himself. It is well known how unreliable the statements of patients are. *Objectively* there is very little to discover in most of these forms; while in some the external sexual organs show various degrees of flaccidity, shrinkage, and paleness. An endoscopic inspection of the urethra reveals in most cases different degrees of paleness of the mucous membrane, and in nearly all cases that are associated with involuntary loss of sperm various degrees of inflammation of the colliculus seminalis are discovered. The result of such inspection is sometimes negative.

These points of diagnosis are of importance though not always present. The physician must never fail to examine minutely the sexual organs with the endoscope and otherwise, because the positive or negative result will yield some points in eliciting the causes and helping to determine the appropriate treatment. The objective results, whether positive or negative, together with the statements of the patient, must then form a whole, from which the physician will deduce his opinion, or, relying on which, he will engage

in further investigations. The result of an endoscopic inspection is in many cases very important. Unfortunately, many persons are very sensitive to the use of an endoscope, and this is easy to understand if we consider that they are in many cases neurasthenic and timorous. Proper encouragement and confidence in the result will, however, persuade the impotent to submit to almost anything.

When any one consults me upon impotence, I begin with close questioning; after this I proceed to the inspection of the exterior of the whole body, and particularly of the sexual organs. The patient is instructed to void urine, the latter is then examined chemically and microscopically. By following Heitzmann's[1] teachings and with some practice pathologic conditions that may have more or less bearing upon the complaint can not infrequently be detected by intelligently reading the findings of a small drop of centrifuged urine under the microscope. The clinical symptoms can sometimes be explained or corroborated, chronic prostatitis, vesiculitis or spermatorrhea detected. This is followed by an endoscopic examination, and, in conclusion, I question the patient about the various points that may have been observed during the inspection.

A physician on the point of engaging in some treatment or other from which he expects any satisfactory result must know regarding his patient the age, hereditary conditions, occupation, constitution, manner of living, previous diseases and sexual life, pres-

[1] Urinary analysis and diagnosis. Second edition. New York, 1906.

ent state of health, and every detail of the existing degree of impotence. He must, besides, subject to a careful examination the whole body of his patient, and especially the genitals. The penis as well as the testicles, the spermatic cords, the prostate and seminal vesicles must be examined in regard to size, the amount of blood they contain, and their sensitiveness. The introduction of the endoscope will indicate at once the width and sensibility of the urethra, the color and other conditions of the urethra, and especially of the colliculus seminalis.

Peterkin[1] of Seattle has perfected a scientific method of examining the genito-urinary system which really covers all possible points, and should be studied and merits to be considered as a model.

The diagnosis is easy in most forms of impotence, but is subject to frequent mistakes on account of the *unreliability of the statements* of the patient. Modesty, ignorance, false notions, excessive timidity, and an inclination to falsehood are the commonest causes that induce a patient to make many a wrong statement wittingly or unwittingly.

There is no difficulty in the diagnosis of *congenital or acquired defects* in the formation of the external genitals. In cases where the congenital defects concern the internal genitals, without any outward signs, some light may be thrown upon the question by endoscopy and by a microscopic examination of the sperm.

In impotence *following some disease* not located in the region of the genitals the diagnosis of the primary

[1] Am. Journ. of Dermatology and Gen. Ur. Dis., Sept., 1910.

or causative disease is sufficient to elicit the cause of the impotence, and then, generally, there are no corresponding pathological changes about the genitals.

In some, though very few, cases of *inherited predisposition* to impotence the diagnosis is very difficult, because the appearance of the patient and also the condition of the visible sexual organs seem to contradict the statements of the patient. Again, in other cases, while the external genitalia may not appear to correspond to the condition of the rest of the body, no sufficient explanation is presented for the complete impotence that exists; hence the physician must depend largely upon the statements of the patient for a diagnosis. The local temperature and electro-sensibility are in such cases of particular importance.

In the *neurasthenic forms* of impotence resulting from abuse of the sexual power the conditions vary greatly. In some cases there is absolutely nothing to be established objectively, except a diminution in the sensibility and electrical irritability. In other cases, again, we find abnormal pallor and laxness in the external sexual organs, with or without local inflammation in the ductus ejaculatorii and neighboring parts, always associated with paleness of the urethra. Grünfeld[1] states that in onanists he found hyperemia of the colliculus seminalis nearly constant. The usual signs are dark-red, even scarlet color, and hypertrophy associated with slight vulnerability of the colliculus seminalis. In spermatorrhea Grünfeld

[1] Die Endoscopie der Harnröhre und Blase, Deutsche Chirurgie. Stuttgart, 1881, Lieferung 51, p. 173.

found catarrhal swelling of the colliculus seminalis. In highly developed spermatorrhea accompanied by impotence a yellowish-red coloring takes the place of the reddening of the mucous membrane. In individuals suffering from pollutions Grünfeld found in some cases a kind of hypertrophy of the colliculus seminalis. Such results or conditions may be recorded by every endoscopist, and are at present, with our improved instrumentarium, easily brought into view. The objective findings will vary according to the nature of the abuse that has taken place. In cases induced by excessive onanism we find, without exception, laxness and pallor of the penis and testicles, a smooth scrotum, and low-hanging testicles in consequence of the relaxation of the muscular fibers in the tunica dartos. The orifice of the urethra is reddened, the rest of the urethra pale as far as the colliculus seminalis, and this latter is in different degrees of inflammation.

The vaguest signs are presented by those cases of impotence which have arisen from excesses in venery. In forms of impotence consequent on abstinence the result of examination is only apparently negative, since the testicles always show smaller dimensions than normal, although the penis may not show any change in its form.

The objective result in the external form of the sexual organs is always of relative importance, because it has first to be compared with the former state before a conclusion can be arrived at about the abuse that has taken place.

Generally negative results are obtained in the ob-

jective examinations of the sexual organs in those forms of sexual neurasthenic impotence which have not been caused by a mismanagement of the sexual power, but are founded entirely on a neuropathic predisposition; for instance, relative impotence not induced by weakness never presents any pathological changes. In the other neurasthenic forms—as, for example, so-called psychical impotence—we discover here and there signs of atony of the sexual apparatus, and, besides this, in so-called irritable weakness we discover sometimes different grades of inflammation of the colliculus seminalis.

Dr. Albert Abrams claims that he can measure virile power by biomechanic means. The apparatus which he has constructed for this purpose and described in his book is known as "Sphygmobiometer." In diagnosing syphilis I have seen most remarkable achievements of this apparatus.

CHAPTER VI.

PROGNOSIS.

THERE is nothing to be said about prognosis in general, since every individual case carefully considered has first to establish fundamental points on which may be grounded a prognosis that even then is not always reliable.

The prognosis is absolutely unfavorable in cases of absence of the penis, of both testicles, of excessive smallness of the sexual organs, of excessive hypospadia or epispadia. It is more or less favorable in the other kinds of organic impotence.

In the forms of impotence dependent on other bodily defects the prognosis is based entirely on the physician's ability to remove the primary disease.

The prognosis in the forms of congenital impotence is always doubtful, because we seldom succeed in the treatment of inherited defects or abnormalities of the sexual instinct, or in the effort to lead it into more natural channels.

In the forms of neurasthenic impotence following bad management of the sexual power the prognosis is different, depending on the symptoms in each individual case. In cases accompanied by persistent pollutions the prognosis is always doubtful, because we can never know whether the pollutions or spermatorrhea can be mastered. In impotentia ex absti-

nentia also the prognosis is doubtful in case atrophy of the testicles has already set in. The prognosis is generally favorable in the forms of so-called psychical impotence.

My personal experience proves to me that Eulenburg[1] is not absolutely correct when he makes the statement that the prognosis is better in cases of merely functional injury, in hyperesthesia of the prostata and pars prostatica, than when there are serious and palpable structural changes, such as cystitis, prostatitis, strictures, etc. I would declare this assertion correct only in reference to grave "structural changes," in which case I should, however, not include cystitis or stricture, nor even simple prostatitis. For my part, I much prefer to find those structural changes to be the cause of the impotence or sexual neurasthenia than to discover that the neurasthenia is an independent disease. In purely neurasthenic disorders the successful treatment is not so easily accomplished as in cases of curable structural changes.

The prognosis in general depends on the result of the examination. We can augur it to be favorable in case of youth or, at least, early manhood, strong constitution, otherwise sound general health, preserved sensibility, electrical irritability, normal temperature, and vascularity in the sexual organs. The absence of these conditions makes the prognosis correspondingly doubtful, or even positively unfavorable.

The physician should, however, always bear in

[1] Sexuale Neuropathie. Leipzig, 1895, p. 33.

mind that there are few persons impotent through any cause except old age who cannot profit by a rational or judicious treatment. Consequently he must engage in the treatment of impotence with just as much zeal and courage as he would display in the treatment of any other curable disease; and he may feel convinced that by the cure of one impotent individual he will dry many tears and do a great amount of good.

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CHAPTER VII.

PROPHYLAXIS.

"Medicina est conservatio sanitatis et curatio ægritudinis."

It must be granted by all that impotence is one of the modern diseases. A physician who pays no attention to impotence has no conception of its great prevalence, nor does he understand that young people may be impotent without any one suspecting it. Very few have the courage to consult a doctor about these *maladies honteuses*, as they are called by all civilized nations.

Only an insignificantly small proportion of those who have become prematurely impotent owe this severe infirmity to an inherited congenital or innocently acquired deformity or disease. The majority have become prematurely impotent because they have been left to themselves and to chance. However well an individual may be led and directed in general, in the most important concern of life, the sexual life, he commonly receives no guidance. If one is possessed of spirit or energy and common intelligence, he may now and then, in his sexual experiences, stumble into different snares; but if no serious injury is sustained, he may eventually attain senile impotence, the natural goal of a healthy man. However, an unlucky accident or the following of a mis-

directed path may lead to a disease that brings a speedy end to virility.

So, before we can speak of a general prophylaxis of impotence, we should first feel convinced that it is highly unwise to allow any young man to enter upon the path of physical love, which is strewn with thorny roses, without furnishing him first with some good instruction. It is true, most men acquire a certain experience in time; but, alas many pay for it very dearly, and often with the loss of their power.

The prophylaxis of impotence is closely connected with the prophylaxis of onanism, because the great majority of all those who have become prematurely impotent commenced with onanism at an early age. First of all is required a strict but loving and rational surveillance of the children. Next comes instruction as soon as the first signs of puberty appear. This instruction, however, should be given without heating the imagination and without the help of those books of horror, the so-called popular scientific works, which generally contain some piquant stories.

When a child has given evidence that he practises onanism, every possible effort should be made in order to induce him to desist from the evil habit. The details of the various ways of discovering onanists, the methods for curing the evil with its consequences, etc., cannot be treated here at length. All this may be found in special works, and we wish particularly to mention that of Fournier.

In the treatment of onanism the individual has to be carefully studied: not every child, nor youth, nor even man, has sufficient will-power to combat suc-

cessfully this evil so difficult to conquer. In many cases the object will be attained by incessant watching, or ultimately by the application of a suitable preventive apparatus, which the child must wear day and night.

Mature individuals should be advised to satisfy the sexual instinct in a natural way, and no notice must be taken of the cry of horror uttered by pharisaical medical authorities or by those who, although possessed of great scholarship, are nevertheless destitute of experience.

Of course, we must not forget that we are treading a narrow path; between the Scylla of onanism and the Charybdis of venereal infection, to which a careless and promiscuous sexual life almost invariably leads. A great deal of tact and experience are required to enable one to give the proper advice in every single case.

The notion that whoever has once enjoyed natural copulation will not feel tempted to return to onanism is an error, somewhat prevalent. Only copulation that is practised regularly, satisfying every strong and real desire, can cure onanism; while copulation enjoyed at long intervals only, would rather incite to more frequent onanism, because pleasing recollections are near at hand.

We know that absolute continence is attended by bad consequences; it gradually extinguishes the sexual power, and does so the sooner and the more easily the weaker the original virility. It is really ludicrous for Bourgeois[1] to admit that he prefers noctur-

[1] Les passions. Paris, 1877, p. 123.

nal pollutions to coition, and to ask why one cannot leave the sexual organs inactive and enjoy good health. He points to the peasant, who does not exercise his mind, and the prisoner, who does not fatigue his apparatus of locomotion.[1] No doubt this may be true, but surely the virility of the abstinent will be as great as the peasant's intellectuality and as good as the chained prisoner's health.

We have already stated that it is utterly impossible to fix a general rule as to how often coition is to be accomplished. Personal disposition and force, phenomena preceding and succeeding coitus, are proper guides to show each reasonable individual where the line of sufficiency is drawn. Every effort beyond this is injurious. No individual should take another as an example for his own conduct, because constitution, hereditary condition, temperament, age, education, manner of living, occupation, state of health, all are active in establishing differences in sexual vigor, either for the time only or permanently, and it would be perfectly useless to combat these influences. Let each man be satisfied with what has been bestowed upon him.

Timorous patients, and healthy persons, also, who see in their doctor their best friend, often ask what part of the day or the night is the most appropriate for coition.

My answer is invariably, that moment which is most convenient and when the sexual desire is most urgent. From an esthetic point of view the evening hours are the time for love. Persons with weakened

[1] Bourgeois, op. cit., p. 119.

virility are accustomed to take advantage of the erection in the morning. Some medical men have uttered their veto against this habit, but this veto is unreasonable, since, when the erection is not indicative of a real want, the member slacks at the first movements and coitus cannot be accomplished.

The physician is also frequently asked in what position the act ought to be carried out. Here also a brief answer is all that is due; all positions except the upright are equally advisable from a hygienic standpoint. If the ecclesiastic prescriptions on this subject are disregarded, the most convenient position is the one to choose. Coitus *a parte postica* is decidedly the most natural and favorable for generation. It is also the most convenient way for corpulent persons. This is the mode that is said to be followed always in Australia, because the genitalia of the women there are placed a little farther back.[1] The Jews believed that cotion in the usual way produced children who were generally not so good, wise, or talented, and did not give ground for so much hope, as those resulting from copulation *a parte postica*. This doctrine was an abomination in the eyes of Mohammed, and therefore he stated, according to the Hediths (traditions), that the following verse of the Koran had descended from heaven: "The woman is your field; come into your field by whatever way you choose." (II. Sure., p. 25, verse 224.)[2]

In intercourse between passionately amorous beings, one of whom is always the leader, there arise

[1] Ploss, Das Weib. Leipzig, 1885, p. 80.

[2] Der Koran übersetzt v. Dr. L. Ullmann; Nicolaus v. Tornauw, Das moslemische Recht. Leipzig, 1855, p. 73.

sometimes habits of certain caresses that might yield subjects for contention, and which we choose to designate simply as somewhat piquant. The medical adviser would do well to dissuade from caresses that are rather too piquant, because a man may accustom himself to such accessories, and then, when he is refused them, be impotent for the time. *Sapienti pauca.*

The most varying opinions prevail in regard to copulation during the *menstrual period.* If we compare the menstrual period with the rutting season of animals, some question is aroused as to the advisability of having coition with a menstruating woman, for that period would seem to offer the most favorable opportunity for procreation. On the other hand, however, it should be stated that most nations observe a custom, a religious rule, or a law, that a menstruating woman is not to be touched. It is further to be observed that some men with sensitive mucous membranes may get urethral catarrh. Again, it is to be noted that many women are actually sick during menstruation; that coitus with a menstruating woman shocks the sense of cleanliness; and, finally, that the increase of the population has not been affected among nations like the Jews and Mohammedans, where the woman is declared unclean during her menstruation and coitus is strictly prohibited. Thus copulation may be desisted from during such period.

In recent time much debate has been carried on about the hurtfulness of a certain process during copulation, which the French have termed "*frauding.*" In consideration of the difficulty one meets

nowadays in providing for a large number of children, even married people often feel compelled to accomplish coition with certain precautionary measures against impregnation. For this purpose are used various means; amongst others, the penis is withdrawn just before ejaculation takes place. Only he who has no idea of what it means to have eight children and little or no bread will contend against the justification for these precautions. The use of most preventives has no injurious effect on the man, and, I venture to assert, no harmful effect on the woman. The theory of the cooling of the uterus by the ejaculated semen, advanced by Al. Mayer and Devay, and discussed with such complacency by Bergeret,[1] has no foundation whatever. It is easy to convince oneself that the woman during ejaculation experiences only a pleasant sensation of warmth and moisture, and by the use of the usual measures of precaution the continued friction of the penis against the clitoris and the whole surface of the vaginal mucous membrane assists the woman in continuing the venereal orgasm to the end.

The circumstances are far more favorable for the man than for the woman when the penis is withdrawn the moment before ejaculation. For him the erethismus ends with the act of ejaculation, and he does not suffer in any way if a smaller quantity of sperm is emitted in consequence of the premature ceasing of the movements of coition. Matters are different concerning the woman: she is sometimes in the midst of a most intense orgasmus venereus when

[1] Des fraudes das l'accomplissement des fonctions génératrices. Paris, 1884.

the cessation of the friction occurs suddenly, and this may cause disturbances in the nervous as well as in the sexual system; for, according to the present state of our experience, it must be assumed that the effect of an abnormal act is injurious—*i.e.*, if the act has not been continued until the satisfaction of the sensation produced by the ejaculation is experienced. The explanation of this is that if the contraction of the muscles does not take place, the genital tube remains surcharged with blood; the hyperemia subsides but slowly, and may be the cause of changes in the tissue, or a genital derangement.[1]

The statements that Bergeret and others make in this respect are probably much exaggerated. I am in a position to make the following statements resulting from personal experience. Some women bear perfectly any kind of frauding, even the last mentioned, while others very soon become nervous, and even have hystero-epileptic fits or suffer from catarrh of the cervix of the womb. In contrast with earlier experiences, several cases have come under my observation in more recent years, in which I found that with men also frauding caused some slight neurasthenic phenomena and an injurious effect upon the sexual desire. The sudden interruption of coitus is not easily borne by passionate men, the individual differences, however, being great. It is certainly possible that "the bad habit of withdrawal indulged in with the object of preventing conception of the woman without foregoing the pleasures of coitus"

[1] Krafft-Ebing, Ueber pollutionsartige Vorgänge beim Weibe Wiener med. Presse, 1888, Nr. 11.

may be one of the causes of prostatorrhea; but I cannot agree with Sturgis[1] when he further reasons that because indulgence in coitus interruptus does not produce the same satisfaction which coitus does, "there is a constant hankering for more intercourse. This inordinate desire gives rise to more frequent copulation, until hyperæsthesia is set up in the prostatic urethra, which is thought to be relieved by more coitus, and thus a vicious circle is established; the more the patient copulates the more the irritation, and the greater the irritation the *more* the desire for coition."

My experience in nearly all the cases observed was a lowering of the sexual desire in men, and consequently it cannot be the "*over-indulgence* in coitus which does most of the mischief."

Bergeret seems to have conceived a pet idea which he works out. If a man or woman given to such habits is seized by any disease, he attributes it to frauding, although every one of the diseases he mentions occurs without any discoverable cause. Bergeret goes so far as to adduce theological reasons against frauding. He would deny marriage, and therefore copulation, to the poor. In spite of daily experience to the contrary, he asserts that a mother of eight or ten children looks young in comparison with a woman who has for a few years only been addicted to sexual extravagances. Bergeret, consulted by unmarried women of different ages who, in consequence of fraud-

[1] Sturgis, Prostatorrhea simplex and urethrorrhea ex libidine, Journal of Cutaneous and Genito-Urinary Diseases. New York, June, 1898, p. 270.

ing, are declining and suffering from profuse menorrhagia, is able to cure them by advising marriage. As if by enchantment they all find husbands, become pregnant and well. We can but come to the conclusion that Bergeret rides a hobby, and is ready to attribute to the habit of frauding any disease observed in a person addicted to it, without taking into consideration that all these diseases are to be found without any apparent cause.

In recent years we have learned a great deal about the importance of *gonorrhea*, its complications and sequelæ as an etiologic factor in several forms of sexual impotence. We know that many a case which we would have formerly classed as sexual neurasthenia is due in fact to pathological changes of gonorrheal origin. It is evident that when we consider the prophylaxis of sexual incapacity we cannot neglect the question of the prevention of venereal diseases. I have treated this subject elsewhere,[1] and shall discuss here only the prophylaxis of gonorrheal complications, in so far as it is in the physician's power. There can be no doubt, that whatever good the medical man can do is also his duty to do.

To prevent many cases of premature sexual impotence and consequent great misery, every physician must give proper care to every single case of gonorrhea that comes under his observation.

In order to be able to do anything properly it must be learned how, and therefore we must be glad

[1] Vecki, The Prevention of Sexual Diseases. Critic and Guide Co., N. Y., 1910.

to observe that even the so very dignified faculties of some of the more prominent medical schools begin to see, and what is more important, to acknowledge that medical students ought to learn more about sexual diseases than what has been the custom until very recently.

It would lead us too far to enter into any details about the treatment of gonorrhea, and we shall therefore mention only a few of the fundamental and irrefutable principles.

Above all, that guiding law in the treatment of all disease: "*non nocere!*" must never be forgotten. No matter what the temptation may be, no matter what urgency the impatient patient may plead, never shall the physician attempt anything that he is not absolutely sure will do good and no harm. No treatment is better than ill-treatment. In this respect physicians with little or no experience in the handling of gonorrhea will sooner be apt to act energetically and undertake therapeutic measures which the specialist would never dare to think of.

On the other hand, we must be glad, that the senseless prejudice, that the gonorrheal discharge must not be attacked during the first and acute stage of the disease, is being gradually abandoned. When we know that a most dangerous germ is destroying the mucosa of the urethra, it is hard to understand why it should be left undisturbed. My method of attacking gonorrhea at once with a half per cent. solution of the best obtainable medicinal fuchsin is very effective and absolutely harmless. Of course, if we should, by foolish attempts at aborting the disease, accom-

plish in a short time what it takes the gonococcus a long time to do; when by the action of a strong solution of any kind we destroy the upper layers of the mucosa, then we may destroy a large number of the invading microbes, but we also prepare an excellent field for the surviving ones. Therefore we must add to the old *non nocere* another warning: do not inflict undue pain upon your patient! Any treatment in an inflamed urethra is painful to a certain degree, but any treatment that causes a great and lasting pain certainly has done no good whatever. Thus, a patient who leaves a physician's office in agony and suffers for hours, and sometimes for days, from the energetic treatment of too brave a therapeutist, has only been damaged. The anatomically complicated urethra cannot be treated as if it were a simple rubber tube that can be disinfected ad libitum. And a physician who creates conditions to perpetuate the gonococci in anyone's urethra certainly does not do his duty toward prevention of sexual impotence and prevention of venereal diseases in general.

A great deal could be accomplished if we could succeed in persuading our patients that they are really sick when they come to us with a fresh and acute attack of gonorrhea. If they could be persuaded to go to bed as sick people should, to have absolute rest, observe a strict diet, be purged and treated very, very mildly, most cases of gonorrhea would be cured in the shortest time. Unfortunately, people joke about gonorrhea, trifle with it, allow it to become chronic, acquire complications, waste time and money and regret all this when it is too late.

And many a physician would have a clear conscience if he just knew that *any solution which could not be applied to a person's cornea has at no time any business in anyone's urethra.* The vis medicatrix naturæ must never be forgotten. Nature works incessantly to fight and to expel the previously killed microbes, but the natural powers are not able to act when the gonococci have been given a chance to hide in the deeper layers of the mucosa, in cracks, minute follicles and in glands.

The acute and inflammatory stage of gonorrhea should not be considered as being unworthy of the attention of the most prominent urologist, while infiltration, fibrillous and callous degeneration are often incurable, or yield only to the skilfully applied knife.

It is now generally claimed that the medical profession, and to some extent also the public at large, have awakened to the realization of the seriousness of specific infections of the urethra and its many possibilities and consequences. The old prejudice, however, that to treat yonder trifle, commonly called "clap," is something beneath the dignity of a great physician, is still very much alive. Else how were it possible that the number of practitioners who prescribe perfunctorily upon the patient's self-made diagnosis of gonorrhea hardly ever grows less, and, though censured so frequently, it is still considered superfluous to pay proper attention to the selection of the syringe and instruction of the patient in its use whenever injections are advised? And what is even more significant, how were it possible that our most renowned genito-urinary surgeons, the great

men, those with an international reputation, very seldom condescend to treat acute gonorrhea?

In opposition to the many who think that acute gonorrhea is not worth while treating are the fellows who jump at it with enthusiasm and *cum furore*, as if they were bound to destroy the patient's natural defences and to help the gonococcus to penetrate into the deeper layers.

Toward the end of the seventeenth century Lallemand published his famous work "Pertes séminales" and reported his brilliant and prompt results obtained in various ailments, including what we would term now sexual neurasthenia, by means of a cauterization of the caput gallinaginis with a lapis stick or caustic holder that formed part of a specially constructed instrument.

Lallemand was the inventor of his method, he saw the results in a rosy light, reported on them enthusiastically; there was no one with authority to contradict him, no one to criticise or hurt him; he became famous. Is there any wonder that his success and glory disturbed the peace of mind of many a urologist in the nineteenth century? And so Dittel came with his porteremède, Ultzmann, Guyon and others with their deep urethral syringes, and up to this time 90 per cent. of physicians are armed with some such appliance, and whenever an unsuspecting patient's morning drop does not disappear swiftly it seems to be the duty to introduce some kind of an instrument into the deep urethra, and flood it with a solution that burns like the everlasting fire and makes a splendid impression upon the sufferer, who consoles himself by

saying, "Now, that ought to cure!" When in consequence the conditions become worse, the discharge more copious, there is another consolation ready, "The strong injection is bringing it out."

And how can we expect that the average physician shall have pity on his fellow-man's urethra when the highest authorities still preach the gospel of burning? While Zeissl mercifully does not go beyond a 1 per cent. nitrate of silver solution, Frisch goes from 2 to 5 per cent. nitrate of silver and 3 to 5 per cent. of sulphate of copper. Keyes thinks "It is not wise to use the nitrate stronger than 5 per cent. for fear of its caustic action." Wisely he adds that "Even that strength often produces a temporary intense irritability of the bladder with bloody urine."

Our great master Neisser begins to see that "the continuance of irritating injections favors the growth of the gonococcus by maintaining serous infiltration of the urethral mucosa," and it were a blessing if he left out the word "continuance."

Besides, what does any one expect to accomplish by applying a few drops of any kind of a solution to the deep urethra when all kinds of germs have crept into urethral glands whose ducts would surely not absorb the slightest particle of the fluid even if they were not partly or completely plugged? It would be laughable were it not so painful to so many poor fellows under treatment, and besides so deucedly harmful.

Whoever handles the various diseases of the genito-urinary organs to any extent will bear me out in the statement, that the number of patients dam-

aged by various manipulations in the urethra is enormous. The injury is mostly done by inexperienced hands, but often enough by operators trained to a mechanically perfect technic.

This time I have no intention of considering the criminal side of the question, the shady transactions of the quack and the charlatan, but only intend to discuss a few of the so-called legitimate and generally accepted therapeutic measures which in reality are most glaring and most common sins against the genito-urinary organs. It may not be out of place to mention right from the start that I do not think I can be entitled to a stone-thrower's license, and that the arraignment is directed solely against thoughtlessness and heedless copying and perpetuation of old practices.

One of the most popular instruments is the urethral sound, and it is certainly a conservative statement when I claim that it is used ten times oftener than really necessary. While it surely ought to be reserved for those who actually need it, there is no harm done if a sterile, properly lubricated sound of proper size is correctly introduced.

As we do not intend to discuss the criminal side of the question, we do not have to contemplate the introducing of a sound that was not previously sterilized by heat; we almost could pass by the creating of false passages, were it not that it happens so frequently and that it so banefully complicates cases of strictures in the posterior urethra and of prostatic hypertrophy.

False passages are almost invariably done with solid, fine-calibered and pointed instruments in the

hands of operators who use force and lack the higher sensitiveness of their Pacinian bodies.

One of the most common sins against the urethra is the forcing of the passage of an instrument whose caliber is too large. To determine the size of a sound to use is not always so easy. The meatus may be misleading in either direction, and a mistake is easily made. The patient will frequently object to any size, and if too large an instrument was selected it is by far better to pocket the slight humiliation of the: "I told you it is too big," than to lacerate the urethra.

The progress made in urology and principally in the therapy of the various diseases of the urethra due to the various urethroscopes is certainly gratifying, but the instrument fairly useful in expert hands is very dangerous if used without discretion, and is responsible for many a laceration, followed by deep-layer infection and scar formation. An example to what aberrations it may lead is the ultrascientific method which was recently proposed as "a quicker and better way to remove the top of the hypertrophy of the Verumontanum with the sharp edge of the deep urethral tube."

It would take a good-sized volume to do justice to the subject, of what should not be done to the genito-urinary organs; it will surely be written by some one sooner or later, and as I have may be said too much already, I beg the privilege before finishing of a few questions.

What does the man who irrigates the gonorrheal posterior urethra with the aid of a catheter expect, unless it is an acute prostatitis?

How is it possible that with our present knowledge of the bacteriologic flora of the urethra so many still dare to introduce instruments into and even dilate it without irrigating before and after?

And if the average practitioner waits until urinary symptoms develop before anything is done for a stricture, and thus, as V. C. Pedersen of New York recently emphasized, prevents timely treatment of many cases, why not wait with a stricture in the esophagus so long as the patient can swallow liquids?

By the way, does it not seem to you that some of the good results accomplished, when the energetic and enthusiastic therapeutist turns from local treatment to vaccination, are due to the rest given to the urethra while the hide is being belabored? I am sure that still better results will be obtained if the advice just now coming from London to combine vaccination with a bland diet, plenty of fluids and an absolute rest in bed is strictly followed.

My suggestions are:

When a physician is confronted by any case of disease, and more especially before rushing into any one's urethra with iron and fiery solutions to tear and to burn, he ought to remember the golden rule, and ask himself what he would wish were done for him if he were in the patient's place. Economic conditions are such that it is asking too much that the physician should consider also the question: Would he, if inflicted by a like ailment, seek the advice and help at the hands of a man of his own experience? It would be a great progress, however, if everybody, and if I say everybody I admit of no exceptions,

would at all times remember that to do for any pathological condition little or even nothing is far better than to do actual harm.

Whoever has witnessed the rage and despair of the victims, whoever has given the subject proper consideration, and scanned his own past experiences, must come to the conclusion that mild and painless treatment may cure, and invariably gives good results, while the energetic, merciless handling of the urethra invariably does damage only.

The study of modern works on psychanalysis[1] teaches us that a rational education of children may prevent many a case of compulsion neurosis, obsession, doubts, phobias, homosexual and other pervert wish phantasies; also that parents should be most careful with only and with favorite children in order to avoid the "unconscious parental influence" and the sometimes ensuing so-called "Œdipus' complex."

[1] For instance: Brill, Psychanalysis, Saunders, Philadelphia and London, 1914.

CHAPTER VIII.

TREATMENT.

IMPOTENCE is mostly difficult to cure, and sometimes incurable. The great number of methods and remedies recommended speaks for the small value of most of them; and yet there is hardly any one of them that could be entirely dispensed with, because there are cases in which the one or the other may be of some use.

The treatment of impotence, this many-headed hydra, varies according to form, phenomena, and state. The treatment of one form of impotence varies in regard to stage and accessory phenomena, and the remedies must be changed frequently before one can obtain a cure. One and the same remedy has not an equal effect on all men; allowance must be made for, or due attention paid to, idiosyncrasies of the patients, who are most of them neurasthenics.

In the choice of any therapeutic measure we must take into account everything—the state of the sexual organs and general bodily conditions, the time taken by individual metabolism, age, habits, occupation, and manner of living. Often the system accustoms itself to a remedy and renders quite inoperative one that had formerly done favorable work.

The success or failure of a treatment depends on the choice of the remedies, and in order to be able to choose the proper one in a given case the physician

must, first of all, have a great amount of experience in that direction; he must make his examinations with great care and employ much ingenuity. In order to secure a prospect of success, he must, in the first place, gain the confidence of his patient. The impotent and the sexual neurasthenics, as a rule, approach the medical man with little hope and confidence. To this is added false shame, which makes them very reserved. Most physicians care little for such patients, and therefore dismiss them after a superficial examination. This will not help to increase the hopefulness and confidence of the patient. In order to win this the physician should at least show a certain degree of interest and sympathy. He must question his patient very closely and examine him equally carefully. This is necessary for the diagnosis alone.

If the physician inspires the patient with some courage and confidence, he has by that means taken the first step in the treatment, because every impotent person must first of all be treated psychically. As soon as such a patient has once conceived some hope for his curability and confidence in the physician he shows himself an exemplary patient and will subject himself to any treatment. Nothing is too difficult, nothing too disagreeable, nothing too painful. Even individuals who are very much reduced in strength and energy, in consequence of onanism or pollutions, are no exception in this. I emphasize this expressly in contrast to Lallemand's[1] statements, which may have been correct, because in his time

[1] Lallemand, op. cit., tome iii, pp. 129 and 131.

the sick had more cause to fear medical men and their methods of treatment.

In case the physician should discover some of the *causes* of impotence still in existence, he must *remove* them as speedily as possible. Often the impotence disappears with its causes; but at any rate there can be no question of any treatment for impotence before the causes are removed.

The methods for treating impotence are manifold, as already stated. There is a general and a local treatment; the application of medicaments, hydrotherapeutics, electricity, massage, etc. Each one of these groups comprises many single methods and remedies. In the treatment of a disease that is so difficult to cure we must make use of every means at our disposal, each remedy being applied at the indicated moment and opportunity. It goes without saying that a mere excitation of the genitals or their nerve-centers which would be but transitory in its effect, and would not at the same time have the tendency to strengthen them, can never be the object of a rational and conscientious therapy.

We shall now discuss the single curative methods, and conclude with the discussion of the therapy for every state of impotence.

Psychical treatment is indispensable in every form of impotence excepting the organic. Psychical treatment forms in some measure the introduction and beginning of every other manner of treatment. It has been stated above that first of all the physician must *conquer the hopelessness and distrust of his patient.* Fear alone prevents in many cases the

accomplishment of a successful sexual act. To take that fear away, to restore the patient's self-confidence constitutes a cure in many a case of sexual neurasthenia. This is frequently very difficult of accomplishment, particularly with patients who have already engaged in the study of several so-called popular scientific works, and with the greatest difficulty with patients who happen to be medical men. I have had many an opportunity to treat neurasthenic physicians for impotence ever since the appearance of the first German edition of this work. I met, without exception, with nearly insurmountable difficulties. It takes a great deal of experience to use the proper arguments, drugs, or even tricks to persuade the so-called psychically impotent who has his own sad experience to contradict mere encouraging words.

The next step is to induce the patient not to think continually of his disease. For this purpose those who are impotent or believe themselves so should endeavor to find various *distractions*. They should be recommended any kind of pastime which involves some bodily exercise; such, for instance, as some suitable occupation that is not fatiguing and is at the same time attractive—driving, riding, theaters, concerts, balls, gymnastics, fencing, swimming, skating, bicycling, rowing, pleasant journeys of moderate duration, etc.

The patient should be most strictly *forbidden* any *useless sexual excitement*, reading of lascivious books, contemplating piquant pictures, and so-called mental onanism. Persons who have experienced a repeated

fiasco with women are in the habit, before they proceed to coition, to excite themselves sexually in sundry ways in order to prepare themselves for the act; but they regularly find that the result is the very opposite to what they had in view, and this introductory excitement is often the cause of impotence.

The patient must be told not to allow single failures to affect him too gravely, but to look upon them with more indifference, and treat them as casual mishaps. It is not uncommon that virility returns with the *peace of mind*, while erection will not appear when it is most ardently wished for. This is a reason for the well-known fact that young husbands who fancy they are impotent are often cured by the mere forbidding of coition. The object is to re-establish mental composure, with which often comes the erection also.

A physician must never suppose that it is possible to put an end to impotence by simply denying it, even were it but a so-called psychical impotence. If the physician denies facts that have been experienced by the patient, he simply loses the latter's confidence irrevocably. Frequently medical men are led to believe they have to deal with a case of hypochondria, when upon investigation they find they have made an error in diagnosis. Hypochondria is a very rare disease, and exists without any reason or cause whatever only in persons of unsound mind, and even then such mental disturbance is itself the cause of the hypochondria.

A therapeutic procedure that has enthusiastic supporters, but also many bitter opponents, is *hypno-*

tism, by which real miracles are sometimes accomplished, in spite of statements to the contrary.

I have personally obtained very good results in several cases that were suitable for such treatment, though I was never able to place any of my patients in deep hypnosis. The hypnoidal state (Sidi's) is quite sufficient in most cases. One should, however, always be guarded against self-delusion. In the treatment of psychical impotence suggestion is, indeed, the means without which we can expect but little result; and from suggestion to hypnotism there is only one step.

Bernheim[1] was able to influence menstruation by hypnotic suggestion. Krafft-Ebing[2] wrote thus: "The task of posthypnotic suggestion is in such cases to suggest a dissuasion from the impulse to commit masturbation; to create, by suggestion, a feeling against homo-sexual desires; to induce a consciousness of virility, and to arouse heterosexual desires."

Baron v. Schrenck-Notzing related one of his cases that beautifully illustrated the therapeutic power of suggestion. Another case may be mentioned, that of Tessie quoted by Casper. Many cases of neurasthenia have been cured by hypnotic suggestion. Bérillon reported more than twenty-two cases of nocturnal incontinence of urine, and four cases of irresistible onanism in children.

When all of this is considered, we may justly expect hypnotic suggestion to prove to be a powerful

[1] De la suggestion. Paris, 1888, pp. 557–563.

[2] Psychopathia sexualis. Stuttgart, 1890, p. 225.

remedy in onanism, morbid pollutions, and various forms of impotence.

My experience with Freud's *psycho-analysis* and similar methods is decidedly encouraging. I shall quote verbatim a short report on psychotherapy which Albert Abrams was kind enough to write for this edition:

"There has been a tendency of late to subdivide the neuroses, and a new mental disorder, psychasthenia, has been added.

"The psychasthenic state is often confused with neurasthenia and hysteria. Thus hysteria is associated with suggestibility and neurasthenia with fatigability.

"The phobias and obsessions are not neurasthenic, but psychasthenic symptoms.

"In *psychasthenia*, the symptoms are periodic and anything which diminishes the general vitality, causes a recurrence of symptoms.

"In a word, psychasthenia refers to the formerly recognized mental symptoms of neurasthenia without the fatigue of the latter affection.

"I employ the neologism, ideopath to designate an individual whose apparently sole affliction is some morbid idea. His idea reacts on the feelings and becomes a source of acute suffering.

"Freud's method of psychotherapy is difficult of application and is only of value in individuals with a certain degree of character and education.

"Poor results are attained in neurotic degenerates.

"All hysterical and psychasthenic conditions are amenable to this method which is based on the sup-

position that hysteria can be traced to unconscious fixed ideas, and that by translating the unconscious to the conscious, the impulsions which dominate the patient may be eliminated. Freud contends that a sexual factor is responsible for the hysteria and that the factor in question arouses an emotion which is associated with some bodily or verbal expression. The original emotion may pass from view, but the expression of the emotion lives and recurs in consciousness.

"Freud's method is as follows:

"The patient must completely relax in a suitable environment, and with all sense stimuli excluded. With the hand on the patient's brow the patient is urged to search the memory for any forgotten painful experience, notably that implicating sex. This method must be repeated several times.

"According to the Freudian conception, our conscious personality is the result of continuous growth.

"The child is primitively savage and by degrees only he adapts himself to the restraints of civilization and represses his old activities. The repressed activities, however, leave their traces even though they do not affect us consciously, and this is particularly true in the realm of sex. Now the child has its own sex life (although not expressed in the sexual organs) in a manner which in the adult would be regarded as perversions, and, if not repressed give rise to the perversions in later life. Although such original means of sexual gratification are inhibited by environment and other influences, yet the tendency to

their enjoyment appear in many ways, notably in dreams. During sleep our inhibitions are relaxed and the repressive force is not great, hence the factors making up the primitive sexual life emerge into consciousness and are expressed in dreams. Thus it is, that the motive force behind a dream is always some old complex in the depths of the soul."

Dr. Carl Renz of San Francisco says in a personal communication:

"The psychic form of impotence is the most common of all troubles in this category. . . . .

"Psychogenic impotence is a symptom seen occasionally in perfectly healthy individuals, but very frequently in sexopathologic conditions. This symptom is due to ideas or conceptions interfering with the psychical and physical conditions necessary to accomplish the sexual act. The center of erection is inhibited through disturbing or contrary ideas. The majority of cases are among neurotics and psychotics. . . . .

"Others, especially impressionable, timid or doubting people or such with little or no self confidence are liable to be impotent. Unpleasant memories, worry, sadness, disgust, fear of ridicule, æsthetic considerations are also frequent causes of this inhibition. Sometimes the impotence is apparent only when intercourse with a certain woman is attempted; more frequently, however, it is general.

"Among the treatment of these sexual disturbances due to psychic causes, psychotherapy occupies the most prominent place. Good results have been reported in cases treated by spermin injections and

in corresponding cases in women with the use of ovarian extract. The words spermin and ovarian extract are strongly suggestive, and I believe that the benefit derived from organotherapy in these cases is due to suggestion.

"Approximately 60 per cent. of the cases treated formerly with hypnosis were cured. In more recent years the results are better yet.

"Since we know that dormant or forgotten complexes, attended by an emotional tone inhibit the process of coition, the methods of resurrecting these ideas out of the unconscious have proven to be very successful and have added greatly to improve the prognosis. There are different methods; the technic may differ, but they are practically alike and their fundamental principle is suggestion. When the original experience which caused the trouble cannot be recalled voluntarily, artificial means are used, *e.g.*, Freud's psycho-analysis, analysis in Sidi's hypnoidal state, in hypnosis, by automatic writing or by the word association method."

Among Renz's many clinical histories plainly illustrating the results of psychotherapy in many cases where other therapeutic measures have failed, we shall report only one:

"Man about thirty, single, complained of impotentia cœundi for two years, cause unknown to him. Physically normal he presents psychoneurotic symptoms. Analysis in the hypnoidal state unveils the following history: Three years ago the patient was caught in a compromising attitude with a woman, this produced such a shock that he refrained

for some time from sexual relations, 'the mere thought of it made me feel faint and sick in the stomach,' he said. When he resumed his former mode of life again he found himself unable to perform the act, but did not attribute the cause to the psychic trauma, and therefore, when questioned about the origin, when the anamnesis was taken, did not mention it.

"After explaining the association between the psychic trauma and his impotence he soon regained his former power."

Consciously or unconsciously, psychotherapy is being employed by every physician. The methods are old; only the names are new. For the most part the methods have been rather crude, and whoever, prompted by his personal experience, tried to give some variation of psychotherapy great importance in his own practice was sure to be called a faker, an imposter. But some of the imposters and fakers were successful with many patients. The medical profession at large, however, sitting on its dignity, clad with periwig, doctor's hat and stick, or later under the atavistic influence of these signs of an exclusive rank, refused to take notice. It is humiliating, but nevertheless true, that among the fakers a female prophet had to arise, to compel the medical profession to start an investigation and to examine one of the most powerful weapons in the fight against disease and suffering.

The representatives of urology may deem themselves safe from the encroachments of the various aberrations of the many groups of mental healers.

No amount of prayer will melt a stone in the bladder, nor will it arrest tubercular and other structural changes and their consequences in these organs; and so on with variations. But, how about the many thousands of sufferers who haunt the various offices and whom the prosperous urologists refuse to handle and others administer to with such scant results? How about the many who have had their prostate massaged, their urethra irrigated ad nauseam, dilated, burned, lacerated and otherwise maltreated, and who remain in the same or in a worse condition than they were when they came to seek help? Who can remain obdurate and refuse to acknowledge that something is radically wrong?

Of course, wherever the modern methods of urology are indicated, psychotherapy will have to be relegated to the furthest background, but it can very seldom be eliminated altogether. Psychotherapy is not going to replace the irrigator, the sound, the dilator, the knife, the endoscope, the cystoscope, nor any other of our almost perfect appliances. Urology, now in the foremost rank of medical specialties, does not have to pause in its onward march to the position of the most exact branch of medical science, but it will certainly only add to its tremendous usefulness by adding systematically studied psychotherapy to its armamentarium.

The number of patients applying at the urologists' offices is growing all the time, and the number of those amongst them who cannot be cured

without the help of properly employed psychotherapy is considerable.

Since 1888 I have kept on using and advocating psychotherapy. At first I thought its usefulness was limited to those suffering with sexual neurasthenia, but when newer methods and means of examination began to thin the ranks of the functional diseases of the genito-urinary organs, it became obvious that psychical treatment must form, in some measure at least, the introduction and beginning of every other manner of treatment in most cases of the diseases we have to deal with.

The subject of psychotherapy in urology is immense; and I shall endeavor to formulate a few rules that my experience has taught me to adopt.

Cases of genito-urinary diseases, like diseases in general, must be divided into four groups:

1. Diseases of the mind itself.
2. Diseases of bodily organs overregistered by a diseased mind.
3. Diseases of bodily organs overregistered by a healthy mind.
4. Diseases of bodily organs rightly interpreted by a normal mind.

In the first group psychotherapy alone will cure if cure there be. In the second group psychotherapy will have to take the leading part in the treatment, in the third group the minor part, and may be of little, if any, importance in the fourth group.

Whoever intends to use psychotherapy must take his time to individualize and to study every single case. Jumping at conclusions most frequently leads

to errors, but the psychotherapist must not get discouraged when he finds himself on the wrong track. Things are not always quite simple, and whoever is in a hurry can accomplish nothing.

Every case must be approached with sympathy. The physician who cannot love his patient, and cannot impress his patient with the feeling that he really sympathizes with him, cannot gain his confidence and will surely fail in any psychotherapeutic endeavor.

Patience is one of the most important requirements, as in many cases results can be obtained only by degrees, and whoever attempts too much at one time, or even loses his temper, loses ground at once.

Some so-called neurasthenics can be influenced by a simple talk, an explanation of symptoms and conditions, by persuasion and suggestion; others must be taken through the intricacies of re-education, psycho-analysis, or even placed into the hypnoid and, if possible, the hypnotic state.

Personally I was never able to place any one into a spectacular hypnotic or even cataleptic trance, but while not denying the possibilities in this direction, I only claim that a hypnoid condition is all that is necessary in order to obtain the very best results. While we must always individualize, it can be stated in general that the two extremes, the highly educated, scoffing skeptic and the illiterate ignorant who never heard of psychotherapy, must be placed in one class, and must never be told that psychotherapy is going to be used upon them. Such people are best

treated in the evening, in a darkened room where all noises can be excluded. The patient is given high-frequency or an autocondensation treatment. The dim light of the apparatus, the muffled and monotonous sounds of the motor are a valuable introduction to get the patient under influence; finally he is either told to close his eyes or ordered to gaze upon the high-frequency electrode through which only very weak currents are passing. Talking to the patient in a gradually lower and lower tone of voice, more and more monotonously, soon brings the subject into that hypnoidal state in which any suggestion will create lasting impressions.

People of a lively or flighty temperament who are not so easily influenced should be ordered to take a long walk or some fatiguing exercise, eat a substantial dinner, and even to take a moderate amount of alcohol before the time of treatment; I never found a narcotic to be necessary.

Tactual manipulations are very seldom indicated, and must always be avoided when a homosexual individual is under treatment.

There is no necessity of testing the degree to which a patient is under the influence. An impatient operator, by giving orders which the subject is able to resist, loses even the small influence he might have had. One must always be satisfied with whatever can be accomplished at any single sitting, because the next time surely more will be possible.

Many physicians make the mistake of judging their patient from their own personal standpoint. The psychotherapist, however, can accomplish noth-

ing unless he succeeds in placing himself mentally into his subject's condition. No statement, no matter how improbable or even impossible the feelings it may describe, should be disbelieved or, what is worse, ridiculed. The patient really feels what he says he does, and if his statements are absurd and foolish he must be the first to laugh at them, and then the physician may join him.

We know nothing about the soul, but what we are used to call by this name, the person's mental make-up, "his nature that is characterized by the attributes of self-consciousness, conscious personal identity, reason, conscience, and the higher emotion," is his own, no matter what civil or ecclesiastic authorities and law-makers may say.

We surely agree with Münsterberg, who claims that every physician and even the village doctor needs psychotherapy much more than he needs the knife and the electric current, but I think he overestimates the value of a systematic study of psychology, as a condition sine qua non for the psychotherapist. Psychology, no doubt, should be studied by every one who wishes to become an educated man, and uneducated people should not be admitted to the study of medicine; but psychotherapy is mostly done without much theoretic psychology, and is invariably based upon proper reasoning, supported by experience and a thorough knowledge of human nature, which, after all, is practical psychology. Of course, anyone attempting psychotherapy must understand the laws of association of

ideas in so far as they can be formulated and understood.

The psychotherapist, however, must never forget the fact that matter must last and cannot disappear, but that the products of our mind, the ideas, volitions and emotions, our joys and sorrows, must always be born anew, and are doomed to disappear. And so long as all the products of the human mind conform to this rule all is well; but when one of them gets undue preponderance over all the others, and refuses to disappear, even to weaken and yield to others, then it is time for the psychotherapist to step in.

Tedious cases are frequent, slow progress, setbacks and even relapses must be expected; but the physician who uses rational psychotherapy never need throw up his hands, or utter a sigh of relief when the patient finally stays away or changes physicians.

Psychotherapy excludes no other rational treatment, and therefore, to adapt what Münsterberg emphasizes in general, I would say: The urologist must be much more than a psychotherapist, but whatever else he may be, he must also be a psychotherapist.

As the principal aim of psychotherapy ought to be removal of symptoms, it is clear that in urology, while very valuable and often indispensable, it can mostly be a helpmate only, very seldom the whole.

We have already said that *any existing cause* of impotence must first be *removed* before the treatment

of the impotence itself can commence; organic obstacles must, if possible, be removed by surgical operation; diseases causing impotence should be treated appropriately; special attention to be paid to the treatment of oxaluria, obesity, anemia and the various forms of neurasthenia, while diabetics can, as a rule, only be helped by mechano-therapeutic measures. Onanists must be cured of their habit, and proper remedies applied in case there is spermatorrhea, pathological irritation, or a condition of weakness in the genitalia.

We have mentioned the prophylaxis of onanism, and shall here but warn against heroic and dangerous remedies. Mairet and Ardin Delteri, for instance, recommend hyoscin subcutaneously one-fourth to two milligrams pro die. Hyoscin paralyzes the genito-spinal center, and the danger of a lasting damage is hardly compensated by the benefit that can at best be only temporary.

We shall devote a more detailed discussion to the **treatment of spermatorrhea,** because spermatorrhea is frequently the sole cause of impotence, and plays an important part in nearly every case. The treatment of spermatorrhea is truly in a lamentable state. The first increase in the frequency of pollutions is scarcely ever treated rationally, because the patient either does not mind it, or avoids consulting a physician about it from false modesty, or, finally, because he finds that his doctor neither understands his ailment nor even listens to his story. Yet one needs no demonstration in order to see that it is of the utmost importance that spermatorrhea should

be combated from its very beginning. In our practice we often discover what desperate efforts are made by the patient in his struggle against the constantly increasing frequency of the pollutions; what unreliable remedies are adopted, and how the body is chastised; or how every enjoyment, every comfort, is denied oneself, everything is tried that has been mentioned or praised by physicians, friends, and books as being of good effect in the case in question. Many a remedy or measure seems at first to have some good effect, but sooner or later loses all efficacy. Meanwhile the precious time passes and the pollutions grow worse. Lallemand[1] tells of some examples that are really characteristic and are taken from life.

The treatment of spermatorrhea is a very delicate and difficult affair. It engages in its service nearly all the therapeutic remedies and expedients which find their application in the treatment of impotence, and of which we shall speak later on. Thus it includes in some special cases the use of medicaments, hydro-therapy, electro-therapy, and local endoscopic treatment.

As a matter of course, we must in the first place search for the etiological factor, so that it may be removed as soon as possible. Onanism, which is the most frequent cause of spermatorrhea, must be considered at once. Besides this, a phimosis, if such exists, must be corrected by surgical operation, even if it is not of a high degree. Phimosis is oftener the cause of persistent pollutions than one would think,

[1] Pertes séminales, tome i, pp. 294–304.

because by pressure it irritates the member, even when slightly erected; and, besides, the phimosis, by protection, renders the glans over-irritable and sensitive. A very good method for the radical removal of any superfluous part of the prepuce has been devised by G. Marion[1].

Regulation of the manner of living will present special difficulties. An individual suffering from pollutions must in the evening abstain from food not easily digested; he must not eat any spicy dishes, and in general special attention and watchfulness must be directed to the food and the increase of the activity of the digestive organs. The patient must take his supper at least three hours before sleep, and he must before he goes to bed empty his bladder, and at all times care for regular defecation. He must sleep on a couch or bed moderately, but not too hard—best on a horse-hair mattress. My observations have taught me that persons suffering from persistent pollutions will be benefited by sleeping with the head in a very low position, so that the brain can be better fed by blood.

Again, the patient must not sleep longer than the necessary time, which should be determined for him. In bed he must not be covered too warmly, and he must not sleep on his back. His trousers must not be too tight. He must never sit on upholstered seats; he must not ride on horseback; he must avoid as much as possible conveyances; and he must not excite himself sexually without necessity. Of special importance is the regulating of sexual intercourse,

[1] La Semaine médical, 1900, No. 44.

because the pollutions cannot possibly be cured during absolute abstinence.

In the treatment proper the physician has to pay strict attention to the individual case. Hydro-therapeutic measures combined with a well-regulated manner of living, and eventually a trip to or a sojourn at a watering-place, will constitute a curative method most frequently leading to a satisfactory result. Balneotherapy[1] gives the best results in those cases of pollutions and spermatorrhea in which onanism and weakness of the nervous system are the causal factors. The use of pure chalybeate waters and ferruginous waters charged with carbonic acid is indicated in such cases.

If the pollutions have originated from a state of hyperemia in the pelvic organs caused by some abdominal stasis or habitual constipation, good effect will be obtained by taking waters containing sodium sulphate, sodium chlorid, then the different bitter waters and some sulphur waters. We might add here that in a state of irritation in the sexual organs —*i.e.*, in cases where chronic inflammation of the mucous membrane of the bladder or of the urethra is the cause of pollutions—the alkaline waters are to be recommended, and will do excellent service. When the mineral waters are taken internally we should observe certain precautions; for example, only small doses must be ordered, so as not to surcharge the bladder, whereby an irritation would be induced. The waters must not be taken in the evening. An

[1] Kisch, Grundriss der klinischen Balneotherapie. Wien und Leipzig, 1883, p. 292.

enema, however, before retiring, with the purpose in view of emptying the rectum and the lower bowel, and "thus relieving congestion of these parts and any possible irritating effect the contents of the bowels may have" (Halsey), sometimes has an almost magic influence.

When an increased morbid sensibility of the nerves is the cause of the pollutions we recommend the acratothermæ of an elevated region; and the iron mud-baths are advisable for cases in which simple anemia is the cause of the disease.

Various cold water treatments and sea-bathing are indicated in most conditions of weakness causing spermatorrhea, but these remedies should be selected cautiously, individual characteristics being taken into careful consideration.

Rational gymnastics will always be of great value in subduing frequent pollutions. Schreiber[1] recommended for this purpose different exercises for chamber gymnastics which are very easy of execution, do not require any apparatus, and are of very good service, particularly so when supported by some other means of treatment.

An electrical treatment is only rarely indicated. Recently, however, I have obtained very good results from the use of the high-frequency sound.

In the endoscopic examination some local treatment will often appear to be required or necessary, mostly the use of the sound or bougie and some good method of cauterizing; but always by the guidance of

[1] Aerztliche Zimmergymnastik. Leipzig, 1883, p. 95.

the endoscope, of course. These measures lead most frequently to the desired result. Randall,[1] of Philadelphia, reports very encouraging experiences on the endoscopic treatment of nocturnal pollutions.

Bromids taken internally are sometimes of excellent effect in cases accompanied by erotic excitement, yet they are not infallible. Prescribing them is an easy matter, and the sight of a prescription is always some satisfaction for both doctor and patient; only this satisfaction is not always of long duration with the patient. Camphor also may be used in some cases, but oftener in the shape of a suppository than otherwise. A trial with secale cornutum, with tinctura veratri viridis, monobromated camphor, antipyrin, sodium nitrate, and eventually with solutio Fowleri, may also be advisable.

According to Rosenthal,[2] atropin has a good effect, but only in cases of prostatorrhea. I had a prejudice against atropin, and until lately did not dare to make any use of it, although in certain cases I have felt tempted to make an experiment with it in consequence of Loewenfeld's[3] recommendation.

Ott[4] claims that when atropin is given, irritation of the secretory nerves of the prostate is without effect. Nikolsky is of the same opinion, while Spina thinks differently, and Nagel[5] emphasizes that such an

[1] Transactions of the Section on Genito-urinary Diseases of the Am. Med. Assoc., 1914, p. 48.

[2] Ueber den Einfluss von Nervenkrankheiten auf Zeugung und Sterilität. Wiener Klinik, 1880, Heft 5, p. 160.

[3] Sexualleben und Nervenleiden. Wiesbaden, 1899, p. 232.

[4] Op. cit., p. 858.

[5] Op. cit., p. 84.

action of atropin would be surprising when we know that this drug has no paralyzing effect upon other vasodilators.

M. Meisels, under the direction of Professor A. Bokai, made some experiments with cornutinum citricum, and he asserts that doses of 0.003 to 0.006 (gram) per day acted very favorably in paralytic spermatorrhea. In most of the cases the sperm effusion diminished on the second or third day, or it ceased altogether. In from one to two weeks a cure generally resulted. This medicament had no disagreeable effects even after nine months' continuous use. In spastic forms, however, cornutinum citricum is considered to have no effect. I have tried this remedy in one case only, with apparently good effect. The price is exceedingly high.

Professor Bozzolo and Mangianti recommend the following prescription for spermatorrhea and anaphrodisia of neurasthenics: ℞. Cornutin. citr., 0.03; cretæ præpar., 3.0; gummi tragac., 6.0. M. f. pil. No. xx. S. 2–4 pills daily.

H. Feleki[1] reports good results from fluid extract of golden-seal given fifteen to twenty drops three times a day.

Of course, diseases which induce pollutions must be treated and removed in any case whether pollutions appear or not. Such are ascarides, itching and smarting cutaneous eruptions about the genitalia and vicinity, also hemorrhoids and fissures, strictures and phimosis. Whenever chronic prostatitis or patho-

[1] Orvosi Hétilap, 1900, No. 50.

logical changes on and about the verumontanum can be detected, everything must be done that is indicated in the treatment of the special condition. Thus very good results are obtained from massaging the prostate, deep urethral irrigations and properly performed local applications.

The various mechanical devices invented for preventing pollutions cannot be of much use, since, though, if well constructed, they may prevent now and then a nightly effusion, they do not thereby contribute much toward the complete removal or cure of the disease, except in certain cases of neurasthenic conditions and states of habit. The arrangements that prevent the patient from lying on his back deserve more consideration.

In special cases I have followed Lallemand's[1] example and ordered continuous application of cold, whereby some rather satisfactory results were obtained. I used in these cases Chapman's tubes or pipes, which facilitate the application, which is not very convenient under any circumstances.

Kisch[2] states that partial bathing is recommended against pollutions in youthful individuals. For the bathing of the occiput, the patient is in a horizontal position and has the back of his head in a specially shaped basin filled with cold water. Stimulating applications for the upper arms, by means of some towel-like material soaked in cold water, and with a dry cover, are likewise of good effect now and then.

[1] Lallemand, op. cit., tome ii, pp. 46–56.

[2] Op. cit., p. 293.

Finally, I wish to mention for occasional application Winternitz's psychrophor, cold clysters, and Atzperg's cooling probe for the rectum.

Sometimes the cure may be assisted by the patient's will and firm determination to awaken at the proper time.[1] For the cases where the pollutions take place in the mornings, we have L. Casper's[2] advice to awaken the patient regularly by some arrangement an hour before the phenomenon usually occurs, so that he may urinate. This is certainly good advice, because in this way you may break the force of habit. The patient, however, must not be allowed to fall asleep again.

Following a suggestion made by Albert Abrams[3] I was able to obtain very good results by placing at bedtime under the foreskin a piece of cotton dipped into a 10 per cent. solution of cocain.

In extreme and apparently incurable cases of real spermatorrhea, in cases where the patient is being greatly damaged in body and mind by the constant drain "most radical measures" are justified, and vasectomy, as advised by Lydston,[4] should be performed. Of course, the patient must be made to give his consent with the full understanding as to the consequent sterility. The operation itself is easy and harmless.

[1] Campbell Black, On the Functional Diseases of the Urinary and Reproductive Organs. London, 1875, p. 172.

[2] Dr. Leopold Casper, Impotentia et Sterilitas virilis. München, 1890, p. 102.

[3] Diagnostic Therapeutics, Rebman Co., N. Y., 1910, p. 223.

[4] Op. cit., p. 623.

Of late I have followed Belfield's recommendation,[1] and in place of performing vasectomy, occlude the vas with a silk ligature. This procedure has, as Belfield emphasizes, the advantages that it surely occludes the vas, and that while the vas is occluded it does not obliterate, and its patency may be restored by removing the ligature. Under these conditions one does not have to hesitate so much as formerly before resorting to this therapeutic measure.

I shall now return to the discussion of the different modes of treating impotence itself. In sexual weakness or anaphrodisia special weight is to be laid on a **hygienic manner of living.** Food, physical exercise, and rest, also dwelling and clothing, must be strictly directed according to the rules of hygiene.

The *diet* is of special importance in the treatment of chronic diseases. Sexual impotence forms no exception to this rule. There is no doubt that the mode of nourishing has a greater influence upon the virile strength than is usually admitted by modern authors.

Roubaud has with more industry than discrimination compiled a long list of so-called aphrodisiac articles of food. Many of them exert in proper cases some influence; others are of no effect; but all are harmless, unless our olfactory sense takes exception at garlic. The other substances, for instance: Saffron, mustard, cinnamon, sage, carrots, turnips, mar-

[1] Some causes of sterility and impotence in the male. Jour. Amer. Med. Assoc., October 19, 1912, p. 1420.

joram, nutmeg, cardamom, arrowroot, laurel, leek, ginger, onions, cloves, peppers, parsnips, celery, fennel, vanilla, oysters, fish, game, and pork, well prepared, can be eaten and tolerated by most people. They might act as mild stimulants, though we do not expect from them as much as Roubaud did.

The proposition, however, is not as simple as it seems at the first glance, and we must strictly individualize, considering carefully the patient's condition and the form of sexual weakness we have to deal with. It is admitted that a man whose impotence is caused by diabetes must observe a diet where sugars and starches are reduced to a possible minimum. When we are consulted by a patient whose sexual incapacity is caused by obesity we would do positive evil if we were to prescribe Roubaud's or any other stimulating food. In such cases it will be necessary to advise our patients to avoid alcoholics, sugar, oily fishes, fats, and spices, to restrict the ingestion of carbohydrates, and to use soups and other liquids only in small quantities. Always individualizing, we will have to devise proper bodily exercise for such a patient, and as there almost invariably exists constipation at the same time, we must look after a proper and regular evacuation. A rather generous use of phosphate of soda, carlsbad salts or some of the more palatable preparations like Kutnow's powder, will be found of great benefit in nearly all cases of sexual diseases whenever constipation is present.

The best results are obtained from a generous, roborant, and eventually stimulating diet in cases

where the sexual weakness is caused by a general debility of the body or by anemia; in cases of sexual neurasthenia where the muscles are undeveloped and flaccid; and in cases when impotence is caused by chronic alcoholic and other intoxications. But even in these cases we must individualize strictly and select the food carefully, as frequently the digestive organs refuse to do the work properly, and just as frequently a stimulating and accordingly exciting diet is able to influence unfavorably existing premature ejaculation and morbid night-emissions. Therefore, we have very often to resort to a food that will not tax the digestive organs, but will stimulate without morbidly exciting. Raw eggs are frequently of great service, but even they, just as alcohol, spices, and a rich, especially a prominently nitrogenous diet are liable to act as two-edged knives do, and cause only harm to all those high-livers who endeavor to stimulate the activity of their auto-intoxicated organs by stuffing themselves with oysters, caviar, cheese, ale, porter, and many other exhilarating substances.

In general, the nourishment must be suited to the state or condition of the body, every superfluous production of fat being injurious to virility. On the other hand, it is to be noticed also that individuals who are possessed of considerable sexual power enjoy a good appetite and digestive power, although they are not gourmands, or do not become such until their riper years. Persons with low sexual capacity are either gluttons or possessed of small digestive power.

Every physician should inquire about the nourishing material of every impotent patient, and correct any existing error. Our purpose does not admit of the use of the diet for producing corpulency, as indicated by Mitchell, Playfair, and others. I am ready, however, to admit that considerable good may be accomplished in some cases where such treatment is modified in the manner that Fürbringer[1] proposes, —*i.e.*, that the patients do not have to stay in bed, are allowed open air exercise and light mental work; but then we do not follow Mitchell and Playfair. Fürbringer is approaching my point of view, although he does not seem to notice it.[2]

Experience, which was gathered principally in North America, leads me to establish and to follow these main rules. The impotent must abstain from spirituous beverages. I make an exception only in the case of persons of feebly developed sexual desire; these may take two glasses of German beer or one glass of good, strong California wine shortly before intercourse. I have already mentioned the favorable effect of beer in cases of precipitate ejaculation. Beer or wine, however, must never be taken in such quantities that the stimulating effect may be followed by a paralyzing influence, be it ever so slight.

The manner of living must be strictly ordained in accordance with hygienic laws, and a proper proportion observed between physical or mental occupation and rest, which, however, is of equal necessity for the

[1] Die Störungen der Geschlechtsfunctionen des Mannes. Wien, 1895, p. 66.

[2] Ibidem, p. 136.

healthy and for the sexually weak. The patient ought to divert himself with mental exercise and amusements of every kind. Gymnastics, walks, systematic breathing exercises and so forth should be resorted to in order to strengthen the body. Fatigue of every kind must be avoided, and every effort must be followed by an appropriate interval of rest.

The principal rest is taken during *sleep*, and this must be apportioned to every individual according to his requirement. The patient in this respect is often in an unfavorable situation: if he sleeps sufficiently long to give his body the necessary repose, pollutions take place during the latter part of this time; and if he denies himself part of this repose, then faintness and exhaustion appear and exert an unfavorable influence on the progress of the cure. We cannot fix upon the number of hours necessary for sleep in every case; but, on an average, eight hours should suffice. Of course, we must pay due attention to the condition of dwelling and clothing.

Although **medicaments** are not the means that in the treatment of impotence lead with great frequency and safety to a fortunate issue, yet they are what every sufferer desires and often asks for, after having given only superficial statements about his complaint. The question, "Will you prescribe something for me?" is never missed. The prescription may sometimes, in connection with other remedies, have a good effect. Thus I shall now proceed to the discussion of the most common medicaments.

Philters, or love-potions, have been known as far

back as the times of Moses. The mandrake that Rachel is reported to have eaten to become prolific is now supposed to be atropa mandragora, and belongs to the genus belladonna. Philters are brewed and drunk in our days, with and without effect.

And now we come to the question of *aphrodisiacs*.

Some idealists among physicians, and some of those who are completely wrapped up in interesting and rare cases, in brilliant surgical operations, seem to think that there is no necessity for an aphrodisiac, and that it is below their dignity to consider such a subject. Of course, the patients think differently, and the demand for a true and real aphrodisiac is great.

Almost thirty years ago I asserted that medicines only seldom lead to good results in the treatment of sexual impotence, and I have had no reason to modify my opinion since. But whenever I meet a case of so-called psychic, neurasthenic or even paralytic impotence I always wish I had a good aphrodisiac to give.

The deeper we penetrate into the study of the various forms of sexual inability, the larger our experience grows, the fewer are the cases of psychic and neurasthenic impotence that we meet. Improved methods of examination enable us to bring many a case which formerly was looked upon as psychic impotence, irritable weakness, etc., under the heading of a chronic affection of the prostate, the verumontanum, or some other plainly organic trouble. Some cases which formerly we were unable to explain and

therefore simply called psychic, are now recognized to be due to autointoxication. Still there always remains a considerable number of patients in whom the whole trouble seems to be an untimely action of the inhibitory center, and in these cases a reliable aphrodisiac would be of great value. I am, therefore sorry to state, that the closer study of all the remedies which our ancestors were pleased to call aphrodisiacs, leads only to the conclusion that there is no such thing as an aphrodisiac. And the worst is that we must include in this negative judgment all the newer remedies, and even those about the brilliant effects of which we are reading a great deal. On the other hand, we have learned that anything which benefits a person's general system, also acts as an aphrodisiac.

Cantharides and its preparations were in former times the commonest remedies used for impotence. If taken internally, the most effective substance of the cantharides, the cantharidin, is excreted by way of the urinary passages. On these passages cantharidin has a very irritating influence, and in proportion to the size of the dose it may lead to serious hyperemia of the mucous membranes of the urinary passages, to albuminuria, hematuria, and cystitis, and, in the worst cases, to croupy deposits on the mucous membrane of the bladder. As secondary symptoms we may have dysuria, stranguria, and painful erections. These erections are certainly to be called pathological, and yet they are to do service in coition. Doses of cantharides so small that they

do not cause any perceptible inflammation of the urinary passages do not cause erection, and doses so large as to cause energetic erections are creative of such dangers that only the despair of a patient or the ignorance of a physician can give rise to a thought of applying them. The patient, sufficiently ignorant and sometimes in such a state of mind as to be willing to sacrifice his life for one night of pleasure, is excusable, but there is no excuse for a medical man who would use cantharides, because if they are an aphrodisiac then acute gonorrhea with an inflammation, causing mighty erections, is also one. It is really surprising that some authors still recommend its use.[1] Cantharides must never be brought into requisition in the treatment of impotence, neither the *oil-beetles* (May-worms), meloes majales, which are related to the cantharides by the acid of cantharidin which they contain, nor the *oil or tincture of ants*, used in South America.[2]

Phosphorus was known to the ancients as a remedy for sexual weakness. It has a stimulating influence on the nervous system. In regard to this remedy we have the observations by Alphonse Leroy and Bouttotz,[3] and those of Delpech, which show phosphorus to be a powerful stimulant. I have frequently had occasion to use phosphorus for impotence, and feel justified in saying that in some cases it has

[1] Arthur Cooper, The sexual disabilities of man. Hoeber, New York, 1911, p. 170.

[2] Rosenthal, op. cit. Wiener Klinik, 1880, Heft 5, p. 163.

[3] Roubaud, Traité de l'Impuissance. Paris, 1876, p. 133.

given satisfaction. I noticed particularly the favorable effect it had on the mood of the patients, and feel convinced that it is of decidedly good effect in cases where the patient has become indifferent or melancholy. There is no bad effect noticeable in the cautious administration of phosphorus, even from continued use (in pills or capsules of 0.001 gram three or four times daily, or of phosphoric acid twenty to thirty drops in a glass of sweetened water several times a day).

Nux vomica and its preparations are of very great value in all forms of impotence, although the effect is not very vigorous, and, I am sorry to say, is of but short duration.

The extract and the tinctura nucis vomicæ, but mainly strychnin, are justly considered as tonics and remedies that excite the appetite and preserve their character as good nervines in many neurasthenic diseases. Hence it will be worth while to give them a trial; it will be accompanied with some advantage. I saw the best results with patients who were otherwise healthy, but felt a diminution in their sexual power without any assignable cause. It is true, the effect of nux vomica is not lasting, but after discontinuing it the sexual power will not sink below the level that existed before the use. The doses recommended are from five to twenty-five drops of the tincture, or 0.01 (gram) of the extract, three times a day, and one to two milligrams of strychnin two or three times a day. Lately I obtained better results from hypodermic injections of strychnin, as recom-

mended by Lydston.[1] I prefer, however, the strychninum nitricum to the sulphuricum, and resorted frequently to larger doses than advised by Lydston, going up to one-twelfth grain, the average dose being one-thirtieth. Wherever the hypodermic use of the drug is not practicable, almost identical results can be obtained by rectal suppositories.

I have only seldom made use of *brucin*, because it is so very unreliable and of such different effect on different individuals.

Casper[2] is of the opinion that *atropin* exerts a stimulating action on the genitals. He prescribes pills containing 1/250 to 1/120 grain atropin to be taken three to four times a day. Lately I have used atropin in combination with cathartics to good advantage.

Secale cornutum and its preparations are also recommended for impotence, or rather as aphrodisiacs; but, as their effect is of but short duration, and, moreover, is quite unreliable, we can dispense with them in all cases unaccompanied by spermatorrhea.

Ergotin was recommended by Maximilian v. Zeissel to be used in combination with quinin. I think that the quinin as a roborant in this combination is the more powerful ingredient in the prescription.

Quinin, either alone or in combination with easily assimilable preparations of iron, will effect in anemic and weakly impotent persons all it is capable of effecting in anemia and weakness. If, therefore, a

[1] Op. cit., p. 590.

[2] Text-book of Genito-urinary Diseases, Phila., 1909, p. 615.

physician has reason to assume that a patient requires a roborant, then he will with some ground appeal to quinin or iron; but he need not expect therefrom a specific effect on the sexual functions.

Equally uncertain are the volatile stimulants, as musk and castoreum. They may induce libido but no erections, and are consequently dispensable.

In the Orient especially some *narcotics* enjoy the renown of being aphrodisiacs. Indian-hemp, opium, and morphin given in certain doses produce undoubtedly sexual excitement followed by powerful erections. It is a known fact that hashish-eaters and opium-smokers experience heightened sexual impulse in the beginning of these fatal habits. Pal[1] demonstrated that opium and morphin have a stimulating action upon the nerves of the intestinal walls. The "just, subtle, and mighty opium" is capable of rousing the sexual desire to a very high degree,[2] and this is, no doubt, due to increased reflex irritability of the spinal cord. These means are, nevertheless, quite unsuited to our purpose, on account of their transitory effect as well as the subsequent relaxation, and also on account of the danger that their use may lead to a habit, the fatal consequences of which are well known. At best the trial might be made to raise the confidence of a patient suffering from neurasthenic impotence; but this would be done at the risk of a perfect failure, since the effect of the opiates is so much dependent upon the individual. I am inclined to believe that these narcotics are no aph-

[1] Wiener Med. Presse, No. 45, 1900.

[2] Paul Bonnestain, L'Opium. Paris, 1887, p. 493.

rodisiacs in the sense of heightening the sexual power even momentarily, but probably act favorably by dulling the inhibitive centers which so often interfere with the desired erections.

Valerian has unjustly the name of an aphrodisiac, because it only lowers the reflex irritability of the spinal cord, and for that reason it is recommended as a sedative by Arndt.[1]

The *mildly working stimulants*, as vanilla, cinnamon, galanga, and several spices, are of very transitory and unreliable action, and operate only in persons who are easily excited sexually.

Cocain taken internally invariably produced sexual excitement in a man fifty-six years old. I had previously noticed a diuretic effect of cocain, but I am unable to decide whether there is any causal connection. Cheerfulness is always the effect of an internal use of cocain. This is diametrically opposed to the observations of Dr. H. Wells, of the United States Navy, who asserts that he has noticed in cocain an anaphrodisiac effect. Further experiments and investigations would certainly be interesting. The drug, however, is too dangerous to trifle with.

The little lizard, *scincus marinus*, anything but pleasing, has for a long time been praised as a popular remedy, and in some countries is even now named as a domestic remedy, and yet it contains no substance whatever that can act as an aphrodisiac. At best its fat might possibly induce salacity.

Again I repeat that we must come to the conclusion that whatever our ancestors termed an aphro-

[1] Neurasthenie. Wien und Leipzig, 1885, p. 246.

disiac was no such thing, and that there is no wonder that industrious fellows have tried to supply the ever present demand. We couldn't even think of enumerating the endless legion of preparations thrown upon the market. Of some of them we are thoughtfully reminded at regular intervals by the most alluring pamphlets and testimonials. Most of these testimonials cry to heaven, testifying loudly to some doctor's credulity, ignorance or even venality.

Damiana (Turnera aphrodisiaca), its liquid extracts, and other quite elegant American preparations are not what they are represented to be by the extraordinary advertisements.

Recently a new aphrodisiac has been heralded *urbi et orbi* under the name of *Yohimbin*. Professor A. Loewy,[1] of Berlin, says that this is the name given by Spiegel to an alkaloid extracted from the bark of an African tree called yumbehoa or yohimbehe, apparently belonging to the rubiaceæ. To another alkaloid the name of yohimbenin has been given. A decoction of the bark of the tree is used by the African natives as an aphrodisiac. Loewy experimented on mice, cats, and dogs with hydrochlorate of yohimbin, and noted a dilatation of the vessels supplying the genitalia, swelling of the testicles, and full erection of the penis. The local results resembled very much those of cantharides, but without the irritant effect on the kidneys. Even repeated trials on one and the same animal produced apparently no inflammatory changes in the parts. Overdoses caused in

[1] Beiträge zur Wirkung des Yohimbin. Berlin. klin. Wochenschr., 1900, No. 42, p. 927.

warm-blooded animals interrupted respiration, lessening of the pulse rate, and fall of the blood-pressure. If artificial respiration was continued, the pulse rate and blood-pressure gradually diminished in a proportionate ratio until death occurred from cardiac paralysis. When proper doses are given the action seems to be confined to the genitalia alone. One patient took 5 mgm. three times a day internally; genital hyperæmia and powerful erections followed, but the libido was not increased.

Professor E. Mendel,[1] of Berlin, after mentioning Oberwarth's physiological experiments on animals, reports that he used the yohimbin in 40 cases of impotence, 5 to 10 drops five times a day and subcutaneously, that he never saw untoward effects, and found the remedy to be sometimes of immediate and noticeable benefit in cases of irritable weakness and paralytic impotence. Many patients did not report results, and half the number of those who did were not influenced at all. Mendel admits that all apparent results may be due to suggestion, and recommends further experiments.

Eulenburg[2] recommends the yohimbin for cases of neurasthenic impotence in place of any other medication, he is satisfied with the results and uses the drug in the form of subcutaneous injections of a 2 per cent. solution, 0.5 to 1.0 per dose.

The yohimbin hydrochlorate is to be used in a 1 per cent. solution and the dose is 10 drops, equal to 0.005 gram, three times a day; the dose may safely be

[1] Therapie der Gegenwart, July, 1900.

[2] Deutsche med. Wochenschr. May 29, 1902, p. 402.

increased to 15 drops, or 0.0075 gram. In order to preserve the solution it must be kept in a dark bottle, and one drop of chloroform added.

Thus we have a preparation for which powerful aphrodisiac properties were and still are claimed from otherwise trustworthy and authoritative sides. Yohimbin advertised ethically, but extensively during more than ten years past, has received the endorsement of people whose word is almost law in the medical world. In spite of all that, it is decidedly but a new disappointment. In 1901 I reported on yohimbin and asserted that, as far as my personal clinical experience went, yohimbin is of no effect in healthy persons, and showed no effect with any of my impotent patients. At the same time I said the following: "The only apparent result was obtained in the case of a fifty-year-old neurasthenic, who was ordered to take one 0.005 gram yohimbin tablet every evening. The second night he woke with an erection, which had not occurred for several months."

Such a modest result in one of several cases certainly could prove nothing, and was, as later experiments proved, quite accidental. But even this little accident was seized upon as a welcome pretext by the clever advertisers of yohimbin to place my name upon the list of the credulous admirers of this drug, and mention me with a number of authors, "some of whom are enthusiastic over" yohimbin's "results in neurasthenic impotence."

In order not to be misunderstood in the future, even by the most interested parties, I am now ready to declare that in my opinion yohimbin has no value

as an aphrodisiac. I have given it a fair trial, in fact, more of a trial than the remedy deserved, and certainly more than was good for the purse of many a help-seeker. Without doing an injustice I can even go further, and directly warn against its use. My reasons for such a warning are two: First, at its best yohimbin is useless. I have never seen the slightest benefit in any of the numerous cases in which I tried it. Second, in a few instances it has directly done harm. Persons afflicted with any kind of a disturbance of the circulation do not tolerate yohimbin.

I shall briefly report the history of one typical case. A showman, 52 years old, drinker, slightly arteriosclerotic, but boasting of excellent health, consulted me in an off-hand way, complaining of gradual failing of his sexual power. While there was desire and love for a handsome wife, the necessary firmness of the erections was lacking. The man was certainly a better subject for an experiment with yohimbin than Loewy's celebrated castrated dogs, on whom yohimbin promptly provoked erections. I prescribed the 5 milligram tablets of yohimbin, as the patient did not consent to an examination, thinking that was not necessary, he wishing simply to be given something that would cause erections. One single dose taken at bedtime brought no erections, but a condition which the wife described as collapse. I saw the patient two hours later when he, as I was told, had partly recovered. He still complained of dizziness, weakness and nausea; the pulse irregular, flighty, the skin perspiring freely. Supposing that it was a case of idiosyncrasy, I advised that no more

yohimbin be taken. A few days afterwards, the man hankering for the prospective erections, took another tablet. This was followed by similar symptoms as the first dose, with the difference that this time the patient was not frightened and did not alarm his better half, whose peaceful sleep he disturbed in no way. There being not even a semblance of an erection, he never felt tempted to take another yohimbin tablet.

Slight disturbances in the form of dizziness, nausea and general ill-feeling I have observed in several cases, and am convinced that Krawkoff's conclusions, to which he came after a series of carefully conducted experiments on animals and men, are correct. Krawkoff claims that yohimbin paralyzes the motor ganglia of the heart, and that any congestion of the sexual organs is due to its vasodilating effect.

But however that may be, and even admitting that the drug in small doses is non-toxic, my personal clinical experience with yohimbin, and the verbal information collected from various fellow-practitioners are for me reason enough to abandon this medicine for good.

One thing, about yohimbin, however, I fail to understand. How was it possible to arouse the enthusiasm of some prominent members of the profession? How did they obtain the brilliant results with patients suffering from paralytic impotence, nay! even on castrated dogs? Was their yohimbin different from the one we obtain? I must doubt this when I consider that my results were uniformly negative, no matter where the drug came from; they

were not any better when, on various patients, I used the large quantities kindly sent to me for experimental purposes.

When experimenting on dogs I would advise to be exceedingly skeptical. It is almost laughable to notice the triumphant feeling, when some of the experimenters found that yohimbin injections were followed by "reddening and swelling of the penis," that the member was rather stiff, stretched out and greatly strained. A controlling handling of a dog's genital organs without any kind of a previous injection, would have shown how sensitive to the slightest touch they are.

I believe further, that Eulenburg, after injecting subcutaneously one or two centigrams of yohimbin found that the erecting effect ensued quite slowly, usually in the morning following the injection given the previous afternoon or evening. Morning erections are an easily obtained result with any kind of treatment, and cannot always be considered of value.

Further, I should like to ask the question: Why are the effects caused by yohimbin, according to some enthusiastic experimenters, immediate, while we are variously informed that in man we may expect results only after using the drug from four to six weeks? Is it that Loewy's mice, cats and dogs are easier to influence, or because our man-patients must pay a good price for the remedy, and must be kept taking it for quite a while?

Loewy, the chief yohimbin enthusiast, goes so far as to compare this drug's action to that of cantharides and there he may be right; cantharides also have no

aphrodisiac action in non-toxic doses; and as we do not intend to use either one in toxic doses we are fairly justified to leave both of them alone.

Yohimbin made its entrance into the realm of medicine recommended by great authorities, and we must be skeptical when other new remedies are hailed by the same or even other shining stars of the medical world. It was, therefore, with distrust only that I approached *muiracithin*, the newest of the "harmless, effective and lasting" aphrodisiacs. Its main constituents are said to be muira puama, a "powerful aphrodisiac," and as such, "recognized by the natives of Brazil," and lecithin which was always recognized by its manufacturers as "invaluable in cases of debility" and to be "a restorer of appetite," a "weight increaser" and at the same time "non-toxic and perfectly assimilable."

While I was never able to obtain any results with the various lecithin preparations I decided to try muiracithin. It came so well recommended: Leyden and Bramann liked it, it was being employed by Senator, Mendel and others. Mendel, of course, was fairly enthusiastic about yohimbin, and I became doubly skeptical. Fürbringer, for whom I have always had the greatest admiration, published an article in which he mentioned muiracithin and recommended it, in a guarded manner, however, for trial.

The drug, as to be expected, is expensive. A druggist ordered a large supply, and I began to use it in several cases, including a sexually normal individual.

To be just, it must be acknowledged, the patients

were none the worse for using muiracithin, but none of them noticed the slightest effect upon their sexual power and feelings.

I wrote to Fürbringer, giving him my experience with yohimbin and muiracithin. He was kind enough to answer my letter, saying that he was glad to see that we are of the same opinion in regard to these two remedies.

While I am fairly sure that there is no real aphrodisiac in existence, I have not given up the search for it. For quite a while I was experimenting with the fluidextract of the cortex of muira puama, the Brazilian Acanthacea, and with the fluidextract of Catuba, another Brazilian "aphrodisiac" produced from Juniperus brasiliensis, but am unable to report anything favorable.

For the sake of completeness, and also as a curiosity, I must state that homeopathy also has taken an interest in sexual weakness, and endeavors to treat it by administering the salts of copper, gold, iron, lead, etc.[1]

The various hydro-therapeutic processes have always enjoyed a special fame, and are highly recommended by men in and out of the medical profession for the states of sexual weakness. The reputation of **hydrotherapy** in general increases every day, and with it also that of its special application in the treatment of impotence. Every one who feels a beginning of impotence resorts, with or without medical

[1] Dr. Christof Hartung von Hartungen, Ueber virile Schwäche und deren Heilbarkeit auf inductivem Wege. Wien, 1884.

advice, to cold water ablutions and sitz-baths. These remedies are of feeble action and produce but little effect.

In order to understand the action of water on parts of the human body which are in a pathological condition, we have to call to mind the principles of hydrotherapy. The stimulating effect of water upon the body is always twofold—thermal and mechanical, the one or the other prevailing according to the manner of application.

The impress of the thermal stimulus[1] upon the peripheral terminations of sensitive cutaneous nerves is transmitted to the central organs, appreciated by these as sensations of warmth or cold, and transmitted by them by reflex action to the motor system. It is probable that thermal effects have also a local action through the influence of peripheral ganglia or the excitable tissue itself, and without the mediation of the central nervous system. Again,[2] the application of a lower temperature over large vascular trunks causes the latter to contract. This narrowing of the main vessels induces diminution in the afflux of blood toward the peripheral ramifications of the trunk-vessels that are contracted, whereby is also induced a lowering of the temperature in the parts of the body supplied by these blood-vessels. Again, experiments[3] have proven that by the local application of water of different temperatures we can alter at will the local warmth of a part of the body even to

[1] Winternitz, Hydrotherapie. Wien, 1877, Band i, p. 49.
[2] Winternitz, op. cit., Band i, p. 75.
[3] Ibidem, p. 36.

the deeper tissues. Finally, stimulation by cold increases considerably the tension and tonicity of the smooth and striated muscle acted upon as directly as possible.[1]

The action of the various procedures in hydrotherapeutics is therefore directed first on the nerves, by means of these on the vessels, and ultimately on smooth muscles. The water must therefore be applied in accordance with the various requirements of the cases under treatment.

There is no case of impotence where one or the other hydro-therapeutic process would not considerably assist any course of treatment; and in many a case no other remedy is required to effect a cure. Again, it must be remarked that an untimely application of a hydropathic stimulus may also do harm.

Out of the immense treasury of hydro-therapeutic procedures we can appropriate for our purposes local and general ablutions, rubbing down, flapping,[2] sponge-baths, rain- or douche- or shower-baths, sitz-baths, half-baths, full-baths, vapor-baths, river-baths, sea-baths, and many mineral baths; also the application of cooling sounds and injections of cold water into the urethra and rectum.

[1] Winternitz, op. cit., p. 119.

[2] I would designate by the name of "flapping" a very important and efficacious hydropathic procedure, which is executed in the following way: a coarse sheet, wet and cold, is wrapped around the body of the patient, the attendant slapping more or less gently, but always rapidly, the whole body up and down repeatedly until the skin is quite reddened and warm. A cold cloth is placed on the patient's head to avoid possible congestion. Flapping is usually followed by a cold half-bath.

The action of simple *ablutions* is too feeble to be of much good in any form of impotence. They should, however, be observed as a hygienic rule for cleanliness, both by the virile and the impotent. Ablutions of the spine and loins act, nevertheless, as a gentle stimulus. Washing of the spine and genitalia with spirituous fluids is common as a domestic remedy. Roubaud recommends washing with tinctura nucis vomicæ. As a matter of fact, I have seen really good results from the external use of tinctura nucis vomicæ in several cases of purely neurasthenic impotence.

Rubbing down and *flapping* are of excellent service, as they gently stimulate the nerves and assist in the assimilation of material; they thus are indicated in several forms of impotence.

Sponge-baths may be substituted for shower-baths. They do not operate quite as powerfully, I admit, but they are more easily procured, as a round vessel not overlarge—a sitz-bath tub, for instance—or a portable rubber tub and a good sponge are all that are requisite.

Rain- and douche-baths are in many cases absolutely indispensable. Applied generally, the shower-bath assists powerfully in the assimilation of material. Applied locally, on the genitalia and spine, they operate as a gentle stimulant, acting directly on the nerves and spinal cord. In certain conditions the douche filiforme,[1] or thread-like shower-bath, directed upon the glans is of good effect.

In commonest use, however, are *sitz-baths*. Win-

[1] Winternitz, op. cit., Band i, p. 35.

ternitz is of the opinion that the sitz-bath operates by means of a reflex stimulation of the nervus splanchnicus.[1] He has made experiments[2] with these baths and obtained the following results: A short sitz-bath, of ten minutes and 10° C., causes a lowering of the local temperature, which, however, is followed by increased warmth within half an hour, the reaction which ensues during the second half-hour being followed by a moderate decrease in the temperature for several hours. A sitz-bath of thirty minutes and of the same temperature causes a diminution of the temperature during a longer time and to a lower degree. The reaction sets in later, seems less intense, and is followed by a marked compensatory lowering of the temperature. Very long continued and very cold baths might postpone the reaction still more, and possibly prevent it altogether. Either short or prolonged sitz-baths of a temperature approaching that of the blood warm the rectum directly. The most important therapeutic results are obtained by hip-baths of 20° C. They usually cause no subsequent warming of the rectum, but constantly show a lowering of the temperature in the rectum.

Hence short, cold sitz-baths must be considered as an exciting, stimulating form of bathing, while cold sitz-baths of longer duration induce depression and retard the process of local nutrition and heighten the vascular tonicity in the pelvic organs. Warm and hot sitz-baths have a relaxing effect. Temperate

[1] Winternitz, op. cit., p. 224.

[2] Ibidem, Band ii, p. 139, etc.

sitz-baths, 18° to 25° C., are antiphlogistic. The cold sitz-bath is of main utility, and should be of a shorter or longer time according as a stimulating or sedative effect is intended.

Of similar but more powerful effect are the so-called *half-baths*, which, along with the ordinary cold baths, must be considered as exciting, if they are not of too long duration, which is not likely to be the case, because a chill would compel its interruption. Very excellent results for the purpose of curing several forms of impotence in which stimulation is indicated are obtained by half-baths of 12° to 18° C., combined with friction and showers during bathing.

Even *vapor-baths* may be indicated in many cases of impotence; these have also a stimulating action, and, moreover, prevent the formation of adipose tissue.

The most stimulating form of bathing is *river-bathing* and *sea-bathing*, which often perform real miracles with the impotent. Milder forms of impotence are very frequently cured by river-bathing alone, and still better by sea-bathing. In these baths there is, besides the thermal stimulus, an exceedingly strong mechanical excitation by the action of the flowing water and of the dashing of the waves. For river-bathing are to be preferred those rivers or parts of rivers which present a moderate depth combined with a strong and rapid current, and, likewise, for sea-bathing, places where the billowing is strong. Very great care must be taken in prescribing these forms of bathing, because patients who are run down

and many neurasthenics cannot endure them very well. Bathing in *lakes* is frequently indicated. It may be a thermal stimulus, and the movements made in the bath contribute to the acceleration of the elaboration of matter. Protracted bathing in warm water is scarcely ever desirable.

The *balneological treatment* is merely in its inceptive stage; but we know that soda and sulphurous waters do very good service in nearly every form of impotence. The sulphur waters were recommended by French authors as early as Lallemand's time. I have occasionally noticed a favorable influence on the sexual life of patients who used sulphurous thermæ for other causes. I have frequently ordered with best results bathing in natural salt-water, and also in artificial mineral salt or rock-salt water.

Bathing in other mineral waters is advisable for those forms of impotence in which some specific mineral water treatment will remove causes of impotence, as, for instance, prostration, anemia, torpid digestion, etc.

Excellent results are obtained from the so-called champagne baths at Vichy in California. Unfortunately the stupidity of calling this marvelous place Vichy was committed; the accommodations are poor and the waters therefore not duly appreciated.

The Winternitz cooling-sound, *psychrophor*, is an unfenestrated catheter à double courant. Its application is adaptable in the treatment of all the forms of impotence connected with hyperesthesia of the urethra, especially of the colliculus seminalis. The instrument is introduced as far as the neck of the

bladder, and preferably into the bladder. A continuous stream of cold water flows through it, so that to the mechanical stimulus of the sound is added the effect of the cold. The psychrophor is borne even by patients in whom the sound cannot be introduced at all, or not often enough, on account of the violent pain produced.

Simple *injections of cold water* into the urethra are very efficacious on account of the mechanical stimulation and the effect of the cold combined. The effect of such injections is merely exciting, while the psychrophor may, according to the duration of the application, have a depressing, even an antiphlogistic, action. The injection of cold water into the urethra is made use of, as I have noticed, by sailors as a means of temporary excitation after long continence, and I wonder that we never read of this practice in medical literature.

In order to act upon the prostatic part of the urethra we may in some cases make use of *Azperger's rectal cooling sound*[1] or of *Winternitz's rectal cooling pouch.*[2] The action is similar to that of the psychrophor, while cold-water injections into the rectum act as do those made into the urethra.

Application of *dry warmth or cold* has a similar action to that of hydro-therapeutic stimulation. Very considerable stimulation can be obtained, particularly if high and low temperatures are applied alternately. Roubaud[3] recommends a syringe for the

[1] Winternitz, op. cit., Band ii, p. 129.

[2] Ibidem, p. 131.

[3] Traité de l'impuissance. Paris, 1876, p. 146.

application of hot air. Recently there have been devised several instruments, called thermo-psychrophors, for alternate cold and hot water.

Many newspapers have advertised the *carbon-douche*. In the application of this remedy the genitalia are, by means of a peculiarly constructed apparatus, exposed to the direct action of carbonic acid gas. This action, though mildly stimulating, I consider has more of a psychical effect or influence. The external application of carbonic acid gas has already been recommended by Bernatzik,[1] and more recently by B. Schuster in Nauheim.[2] The latter found it highly effective in cases of neurasthenic lessening of libido and erectility and in premature senile impotence. I saw very little effect in the few cases in which I have made use of it. Carbonic acid may have a better effect in female diseases. Carbonic-acid baths are of greater value. S. Rose,[3] of New York, said: "Carbonic-acid gas baths effect relief in many cases of impotency. Physicians at watering places are aware that in many the libido becomes markedly stronger under treatment by carbonic-acid baths." He recommends it as "an excellent remedy" in neurasthenia sexualis.

The different kinds of **electrical currents** are made use of in the treatment of impotence quite as often as the various procedures of hydro-therapeutics. Every kind of current has its advocate among

[1] Aphrodisiaca, Eulenburg's Real-Encyclopädie. Wien und Leipzig, 1885, Band i, p. 614.

[2] XVII. Versammlung der balneol. Gesellch. in Berlin, 1896.

[3] New York Medical Journal, Jan. 13, 1900.

the different authors, and every one extols the method he uses. This fact alone is enough to prove that science has not yet reached its zenith in reference to the application of electrical currents.

Erb[1] stated in plain words that nothing is known about the electrophysiological action upon the testicles and vasa deferentia of the living man, and that the knowledge of the effect on the spinal cord is also very scanty. We must rely entirely on empiricism, or practical experience, and this teaches us that electricity, in whatever way it may be applied, is of excellent service in special forms of impotence, but that there are many cases where it is of no use, or may even do harm. A careful distinction of the sundry cases and a thorough investigation as to which are proper for electrical treatment is more necessary than in any other mode of treatment. Only a thoroughly correct application can sufficiently reward our efforts by good results, and it is of the utmost importance to know what kind of current is to be chosen, of what strength it should be, and in what way applied. This necessitates a careful study of each individual case, with all its accompanying details or circumstances.

The *galvanic current* will be indicated frequently. We commence by localizing the electricity, applying the zinc pole over the cord in the lumbar region, and the copper pole to the upper and under surfaces of the penis, to the testicles, perineum, and the spermatic cord downward from the inguinal

[1] Elektrotherapie. Ziemssen's Handbuch der allgemeinen Therapie, Band iii, p. 128.

ring. In other cases, when the spinal cord is to be operated upon, the copper pole is applied to the nucha, and the zinc pole to the region of the lumbar vertebræ. A more powerful action is obtained if the copper pole is applied to the lumbar region and the zinc pole to the perineum or to the pars prostatica by means of the bladder rheophore. A still stronger effect is produced by the introduction of the copper pole into the rectum by means of the rectal rheophore, and the zinc pole as far as the pars prostatica. Only weak currents, however, can be applied, and but once a week, as a more frequent application might induce inflammation of the mucous membrane.

In the use of the bladder rheophore Lewandowski[1] recommended the gradually increasing faradic current or very short interruptions in the application of the current. Besides, both poles may be applied externally along the course of the spermatic cords, when interruptions and reversing of the current are particularly effective. It must always be borne in mind, however, that an energetic electrical treatment can be of service only to individuals of very low electrical irritability.

The time of application will have to be longer or shorter as the different cases may require. If the patient is not affected with excessive anesthesia, or if the electrical irritability begins to return during the treatment, erections may occur even during the application, and this would very much raise the courage and confidence of the patient.

[1] Elektrodiagnostik und Electrotherapie. Wien und Leipzig, 1887, p. 410.

The manner of application of the *faradic current* is the same as that of the galvanic; but the induced current is not so frequently used for electrizing the spinal cord itself. By means of the metallic brush the glans and the testicles are directly excited rather strongly. Such an application produces a reddening of the skin, and serves therefore as a stimulant to the circulation of the blood in the parts in question to a higher degree than any other method of applying electricity.

If one pole is introduced into the rectum to the height of the vesiculæ seminales, while the metallic brush faradizes the testicles and the entire surface of the penis, an erection may very often be produced during the treatment, as Onimus[1] remarks, and this fact has also been observed by myself.

Especially to be recommended is the application of weak induction currents during a longer time, because they are apt to revive the excitability of weakened nerves, as has been demonstrated by von Bezold and Engelmann.

Static electricity, *franklinization*,[2] or general electrization, and high frequency currents are frequently used and very good results have been obtained thereby in recent times. Eulenburg[3] asserts that carefully watched hydro-electric baths, electro-static air-baths, etc., are preferable to the process of general faradization and galvanization as indicated by Rock-

[1] Guide pratique d'Electrothérapie. Paris, 1882, p. 264.

[2] Stein, Die allgemeine Elektrisation des menschl. Körpers. Halle, 1883.

[3] Sexuelle Neuropathie. Leipzig, 1895, p. 40.

well and Beard, because the latter are too complicated, cause loss of time, and are somewhat imperfect in their effect.

Hydro-electric baths[1] and general franklinization with the influence machine will be positively indicated in impotence dependent upon constitutional diseases, disturbances in the general nutrition, or states of weakness, but most of all in those forms brought about by general neurasthenia. The effects of static electricity will, however, largely be due to a suggestive influence.

In recent years I have frequently made use of *high-frequency currents* and of the high-frequency urethral sound; and while I am not so enthusiastic about this mode of treatment as Noble M. Eberhart[2] is, I can report that the results obtained were most remarkable in many cases.

Local treatment is most frequently indicated.

In the first place comes *local cauterization.* Modern physicians have simply returned to Lallemand's method of treatment, which has been so much criticised. The principle has remained the same, the mode of application only having somewhat changed.

Lallemand cauterized the caput gallinaginis with a lapis-style or caustic-holder that formed part of a specially constructed instrument. To handle successfully Lallemand's instrument requires a certain

[1] Eulenburg, Die hydroelektrischen Bader. Wien und Leipzig, 1883, p. 76.

[2] A Working Manual of High-frequency Currents, Chicago, New Medicine Publishing Co.

dexterity which can be acquired only by practice; but when this dexterity is once acquired, the extent of the cauterization can be limited at will. Any one who became skilled in Lallemand's method of cauterization preferred it to all other methods until the endoscope was invented.

Every one will soon convince himself that such brilliant and prompt results as we read of in Lallemand's wonderful work cannot be obtained in our days by any method of cauterization that may be adopted. The method has remained the same, man is the same, and the nature of the disease is still the same as in Lallemand's time. The difference between our results and those of Lallemand can be explained by the fact that we are not the inventors of this method of treatment, and are therefore able to look upon our results with greater impartiality. It will enter no one's mind to accuse Lallemand of having intentionally distorted the facts; but every one can easily understand that Lallemand, who had correct ideas of the conditions in the urethra long before the endoscope came into existence, would see only the successful results of his method, and give little or no attention to his failures; also, that he overestimated the value of his invention. His brilliant success can be understood when we consider that in his time Lallemand was the only physician of renown who did not think it below his dignity to occupy himself with the different forms of sexual weakness; so that, as a natural consequence, people of the wealthy class suffering or imagining themselves to suffer from sexual weakness would flock to him from

far and near. Comparing the number of psychically impotent with those that are affected with real impotence, we shall find that the former constitute a large portion of those applying for relief. Now with these neurasthenics Lallemand's fame, combined with the great renown of his method, must have exercised a curative influence. Finally, we must not forget that great minds are not without a weakness or a hobby. I have a vivid recollection of a worthy clinician who died, unfortunately, too early. This gentleman thought he had discovered at one time a great epidemic of cerebro-spinal meningitis, and he became quite angry when his assistant merely sought for another explanation of the symptoms. When he had to treat obstinate patients who positively refused to show cutaneous hyperesthesia, he would pinch their skin, so as to produce for his own satisfaction utterances of pain which would indicate to him the existence of hyperesthesia.

Many German physicians took umbrage at the fact that they could not obtain the same brilliant results as Lallemand, and rejected his method altogether. In the eyes of other investigators Lallemand had presumed too much through his mania for writing. Although Lallemand has really treated the whole question too broadly, every one will prefer his prolixity to the scant treatment given to the subject by many authors of the present time. Of course, we no longer accept many of Lallemand's views; as, for instance, his idea of the effect on the sexual power of riding, of tobacco, coffee, and tea. This, however, does not alter the fact that cauterizing after Lalle-

mand's method does good service in pollutions, spermatorrhea, or impotence caused by changes in certain portions of the urethra. The endoscope enables us now to obtain positive knowledge about this cause.

Swinburn's, Goldschmidt's, Wossidlo's, Buerger's, MacGowan's, and McCarthy's urethroscopes are most valuable additions to our armamentarium. They enable us to inspect the deep urethra, the colliculus seminalis and the trigonum, and see structures *in vivo* which we were, until a few years ago, able to see only in anatomical dissections and preparations.

Special care must be taken in cauterizing, and it should be undertaken only by medical men who are perfectly familiar with the handling of the endoscope, and by them only under the control of this instrument.

Lallemand did the best that could be done with the knowledge and means at his hands; now it would be surely criminal to poke blindly into the complicated structures of the male urethra, and for a physician to cauterize the deep urethra without seeing exactly what is being done would be as if one were arresting the bleeding of an amputation wound with the actual cautery. We hope, at least, that now when the ingeniousness of Goldschmidt, Wossidlo, Buerger, Oudin, D'Arsonval and others have placed into our hands the endo-urethral knife and various endo-urethral electrodes, no real physician should be foolish enough to use antiquated appliances to slash and burn his fellowman's urethra.

Some ultra-modern urologists, however, go a little

too far in depending upon the urethroscope altogether. They poke it into the urethra of every patient falling into their hands, they find a red, swollen and inflamed verumontanum and then cut and burn without mercy, without even considering that the local condition may be a symptom of a deeper trouble, or even may be caused by their own manipulation.

Cauterizing is now much facilitated, the need of a caustic-holder being dispensed with, since a lapis-style fastened on a piece of silver wire answers the purpose perfectly. The majority of physicians had for the endoscope a certain objection, which, as Grünfeld said, could exist only on the ground of their ignorance in regard to the details. This one application of the instrument should suffice to make its utility obvious to every thinking man.

Immediately before the operation of cauterizing, the bladder should be completely emptied. One reason is to spare the patient the intense pain that would be induced by urinating soon after the operation, and another to prevent the risk of having the effect of cauterizing very much interfered with by an involuntary discharge of urine while the operation is going on. Nowadays it hardly seems necessary to mention any reasons, as no competent physician will introduce any kind of an instrument into the urethra without first having the bladder emptied and disinfecting the urethra itself.

The eye of the operator will guide him as to the extent of the cauterization, which, of course, will be determined by the pathological changes he observes,

but in any case the cauterization must be confined within reasonable limits.

Altogether I think cauterizing should be resorted to in exceptional cases only. The immediate effect is mostly satisfactory to the inexperienced urologist, who may even feel justified to rush into print to give to the profession the benefit of his experience in one lonely case. The local hyperemia, irritation and even inflammation caused by the searing generally give rise to erections, the patient is also elated, at least for a while. Unfortunately the erections mostly disappear with the subsiding of the local injuries, and the patient is at least, in no better condition than before. In some cases a demonstration ad oculos, that erections are possible may be useful toward restoring the patient's confidence. But, and again but, this certainly could be accomplished at a smaller risk.

A similar although more feeble effect may be obtained by the use of *astringent injections*. I have already had occasion to state that injections of cold water exert a certain stimulating influence, being frequently followed by erections. Astringents cause a stronger irritation, and the stimulation is in direct proportion to the strength of the injection.

Astringents for local excitation may be used also in the form of gelatin bougies. Dittel has had constructed a special porte-remede, by means of which he applies to the pars prostatica astringents in the form of small *urethral suppositories*.

Ultzmann has invented a urethral dropper for applying any astringent fluid or caustic to deeper por-

tions of the urethra. A physician handling the endoscope can dispense with these instruments in the treatment of impotence if no special obstacle interfere with its introduction. Any difficulty in the introduction of the endoscope will also interfere with the introduction of the other instruments, excepting cases where an exceedingly narrow urethra is the only obstacle.

Zinc, alum, copper, or tannin may be used in the urethral injections. I especially recommend *tinctura ratanhiæ*, which can be used in solutions of different strength. One drop of pure tinctura ratanhiæ (Krameria triandra) on the pars prostatica has the same effect as one cauterization, without any of the objectionable consequences that follow the latter procedure. Recently I obtained remarkable results from local applications of *fuchsin solutions*. Weak solutions of fuchsin and of the various astringents can be injected with any ordinary urethral syringe. Stronger solutions had better be applied locally under the safe guidance of an endoscope.

Very good results are obtained in certain cases of impotence that accompany chronic gonorrhea and its complications by the use of *intravesical irrigations*. These can be performed thoroughly and easily with Valentine's intravesical irrigator.

The introduction of flexible *bougies* or *metal sounds* may be indicated in a great many cases, and was advised by Lallemand. Special results are obtained in hyperesthetic conditions of the urethra and the prostata. In some cases the introduction of a bougie or sound is accompanied by so much pain that the

patient can with difficulty be induced to submit to a second introduction.

In cases of intense hyperesthesia it is best to begin with the insertion of flexible bougies as gently as possible. If the procedure is repeated daily, the hyperesthesia decreases markedly and gradually admits of the use of metal sounds. This would show that the treatment by sounds or bougies is of particularly good effect, especially in cases of precipitate ejaculation and of too frequent pollutions. The idea is probably quite correct that by the introduction of a heavy metal sound pressure and tension are produced in the pars prostatica, thus causing a stimulation and possibly an erection,[1] but this is of no particular value in the course of the treatment of impotence, because it soon loses its effect. In certain cases it may be useful as a temporary harmless excitant.

For many years I have almost exclusively used metal sounds, because experience has taught me that after sufficient dexterity is acquired it is easier to insert a steel sound than a flexible bougie in cases of intense hyperesthesia. When using a metal sound force is, of course, to be avoided, and the sound must be guided by the anatomy of the parts, and must be carried practically by its own weight into the bladder. In withdrawing the sound the free hand must take hold of the penis close to the meatus, and by gentle downward pressure protect the urethra from strain that might be induced by the escaping sound.

[1] Ultzmann, Ueber Potentia generandi und Potentia cœundi, Wiener Klinik, 1885, Heft 1.

Many authors and most practitioners recommend *external applications* to the genitalia of various substances, such as tinctura nucis vomicæ, eau de Cologne, alcohol, etc. It is not to be denied that such applications increase for the time being the vascularity of the parts in question, and that the cutaneous nerves may thereby be temporarily excited. At any rate, the effect cannot be great, and therefore they may be ordered sometimes "ut aliquid fiat," especially in cases when the patient's uneasiness must be appeased. Concerning the tinctura nucis vomicæ recommended by Roubaud,[1] it would be interesting to ascertain whether some of it is absorbed through the skin of the glans. The late eminent surgeon C. Stinson,[2] of San Francisco, unfortunately one of the few persons killed by the earthquake in 1906, took the effect of local applications of a fluid preparation of *Echinacea angustifolia* somewhat too seriously, and thought to have discovered "a new and successful aphrodisiac for impotence." I am really sorry to state that this, as he said, "mildly stimulating non-toxic antiseptic, antizymotic, alterative, anodyne, restorative, and aphrodisiac" accomplishes certainly no more than an application of alcohol or tincture of nux vomica.

We cannot approve of the application of *sinapisms* to the genitalia as recommended by Roubaud; because the least incautious management may do harm, and because no benefit can be derived from an erection produced by such a painful remedy.

[1] Op. cit., p. 154.

[2] New York Medical Journal, Jan. 13, 1900.

We do not mean to waste more than a word here on *acupuncture* and *electropuncture*. They were formerly in use; were recommended by Lallemand, and later by Roubaud; but no one nowadays would entertain the idea of indulging in such a procedure.

Local *surgical operation* must of course be adopted, when possible, for the removal of defects. The most frequently indicated operations are *circumcision* and the gradual *dilation of strictures*. Circumcision is certainly indicated more frequently than executed. Many cases of neurasthenic impotence, nocturnal enuresis and even annoying acne can be relieved by this simple operation.

The *resection of the dorsal vein* of the penis has been suggested some years ago. Lydston[1] reported that he was unable to secure as satisfactory results from this operation, as other more enthusiastic advocates. Still he claims 25 per cent. of the properly operated cases giving perfect satisfaction, in about half the remaining cases some improvement, failures for the rest. I have never seen the slightest effect of this operation, and agree fully with Lydston when he says that many of the sudden and complete cures probably were but cases of psychic impotence in which "an alleged operation upon the dorsal vein of the penis would be likely to be equally efficacious with the genuine article." Better results would certainly be obtained were it possible to remove the vena profunda penis, which carries the bulk of the venous blood from the corpora covernosa.

Kreissl[2] obtains good results from epidural injec-

[1] Med. Standard, 1901, p. 391.

[2] Urogenital Therapeutics, Chicago, 1908, p. 433.

tions. My experience with them is limited to several cases of spinal and cerebral syphilis in which I used the Swift-Ellis treatment, and saw, along with other favorable results, in some cases also an improvement of the sexual power.

The application of **massage,** general as well as local, **gymnastics,** and, above all, systematic deep breathing may in many cases of impotence bring about very satisfactory results, especially when it is necessary to strengthen the body and to further assimilation and elimination.

General massage of the body, the Swedish movements, and our ordinary gymnastics can be used only with reasonable moderation. I do not think, however, that systematic exercise, even if carried to athleticism, can in any wise have an unfavorable influence on the sexual power, as is often stated. If some athletes are really disinclined to enjoyments in venery, the explanation is found in the fact that an occupation monopolizing time and causing bodily fatigue is not conducive to sexual pleasure. I have known some athletes who by no means despised sexual enjoyments. The idea that athletes are weak sexually probably arose from the fact that among the ancient Grecians all athletes were compelled to abstain from coition as much as possible.[1]

Substitutes for gymnastics proper are such other *bodily exercises* as riding, skating, etc.; and bicycling is to be recommended particularly. Lallemand has said, "The action of the lower limbs has probably

[1] Busch, Allgemeine Orthopädie, Gymnastik, und Massage, Ziemssen, Allg. Therap., Band ii, Theil 2, p. 20.

more of a direct influence upon the sexual organs." Of course, even these exercises must not be carried to the point of fatigue.

When most authors condemn *horseback riding* as being injurious for all those afflicted with any genito-urinary disease, then they are simply trying to perpetuate old established prejudices, copying erroneous statements that go from book to book, and give conclusive proof that they know very little or nothing about the question. Of course, like any other athletic exercise, horseback riding is injurious to various organs if done improperly. The rider who depends on his balance instead of upon a firm clutch of his legs, who rides with the stirrups low, cultivating exclusively a sitting trot, trembling like a jelly-fish, hitting the saddle with his perineum, rubbing and knocking his sexual organs against a high and hard frontal knob, or the other fellow who trying to ride the rising trot does what is usually called bouncing, have to blame themselves if they feel bad consequences. Riding properly done is not contraindicated in any genito-urinary disease where absolute rest is not required.

Dr. Clifford Mitchell of Chicago obtains good results in cases of 'neurasthenic impotence' by persistent bicycle riding, about ten miles a day, and presumes that horseback riding is also useful.

The long suffering public, pedestrians and horseback riders, who can never tell when a drink and speed-crazy hoodlum in an automobile is going to crush the life out of them, may feel some satisfaction by knowing that *motorcar speeding* causes sexual

impotence. I suspected this fact years ago, but did not dare to trust my own observations, fearing that my wish was the father of my conclusions. But then came such a careful and reliable observer as Notthaft[1] and reported four cases of sexual impotency in wealthy married men fond of automobile speeding and one in a chauffeur. Notthaft knows of similar cases in the experience of others. The sexual depression developed from three months to three years after special devotion to the sport. Notthaft ascribes the impotency to a cerebral neurasthenia from the nervous strain of the speeding. The intense concentration of mind required in speeding, the anxiety and the jar of the car—all tend to induce neurasthenia.

I think, however, that the jar of the car and the bouncing upon the soft and warm upholstery are the chief harmful influences, because the speeders that I have so far observed certainly had no mind worth to speak of to concentrate on anything.

An occasional massage of the genital region after Zabludowski's[2] method gives good results in some cases, but would be contraindicated where we have to deal with any symptoms of irritable weakness.

Gentle and careful massage of the testicles is indicated and very useful in premature senile impotence. It positively increases the blood-supply and, consequently, the semen-producing activity of

[1] Zeitschrift für Urologie, April, 1911. Journ. Am. Med. Assoc., May 20, 1911, p. 1519.

[2] Therapy of Impotence in the Male. Journal of Cutaneous and Genito-urinary Diseases, March, 1900.

these organs. Intelligent patients may eventually be instructed to act as their own masseurs.

In some cases *traveling* may have marked effect. An interesting journey, and especially if made on foot, in part at least, is beneficial; it engages the mind and draws the patient away from bad company or from undesirable conditions. Many patients have returned perfectly cured from a proper journey. Sea voyages also, if not of excessive length, do very excellent service in proper cases, and especially in those where temporary abstinence is positively indicated.

The *flagellations* that were known in ancient times,[1] and at one epoch enrolled in religious service, "la Discipline d'enhaut et la Discipline d'enbas,"[2] are in some sense a kind of massage. They are appropriated in our days by physically ruined debauchees as a means of stimulating the exhausted spinal cord. Ancient authors have a peculiar explanation for the stimulating influence of flagellations; for instance, Boileau:[3] "Cela pose, il faut de toute nécessité, que lors que les muscles lombaires sont frapez à coup de verges, ou de foüet, les esprits animaux soient repoussez avec violence vers l'os pubis, et qu'ils excitent des mouvements impudiques, à cause de la proximité des parties genitales: Ces impressions passent d'abord au cerveau, et y peignent de vives images des plaisirs défendus, qui fascinent l'esprit

[1] Roubaud, op. cit., p. 151.

[2] Histoire des Flagellans, traduite du Latin, de M l'Abbé Boileau. Amsterdam, 1701, p. 5.

[3] Histoire des Flagellans, p. 307.

par leurs charmes trompeurs, et reduisent la chasteté aux derniers abois."

Our explanation of the effect of these flagellations differs considerably from the above. Besides, we must dispense with these means of treatment. In some cases we may apply along the spine different aromatic and irritative substances, which cause a local hyperemia and are good substitutes for the flagellations. We shall take no notice of urtication, moxa, vesicatories, and similar things.

Albert Abrams[1] inaugurated a new method of treatment by *concussion* of the region over the eleventh and twelfth dorsal vertebræ. According to Eckhard erection is mediated by the nervi erigentes, stimulation of which causes a dilation of the arterioles in the erectile tissue of the penis with an increased flow of blood. These nerves arise from the sacral portion of the spinal cord which corresponds to the spines of the vertebræ mentioned above.

While at first rather incredulous, I have seen such startling results from the concussion (not vibration) of the various bodily regions, mainly over the vertebræ, that I feel justified in recommending that a trial be given to this method in all cases where it can be supposed that nerve-centers are in need of stimulation.

Professional and other inventors have always endeavored to construct **apparatus and instruments** designed either to remove sexual impotence itself or to enable the impotent to introduce the non-erected or only partially erected penis into the vagina. I

[1] Spondilotherapy, Philopolis Press, San Francisco, 1910.

refer here to the paradoxical apparatus for the pretended enlargement of the penis by Roubaud, who has found no imitators; to the so-called "ventouse" by Mondat, mentioned also by Roubaud; and to numerous other devices that are almost useless.

The first step in a practical direction was made by an inventor unknown to me, who constructed a small instrument in which a flourishing trade was carried on for a while, and which I described in the first edition of my "Pathology and Therapy of Sexual Impotence" (1889). There existed at that time also medical moralists who declaimed against such instruments; but, in spite of this, I was confirmed in my opinion, expressed at that time, that even a conscientious physician in cases especially worthy of regard, and when every other remedy had failed, could take upon himself the responsibility of advising the use of such an instrument. Shortly after the appearance of my work, letters from every part of the world came to me from physicians inquiring concerning the instrument, which was ample proof for me that such an apparatus was in demand.

The instruments were made of German-silver, silver, or gold, and consisted of two delicate splints connected at the base by a metal ring, and at the upper end by a soft-rubber ring. In the jargon of elderly bon-vivants it used to be called "the sledge," and fairly fulfilled its purpose, when made exactly to measure, in spite of considerable inconvenience arising from the fact that the penis was not supported at the base, and that the instrument certainly could not remain unnoticed and unfelt by the female partner.

The various chains, belts, plates, and other contrivances which, as Fürbringer says, bring to mind the amulets of old, we shall not consider at all, as they are calculated solely to abuse the ignorance and credulity of the masses, and are of greater utility to the rascally vender than to the gullible purchaser.

A real progress in the direction of the mechanical treatment of sexual impotence began with Paul Gassen's devices, and while his instruments are no more up to date, because surpassed in efficiency by newer inventions, we shall quote the opinions of Krafft-Ebing and others because they explain the motive, object and principle of such appliances in general. Gassen's "erector" consisted of a doubly coiled spiral provided at both ends with knob-like masses. The instrument was to be twisted round the member in such a manner that the greater button-like extremity was placed in the region of the anus, the smaller one on the right side of the frenulum. The first turn, consequently, was placed on the dorsal side of the basis of the penis, enabling it to exercise pressure on the vena dorsalis, thus possibly checking the reflux of blood from the corpora cavernosa.

The interest of European physicians for these instruments was awakened through Krafft-Ebing's[1] expert opinion, as well as Fürbringer's[2] article in the

[1] Gerichtliches Gutachten über ein von dem Techniker Paul Gassen erfundenes Instrument zur Behebung der Impotenz, genannt Erector. Friedreich's Blätter für gerichtliche Medicin und Sanitätspolizei, 1897, Heft 3, p. 217.

[2] Zur diätetischen und physikalischen Behandlung der Impotenz. Zeitschrift für diätetische und physikalische Therapie, 1898, Band I, Heft 1.

"Zeitschrift für diätetische und physikalische Therapie," and numerous experiments on the subject followed.

Krafft-Ebing, in his well-known opinion, given as an expert before the royal court of justice of Cologne, said, among other things: "Paul Gassen's erector is in general adapted to afford the results claimed for it in the circular, in spite of this being too full of self-praise, in so far as it promotes the erection, and gives to the penis at least part of the rigidity requisite for the inimissio in vaginam." Further: "Conditions of absolute impotence are, however, rare, and are caused only by severe vertebral and nervous diseases. In medical practice we have, in a vast majority of cases, to do merely with relative impotence through physical causes (exhaustion as a consequence of excesses of individuals who have abused the natural sexual pleasures or in consequence of onanism) or psychical (imaginary obstacles, fear of failure, etc.). Here a considerable or virtually the full power has been preserved, and the erector may, in the first case, compensate for the failing remainder of power, and afford, as it were, a crutch for the lame; in the latter case it acts, in combination with its mechanical action, psychically, and, awakening the confidence in the required capacity, it compensates for the imaginary obstacles called forth by the mistrust of his own power, under circumstances preventing erection; just as, for example, any one suffering from agoraphobia, being in this psychical anomaly incapable of crossing a square, is enabled to do so when accompanied at starting merely by a child.

"The inventor of the erector, in his circular, had in view as a layman merely the mechanical effect of his instrument, and those debilitated and enervated through sexual abuse. He had no idea that there are very many sufferers with impotence who are so from no fault of theirs, through psychical influence, and only requiring psychical aid.

"In so far, however, as the instrument is adapted, in cases of merely relative impotence, to accomplish important ends, at least to facilitate the sexual act mechanically, it gives a quasi-guaranty of the result in the case of the psychically impotent, and frees him, through the success attained, of his psychical obstacles, and thus renders him absolutely able. In this respect we might even speak of a (psychical) cure through the erector.

"As the potentia cœundi is a necessary condition for the potentia procreandi, the erector appears eventually also adapted for insuring the latter capacity.

"As, however, the instrument essentially facilitates the conditions for the accomplishment of coitus, impotence being for the one who suffers from it a physical and psychical evil, its use, rendering possible, as it does, the accomplishment of a function natural and important both for the body and for the soul (psyche), can in general operate only favorably, except in case one is misled by the artificial contrivance to excesses in coitus—a circumstance, however, which should not be attributed to the instrument, but to the wearer.

"In view of the very great frequency of impotence in modern society, and the significance of this evil for

those who suffer from it, as well as the imperfection of medicinal and physical remedies, the fact is readily understood that mechanical expedients have long ago been devised by physicians to come to the aid of failing or weakened power." Further: "Paul Gassen has, as we see, scientific medical predecessors in the domain of invention of mechanical contrivances for the removal of impotence, and the need of such will always exist, since, on the one hand, the medicaments at our disposal are only exceptionally able to cure impotence, and, on the other hand, the most important interests of patients are at stake: health, fitness for marriage, capacity for procreation, and, in the negative case, bodily and mental disease, suicide, adultery, etc.

"Accordingly, Paul Gassen's erector appears at the present time as the best expedient for the improvement and attainment of sexual capacity for all who are in the sad condition of needing the service of such mechanical contrivances, and medical science would have been under obligation to the inventor if he had placed his invention at the disposal of its representatives for trial and application, instead of making it from the start an object of advertisement and mercantile enterprise."

Fürbringer also thought that Gassen's erector must be considered an instrument constructed on rational principles, when used under proper circumstances. In a simple and ingenious manner it has completed the principle of the "sledge," under the form of an elastically flexible serpentine coil in such a manner that opposite to each point of pressure there is a cor-

responding point without such pressure. Prevention of natural erection in any way is accordingly excluded. Fürbringer joined also in the view of the two medical experts who, together with Krafft-Ebing, expressed themselves in those court trials, that by means of the erector the erection may be maintained after ejaculation.

Löwenfeld[1] was of the opinion that the use of these instruments should be limited to a very small number of cases, and warns against their use when patients are suffering from any "irritable" form of impotence, or from premature ejaculation in consequence of an irritable weakness of the lumbar sexual center.

My own experiences with Gassen's apparatus were, with respect to the erector, almost in harmony with the views just quoted. The erector, when made according to correct measurement, supports the member so that it can be introduced into the vagina when partial erection is present. Through the movements of coitus thereby rendered possible the erection is augmented or even completed in cases where this is possible at all, and a gradual vanishing of the erection, as usually happens in so many cases of neurasthenic impotence, is mostly prevented.

Gassen's compressors are no new idea; similar expedients were known to me years ago, but his compressors are preferable to the formerly used annular compressor, because they are easily put on and quickly removed. The compressors are hardly capable by themselves of causing an erection, but they

[1] Therapeutische Monatshefte, Feb., 1898.

can maintain and increase an already existing partial filling of the cavernous tissue, exerting, as they do, the necessary pressure to check the reflux of the venous blood, but not compressing the arteries.

The suction-pump called by Gassen the "cumulator" can, in particular and very rare cases, be used for a kind of gymnastics of the erectile tissue. It is new in execution, but the principle is old.

Considering the experience I have had with "the sledge," we must assume that the erector could bring aid in some cases of impotence. When I remember the case communicated by me at the time in which a psychically impotent young man was able to accomplish copulation only when he had the so-called "sledge" as a surety with him, without, however, ever really making use of it, it is to be expected that neurasthenic impotence will furnish a good field for these mechanical remedies.

Another of Gassen's instruments, the so-called "ultima" was in many ways the predecessor of *Williams' penile splint*, and of another more recent German invention called *Hercules*, which accomplish more than any other mechanical device invented up to date. Because the penis, with exception of the glans, is encased in a flexible rubber mantel, it might meet with prejudice and be objected to. I do not hesitate to advise the use of this kind of a last refuge in cases of incurable, paralytic, or senile impotence, where there are no erections but the seminal fluid is in normal condition, and the begetting of a child is ardently desired.

The penile splint, devised by Dr. Thad. W. Williams, and the so-called hercules are really practicable and enable the introduction of the non-erected penis into the vagina under all circumstances. Acting as a suggestive safety-valve they may be considered a legitimate therapeutic measure in neurasthenic and so-called psychic impotence.

In the treatment of most forms of impotence special weight must be attached to **the regulation of the sexual life.** Here also we must carefully consider the form of the disease, as well as the constitution and general disposition of the patient. There may be cases in which the physician is compelled to order absolute continence, in accordance with what we have previously stated on this subject. This advice will generally be indicated only in those cases in which the patient is to be convinced that he is in reality not impotent.

Generally, however, the physician will find it necessary to order the patient to have regular intercourse, and this advice may have to be given sometimes from the very beginning, sometimes later in the course of the treatment. The medical man must feel it incumbent upon himself to do his duty conscientiously and according to his best knowledge, even though he may fail to sustain his "dignity." The times have gone by when the doctor walked along gravely adorned with his doctorate's hat, his stick, and his periwig; they have gone by together with the periwig and the pigtail. It is well that they are passed, and it is to be hoped that they are forgotten. In our days we wish to advise and help the

sick. Our dignity does not suffer if we order regular sexual indulgence.

I notice with very much satisfaction that I am not alone in my ideas upon this subject, the expression of which, about twenty and some years ago, earned for me so much adverse criticism. Prince A. Morrow,[1] for instance, says, "The exercise of the sexual organs within certain bounds undoubtedly has the effect of strengthening, invigorating, and preserving them in their full integrity."

There is many a case treated and maltreated with all kinds of local applications, milked and massaged, where regular sexual intercourse, sometimes even a pseudo-excess, would accomplish all that is necessary.

The ampullæ, the vesiculæ seminales, the prostate, and other neighboring glands are sometimes filled with the products of their secretion. The result is hyperemia and its consequences. Lohenstein thinks that the secretory activity of the prostata is increased by retention of the products of the testicles in these organs. Whenever a physician finds a case where he thinks milking of the seminal vesicles or massage of the prostata were indicated, he can safely order regular and if possible repeated sexual intercourse. The natural way of emptying the sexual glands is contraindicated only in cases where gonococci cause a florid inflammation, but in such cases a physician with any capability of judgment will also refrain from massage.

In rare cases where gonococci are in a latent condition, but located in the prostata or even higher,

[1] A System of Genito-Urinary Diseases, vol. i, p. 1003.

our only chance to dislodge them is in a thorough and repeated emptying of all the sexual glands. This can certainly not be accomplished by massage or milking, but only through natural and if possible vigorous contractions. Of course, in such cases we must insist upon the use of a good condom, to guard against propagation of the disease.

Especially I must warn against imposing absolute and prolonged continence upon so-called elderly men. The sexual desires and powers of a man over fifty are easily put to sleep, and it may subsequently prove impossible to arouse them again. A rest of one week is the longest I ever exact, though longer intervals may be suggested in cases where an older man lives with a young wife, and where we order abstinence, knowing in advance that the first real desire, associated with a proper erection, will be the signal for the breaking of our commandment.

Regular sexual intercourse may be easily advised, but is a very serious question with the patient. As a rule, the physician can relatively do no more than he does when he prescribes for an anemic, neurasthenic, or exhausted pauper nourishing food, rest, fresh air, proper clothing, amusements, baths, and calisthenics. The hope that the fittest will survive is all that is left to us; but even on this question the doctor may not refuse advice, especially when he is rendered competent by knowledge of medicine and the world.

Whenever regular sexual intercourse seemed necessary physicians have, in all times, advised *marriage*. Now, marriage is a delicate and important affair.

Still, I do not entertain the views of those authors who will not admit that matrimony should be advised from the therapeutic standpoint. I believe that matrimony is a contract in which one party agrees to give something for something to be obtained in return. Of course, if marriage is considered "an immortal relationship,"[1] then it were necessary to wait until in heaven to take advantage of the benefits of this relationship. It is a serious matter to advise matrimony, for no physician wishes to carry on his conscience the misfortune that may arise from another man's matrimonial venture. It must, however, be admitted that marriage with a suitable person is the safest and most reliable remedy for many forms of impotence, and it serves also as a great preventive against the contraction of impotence. On the other hand, most patients object to matrimony. Many even have an aversion for marriage in general, and think they have sufficient reason for their belief. In such a case the physician will, of course, not insist on his advice. Others, again, dare not venture to enter into matrimony because they believe themselves to be unable to fulfil their conjugal duties. If the physician finds this to be true, there is again every reason for not advising matrimony.

A man who is even moderately virile had better be dissuaded from marriage, because his sexual weakness would render his hymeneal happiness doubtful unless he should happen to find a wife not particularly given to sexual pleasure. Here very great discernment and caution should prevail, because such a

[1] James Foster Scott, op. cit., p. 95.

quality is not to be read on the forehead or face of a woman. See here the beautiful diplomatic language with which Rosenthal[1] expresses his opinion: "In case of recovery or lasting improvement in the sexual power, a subsequent marriage to a person of calm temperament may be allowed in order to preserve the restored condition."

Lydston,[2] as usually, hits the nail squarely on the head when he says: "Marriage is too easy, divorce too difficult for the physical and moral welfare of mankind. Marriage should at least be as difficult to enter as it is to escape from."

As marriage is a heroic and very dangerous remedy not accessible to every one, and as a mistake in this affair is so difficult to correct, many a convalescent patient will be compelled to have recourse to other connections than hymeneal in order to satisfy his sexual desire, if he does not want to become impotent again or to be troubled again by morbid pollutions. He must satisfy this natural want regularly, and the act cannot be called immoral simply because it is accomplished out of wedlock. Such connections may be unknown to dried-up pedants who have never been young, but every man gifted with a heart and physical power is familiar with these liaisons in all their variations.

An individual weak in sexualibus is seldom lucky enough to captivate a woman's heart, and prostitutes are his only recourse. Modern prostitution is, as

[1] Ueber den Einfluss von Nervenkrankheiten auf Zeugung und Sterilität. Wiener Klinik, 1880, Heft 5, p. 141.

[2] Op. cit., p. 623.

Mantegazza[1] expresses it, "The product of the Christian virtue, which wants a perfect man, and the animal instinct, which drives the man into a woman's arms."

We must consider that the functional capacity in intercourse with a prostitute is not in proportion to the actual sexual power, and that real prostitutes—*i.e.*, those "whom any one can buy"[2]—are too repulsive to please the good taste of some patients. Again, we must consider the dangers of venereal diseases.[3]

It is obvious that a physician can in these matters give little advice to his patient, but must entrust him to good luck. Besides, when the physician has done his duty toward an individual and cured him completely or partially, he can generally yield him to his fate with tranquillity, because most of the sexually weak persons who take medical advice are of the intelligent and well-to-do class of society.

The sanguine hopes that were entertained once about the result of *inhalations of oxygen* have proved, by thorough investigation and experiments, to be a mere fata Morgana. Sometimes, however, this remedy may be given a trial, because it may be beneficial, and especially in cases complicated with anemia, leukemia, diabetes, dyspepsia, and chronic weakness.

The therapeutics of impotence has been greatly

[1] Gli amori degli uomini. Milano, 1886, vol. ii, p. 201.

[2] Jeannel, De la prostitution. Paris, 1874, p. 190.

[3] For fuller information see: Vecki, Prevention of Sexual Diseases. Critic and Guide Publ. Co., New York, 1910.

enriched by Motschutkovsky, who, while applying Sayre's corset, noticed that the body lengthened during **suspension.** Repeated measurements proved that this lengthening is due to the stretching of the vertebral column, and varies between two and one-half and five centimeters. This led Motschutkovsky to the idea of trying suspension in diseases of the spinal cord. The result was excellent: several troublesome symptoms vanished during the treatment. Of chief interest for us in this experimentation is the circumstance that in every case a certain number of suspensions removed all the preexisting disturbances in the sexual feelings and power. In Charcot's clinique at Paris the same fact was established, along with decided improvement in functional diseases of the bladder, so often accompanying tabes; and also the cure of neurasthenic impotence. Bernhard reports a case in which, after nineteen suspensions, erection and pollutions reappeared after having been absent for over a year.

I have treated with suspension numerous patients threatened with paralytic impotence, and in several cases obtained considerable improvement. After a few suspensions erections and libido partially returned. I never noticed lasting results, however. Everything returned to the old state a few days after the cessation of the suspensions, and, moreover, the suspensions themselves lost their efficacy after a few weeks. These suspensions in paralytic impotence may be compared to one of the last lashes given to a jaded beast of burden.

Since, however, suspensions have had some effect

on paralytic impotence, a disease in which therapeutics is usually powerless, it was certainly to be expected that they would produce better, or even satisfactory, results in forms of impotence that are easier to cure. Indeed, I have obtained very favorable results, and sometimes a perfect cure, in various cases of sexual neurasthenia.

One of these cases, which I published at the time, I shall reproduce here. A lawyer, thirty-four years old, somewhat thin, though always healthy, had in his youth passed through his experiences with onanism. After that he was on intimate terms for six years with a woman two years his senior. During this entire connection he never experienced any signs of impotence, for he was all that time able to accomplish the act to his heart's content. In the rare intercourse he had with prostitutes during those six years he had a few failures in coition, but did not attach any importance to them. For five weeks before he applied to me he had vainly endeavored to accomplish coition, although his opportunities had been most favorable and the responsiveness of his companion all that could be desired. Hence he was in a state of great excitement and believed himself to be quite and permanently impotent. After a fruitless attempt with nux vomica I proceeded to the use of suspensions, after having represented them to be a sure and infallible curative remedy. I was informed by the patient that he had erections in the night following the first suspension, and after the fifth he accomplished coition without my permission, and he assured me he did not need further medical treat-

ment. After the ninth suspension I dismissed him from my care.

Although the result was satisfactory in this case as well as in many others, I was not convinced that these suspensions had an aphrodisiac power, because I knew that psychically impotent persons are sometimes cured by the most inefficient means. To test the suspensions a little further I frequently used them on healthy persons. Though imagination may have had more or less influence on these persons, they asserted that the suspensions had a stimulating effect on the sexual desire.

I tried suspensions in a case of frigidity on the part of a married lady. Both she and her husband attributed the absence of children to this cause, but an examination was refused. Although in this case suspensions had no effect whatever, I do not contend that they have no efficacy in frigidity, which is not infrequent in women, and I think further experiments advisable. In the case just mentioned, I believe the wife had an aversion for her husband, although she assured me to the contrary.

For these suspensions I invariably use Sayre's apparatus modified by Motschutkovsky. The act of suspending is accomplished gradually and with great care. The first suspension never lasts over two minutes, but in most cases I have to limit it to one minute or less. By degrees, as the patients feel less afraid, the duration can be prolonged; but I have never gone beyond five minutes, not even when enthusiastic patients requested it. Almost without exception they were made every second day.

As to the manner in which the suspensions act, we must confine ourselves more or less to conjecture. Is the cause the momentary change brought about in the position of the spinal cord and its nerve-trunks? Is it the tension of the more peripherally situated nerves? Is it the increased pressure of the blood and the increased circulation of blood in the vessels of the spinal cord, which possibly is caused by the increased blood-pressure?

Of course, suspension is out of the question with persons suffering from defects of the heart, atheroma, aneurism, emphysema, cavities in the lungs, inclination to hemorrhage from the lungs, epilepsy, apoplexy, also advanced anemia. Every physician should devote his attention to these evils before commencing any treatment for impotence.

The study of the internal secretion of various glands opened before us an enormous field of possibilities. With hesitation I approached some years ago *organotherapy*.

When the medical world scoffed at Brown-Séquard in 1889 when he dared to come out with his "liquid testiculair," I ventured to give this remedy a trial and reported in 1906 as follows: My personal experience with Brown-Séquard's liquor testiculorum is best expressed in the words that Eulenburg[1] uses when he speaks of his own experience with Poehl's spermine: viz., "The results are varying and unequal, though sometimes surprisingly favorable without disagreeable collateral action." I can even go further and claim that the

[1] Sexal Neuropathie. Leipzig, 1895, p. 41.

results obtained from Brown-Séquard's liquid were at my hands always superior to those with Poehl's spermine. Invariably I noticed an increase of mental and physical vigor, and a considerable improvement in the activity of the spinal centers. Such improvement was observed in cases of general prostration and neurasthenia, and what is more significant, in the aged and even the paralytic. To this I have to add for the present time that I use Poehl's spermine only when, as of late, the genuine Brown-Séquard's liquid is not obtainable.

The late Poehl was able to isolate the substance spermin, which he thought was the active principle of the testicular extract. The present literature on this preparation is considerable. G. Hirsch[1] was inclined to think that Brown-Séquard's testicular emulsion contained both substances, which when injected are useful, and substances which have a disturbing action on the metabolism. Hirsch tried Poehl's spermine in cases of anemia, tabes dorsalis and endarteritis obliterans, and by his own observations and those communicated to him he had arrived at the following conclusions: The spermine has no specific action at all in particular diseases. It seems, however, to control in some way the metabolism or intra-organic oxidation, and by the removal of accumulated waste products to disencumber the nervous system, and so finally to favor the vis medicatrix naturæ.

As outlined in the chapter on Physiology, a great

[1] St. Petersburg Med. Wochenschrift, 1897, No. 7; British Med. Jour., 1898.

deal remains unexplained in regard to the properties of the living material composing the reproductive cells, and we must fully agree with Howell[1] when he claims that at present biological investigation along these lines is largely in the morphological stage. Thus, I am still not ready to go further than to state that I have obtained some remarkably good results with the internal and hypodermic administration of various glandular extracts, that thyroidin, adrenalin and mainly pituitary extracts give excellent results in properly selected cases, but that further experiments are imperative, that it must be warned against careless use, because damage is easily done.

We know now that deficiency of the posterior lobe of the pituitary gland is accompanied by a condition of sexual infantilism, that the blood-pressure is influenced by intravenous injections of extracts of the posterior lobe. I have used the extract of the posterior pituitary gland in several cases of congenital sexual frigidity and weakness accompanied by low blood-pressure, and found the results satisfactory.

The main difficulty in using the various biologic preparations is in the uncertainty of their pharmacological potency and the consequent perplexities of dosage.

The Journal of the American Medical Association[2] claims that "the wide range of physiologic activity found in samples of commercial pituitary

[1] A Text-book of Physiology, Saunders, Philadelphia and London, 1913, p. 944.

[2] April 10, 1915, p. 1250.

preparations from six prominent manufacturers is shown by the ratio of variability between the strongest and the weakest," that "no positive reason can at present be assigned for such marked differences in activity," and that "the need for uniformity in the strength of commercial pituitary products has thereby been made the more apparent."

It is very fortunate that, "realizing that there exists at present an ever-increasing demand for pituitary products, especially those made from the posterior lobe, without there being a generally accepted and accurate method of determining their activity, the Hygienic Laboratory of the United States Public Health Service has taken up the problem of pituitary standardization."

For the time being I am limiting myself to the use of the preparations of one reliable manufacturing firm, and thus hope always to receive preparations of almost uniform strength.

On the whole, a trial with the various organic extracts may be ventured; further experiments are desirable in order to establish proper indications and proper dosage.

Lydston's experiments on the implantation of the generative glands taken from the dead human bodies,[1] and his experiments with emulsions of organs taken from the dead human body[2] are of immense ingenuity and offer possibilities of which we only dared to dream. So far we must admire, though we lack the courage of following him on this field.

[1] New York Med. Jour., October 17, 24, 31; November 7, 1914.

[2] American Medicine, December, 1914.

CHAPTER IX.

SPECIAL THERAPEUTICS.

In this section we shall briefly discuss the curative methods as they are indicated in the various forms and grades of impotence.

The therapeutics of congenital and acquired malformations and defects in the sexual organs will be indicated in each case by an examination, and if anything is to be done at all, some surgical operation will have to be performed in nearly all cases. A timely circumcision can accomplish a great deal in selected cases, but should never be done just for the sake of doing something. The removal of tumors, mainly lipomas, and the radical operation of hydrocele may remove mechanical obstacles to sexual intercourse.

Impotence that has come in the track of different pathological conditions can be treated only after removal of these causal conditions, this being accomplished by well known and approved methods. Chronic and other diseases of any part of the urethra, prostata, vesiculæ seminales, etc., being mostly consequences of gonorrhea, must be treated "lege artis," but with moderation. Mild irrigations and careful dialations will accomplish more than caustic injections and other so-called therapeutic measures, which are dreaded by the patient, and always aggravate the various neurasthenic symptoms that may attend such diseases.

Goldschmidt's, Buerger's, and other endo-urethral knives are, for the time being, the best appliances for reaching and destroying cysts or papillomata of the region of and around the colliculus seminalis. Buerger's cysto-urethroscope and Goldschmidt's endoscopes enable us to locate various inflammatory and other lesions, and treat them properly and effectively.

The Oudin current, fulgaration and so-called diathermy with D'Arsonval's current are practical methods for the removing of various pathological conditions in the urethra, but I must, to my sorrow, oppose the enthusiasm of some newly made discoverers. One may go to work and examine hundreds and hundreds of male urethras, and never find a verumontanum that looks exactly as another one did; there is as much difference as there is in people's noses. You may examine sexually perfectly normal and even extra powerful men and find abnormalities, even pathological lesions, and you may find a perfectly normal posterior urethra in men suffering from various inexplicable forms of impotentia cœundi. And after you may have found some abnormality or lesion in the proper location, and have shouted your "heureka!" and then have gone to work and removed it, you may be greatly disappointed to learn later that your patient remained as impotent as before. It takes certainly a great deal more than fine technic to obtain therapeutic results in the treatment of such a perplexing ailment as sexual impotence. It is, however, self-understood that pathological conditions in the

urethra must be remedied as soon as found before any other therapeutic measures are employed. Many a time brilliant results are obtained.

Again I take the liberty of warning against harsh treatment of the complicated and delicate structures in the deep urethra. The remedy must never be worse than the ailment.

The internal use of some drugs—principally hexamethylenamin and its preparations, urotropin, helmitol, but mainly amphotropin—is frequently indicated.

Massage of the prostate gives sometimes good results, but regular sexual intercourse, whenever permissible, accomplishes better contractions of all sexual glands and is preferable to the milking of the seminal vesicles, whenever the patient is free from gonococci.

Valentine[1] found that those given to sexual intercourse throughout a long life are less prone to senile prostatic enlargement than those who led virtuous lives. This fact observed during more than a quarter of a century of medical practice seemed to alarm this genial though careful observer, and, to appease the prim ones, he added at once: "Far be it from me to even intimate that sexual profligacy may be a prophylactic of senile prostatic enlargement." There can be a question if those given to sexual intercourse throughout a long life always do deserve to be called "sexual profligates," but there can be no doubt about the fact that among the ailments caused by "sexual

[1] N. Y. Academy of Medicine, Feb. 19, 1902. Journal of Cutaneous and Genito-urinary Diseases, May, 1902, p. 242.

profligacy" senile hypertrophy of the prostata shines singularly by its absence.

In the treatment of the different variations of hypertrophy of the prostata which require surgical intervention the consideration for the patient's future sexual capacity is mostly of but secondary importance. Retention of urine and other very disagreeable symptoms always allied with more or less severe pain must be relieved first, and the patient's life should be made bearable and if possible prolonged. Moreover, these kind of patients are mostly advanced in years, and sexual capacity is then of no moment to them. However, the physician must always ascertain, if, and to what extent, sexual ability exists, and it is his duty to select a modus operandi which will not destroy whatever may be left. Ligation of the vas and Bottini's operation being practically abandoned we do not have to consider. Joseph B. Bissel was kind enough to state to me that none of his patients on whom he performed perineal prostatectomy with drainage[1] have suffered any change as to their sexual feelings and ability.

Wherever it is possible to respect the ejaculatory ducts, as some operators claim, we could readily understand that the potentia cœundi may remain unchanged, and regarding the potentia generandi only the finding of motile spermatozoa in the ejaculated fluid can be of conclusive proof.

J. Wiener[2] found that suprapubic prostatectomy

[1] The Relief of Prostatic Enlargement. Medical Record, Nov. 10, 1900.

[2] N. Y. Med. Monatsschrift, July, 1907, p. 108.

gives better results in regard to sexual capacity. He observed cases where prostatectomy even improved the potentia cœundi, but generally it remains as before.

James E. Moore[1] is of the opinion that the removal of the prostate by any route or method is sure to have a decided effect on the procreative power of the patient. He also emphasizes the reticence and untruthfulness of patients, and that it therefore is impossible to state how often bad sequelæ follow.

In this respect I had a significant personal experience. A wine-merchant sixty-four years old on whom I performed perineal prostatectomy in 1905, boasted to me of his improved sexual power, but his wife told me that there "was absolutely nothing doing." Now, did the man prevaricate or cheat?

Considering that we mostly have to depend upon the patient's statement, it is at least doubtful that even the most careful statistics are of great value. Young[2] sent letters to all his patients, and, summing up the gist of the answers, came to the conclusion that "the results obtainable by a conservative perineal prostatectomy in which the ejaculatory ducts and the floor of the urethra are carefully preserved" are "that ultimately in about 80 per cent. of the cases in which the sexual powers were normal before operation they finally become normal after operation." Young finds it very interesting "that in quite a number of cases in which intercourse was impossible before operation on account of impaired or ab-

[1] Meeting Am. Surg. Assoc., Phila., June, 1909.
[2] Journ. Am. Med. Assoc., March 5, 1910, p. 790.

sent erections there has been a complete restoration of the sexual powers as a result of the operation. In a few instances in which the patient complained of an impairment as a result of the operation a urethroscopic examination has shown considerable enlargement and inflammation of the verumontanum. A few applications of the nitrate of silver stick has been followed by a return of the erections, and it seems probable that decline in sexual vigor is due largely to disturbances of the verumontanum as in sexual neurasthenias of younger men."

In perineal prostatectomy Young, however, is in a class all by himself, and I am sure that his superior skill alone saves many an ejaculatory duct; as a rule, the results quo ad potentiam cœundi are better if the suprapubic way of operating is selected. Freyer,[1] who certainly has the largest experience with suprapubic prostatectomy, claims that "there is no diminution of the sexual capacity after enucleation of the enlarged organ suprapubically."

Dr. Henry Meyer of San Francisco, and of intravesical fame, has perfected an instrument which is so constructed that it cauterizes a wide groove in the enlarged prostate gland. The cautery-scoop is buried into the enlarged prostate gland, in the posterior urethra in back of the colliculus with the aid of a modified Goldschmidt posterior urethroscope. The white-hot cautery-scoop is slowly forced into the distended bladder, thereby leaving a large space for the urine to flow through. With the use of this instrument it is not possible to injure the ejaculatory

[1] British Med. Jour., October 5, 1912.

ducts, and it immediately makes space for the urine to flow through.

It is very gratifying that the foremost surgeons begin to consider the question of preserving the "beaux rests" of an eventual sexual capacity in old men. When the third edition of this book was published (1901) no one seemed to bother about it.

Fortunately castration as a remedy for the reduction of prostatic hypertrophy has been abandoned.

If impotence should still remain after the removal of all possible causes we must then call into service all the stimulating means at our disposal, together with a selected diet appropriate for convalescent patients. The means indicated then are, first, hydrotherapeutic measures, electricity, high frequency, river-bathing, sea-bathing and eventually the internal or hypodermic use of strychnin.

The treatment of inherited sexual weakness is very difficult. First of all the sexual desire must be awakened. This cannot be the business of the medical practitioner, but must be left to friends or relatives of the patient, who may be advised by the physician. After the sexual desire has once been awakened, we may proceed to the use of various means of stimulation in order to arouse the sexual power that possibly lies dormant, and here organotherapy is most useful. Experience teaches that results are not easily obtained. Fortunately, sexual weakness of a high degree is seldom inherited.

The medical science is of but little use in the cure of perverse sexual sensation. However, education or, perhaps, hypnotic suggestion and psychotherapy

may be of some benefit in all acquired conditions. No treatment can be of any use in cases of "imperfect differentiation of sex," and castration may be indicated as the only means to save the patient from disgrace and keep him out of jail.

When sexual neurasthenia and impotence have been induced by bad management of the sexual power, therapeutists must choose various means in accordance with the state and physical strength of the patient. In every case the treatment must begin with the regulation of the sexual life, and in some isolated cases it may be advisable to order continence of moderate duration. It will be proper to order for individuals in a declining condition, besides a correct diet and certain medicaments, gymnastics, massage, hydrotherapeutics, or general electrization and autocondensation of the body. In patients who are still physically strong you will find indicated, besides ordinary food, which need not be too delicate, hydrotherapeutics, local electricity, the sound or bougie treatment, local injections, cauterization of the caput gallinaginis, and, possibly, suspensions.

As above mentioned, in case onanism or spermatorrhea exists, we must endeavor energetically to correct them.

In the case of impotence originating from continence, which, however, is exceedingly rare, it is the physician's duty to reawaken the dormant virile power; that is, he must stimulate vigorously the sexual nerve-centers and tracts that have grown indolent from want of proper excitation. In this case, bad company, which has the reputation of spoiling

good manners, may do some good. If necessary, recourse may be had to electricity, douches, suspensions, and local stimulation of the mucous membrane of the urethra, especially of the caput gallinaginis.

Most of all, purely neurasthenic impotence presents numerous difficulties, because an unwise treatment may easily do harm. On the other hand, a physician who knows how to think will find this a most satisfactory field for his action, because good results are sometimes more easily obtained than in any other form of impotence. A wise, psychical treatment does much in such cases, but cannot constitute the entire treatment. Neurasthenic conditions cannot be cured by simply telling the patient that he is not afflicted. Often hypnotic suggestion does very good service.

In so-called irritable weakness we may exercise some good influence against precipitate ejaculation by toning up the body in general and the sexual power in particular. The means suitable for that effect are hydro-therapeutics, sea-bathing, river-bathing, gymnastics, massage, and the psychrophor and the sound to lessen the sensibility of the mucous membrane of the urethra. Every exciting means must be avoided in case the irritable weakness is attended by intense sexual agitation.

Edward Martin[1] recommends for the avoidance of premature ejaculation, "where the patient is educated and has a trained mind, the concentration of the latter upon some act of memory, such as recalling

[1] Impotence and Sterility. Hare: System of Practical Therapeutics. Philadelphia, 1892, vol. iii, p. 665.

a recitation, or upon some calculation in mathematics." I am afraid that such a scheme would work in but very few cases, because we know quite well that anything which distracts the mind from the sexual act is apt to impair the necessary erection.

I have found that one or two glasses of good beer taken before the act very often controls precipitate ejaculation. Circumcision is almost imperative in all cases where a hyperesthesia of the glans is caused by more or less of a phymosis. Very good results can be obtained by bathing the glans in a solution of tannin in alcohol as Lydston[1] recommends.

Whenever pathologic conditions of the ampullæ, vesiculæ seminales, the prostate and parts of the deep urethra are the cause of ejaculatio precox these must be treated lege artis. Massage of the ampullæ, whenever they can be really reached, frequently gives prompt relief.

In other forms of sexual neurasthenia the treatment will be determined in each instance by such causes as can be discovered, and the case may have to be treated symptomatically. The frequency of intercourse must always be regulated.

Impotence induced by occupation may also be a subject for treatment, but good results can then be obtained only when one succeeds in eliminating, or at least diminishing, the injurious influences of the occupation.

Genuine senile impotence can never be the subject of rational medical treatment, though one may sometimes pity an amorous old man. Mechanical devices are sometimes indicated.

[1] Op. cit., p. 587.

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