Clinical observations on diseases of the genito-urinary organs / by Henry James Johnson.

Clinical Observations

ON

DISEASES

OF THE

GENITO-URINARY ORGANS.

PART I.

GONORRHŒA AND ITS CONSEQUENCES.

BY

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LONDON:

HIGHLEY AND SON, 32, FLEET STREET,

Booksellers, by Appointment, to the Royal College of Surgeons of England.

1851.

WILSON AND OGILVY, 57, SKINNER STREET, SNOWHILL, LONDON.

PREFACE.

When House-Surgeon to the Lock Hospital, during the years 1832 and 1833, I published in the Medico-Chirurgical Review, of which I was then Editor conjointly with my father, the late Dr. James Johnson, some papers on the Treatment of Gonorrhœa and its Consequences. The views entertained by many surgeons appeared to me to be erroneous in themselves, and to lead to injurious results in practice. The opinions that I endeavoured to enforce, were, in the main, what will be found in the following pages. At that time, they were more heterodox than they are at present; and, although I do not pretend to flatter myself that the change is due to anything I may have written, I have the satisfaction of imagining I was in the right.

In 1840, Mr. Costello commenced the publication

of the Cyclopædia of Practical Surgery. At his request, I agreed to contribute to it a certain number of articles,—amongst others, those on Gonorrhœa and Syphilis. The greater portion of the data for the former had been put together, when the Cyclopædia was abandoned, and my published contributions to it were limited to some of insignificant extent.

I was now too much engaged to prosecute the plan I had entertained, of giving a complete account of those diseases of the genito-urinary organs which require surgical treatment. The editorship of the Medico-Chirurgical Review, my Lectures on Anatomy and Physiology in Kinnerton Street, the duties of Assistant-Surgeon to St. George's Hospital, and my private practice, left me little leisure, and less taste, for further occupations. I determined on a future, and that not a remote day, to resume the work I had begun. But, *l'homme propose et Dieu dispose.* I was seized with a formidable illness, the result of over-exertions, and I left England, as I thought, to die. A life of habitual temperance, nature, and time, decided otherwise, and I returned, after an absence of two years, again to practise my profession. The opportunity was now afforded me to recommence what

I had been compelled to interrupt, and the results are the present pages.

I have said thus much, not merely for the purpose of detailing circumstances uninteresting to every one except myself, but with the view of shewing that, though published now, this trifling essay was almost wholly written, and partly published, many years ago. Whatever its defects, I cannot help believing that it carries with it intrinsic evidence of individuality, and that it will not be found a compilation unavowed, or a translation in disguise. I have stated nothing of which I have not personal knowledge, and am alike responsible for the opinions and the facts. But, if there was nothing new in the days of Solomon, *à fortiori*, it cannot be looked for now, and, for my part, I am more anxious to determine what I believe to be true. In science, however, as in poetry, authors are an irritable race, and several may claim my views as their own. I decline the contest beforehand, contenting myself with the apology of Sir Fretful Plagiary:— "Homer and I hit upon the same idea, but, confound the fellow! he got the start of me."

My original intention was to comprise in one volume Gonorrhœa, Stricture, and Diseases of the Prostate Gland and Bladder. But the subject lengthened as

I went, and, under the influence of that composite feeling of impatience and of indolence, which many, I dare say, have experienced in a similar predicament, I determined to split it into three. A "great book" is both a "great evil" and a great bore, if not to him who writes, most certainly to him who reads it. Whether three little books may not be quite as bad, or worse, it must be left to others to decide. One more remark and I have done. Many write *for* practice—some write *from* it. Opportunity and circumstance place me in the latter category.

HENRY JAMES JOHNSON.

8, SUFFOLK PLACE,
PALL MALL EAST.
June 1851.

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ON

GONORRHŒA.

THE FORMS OF GONORRHŒA.

There can be no question of the impropriety of the term by which this complaint is generally known in this country, as it is *not* a discharge of semen. But the name is so familiar, and the nature of the disorder is so little liable to misconception, that we may speak of *Gonorrhœa* without danger of misleading or of being misled. I therefore retain an appellation sanctioned by custom, in preference to introducing a more correct, but new and strange one.

By Gonorrhœa, I would be understood to mean a discharge from the urethra,* ranging from transparent mucus up to bloodless or bloody pus, and comprehending within those extremes every shade of mucous or muco-purulent matter. The term, in this wide

* I put on one side gonorrhœa in the female. It will be adverted to hereafter.

sense, would include "Gleet" upon the one hand, and "Gonorrhœa virulenta" on the other, and one of less universal application would not, I imagine, meet the case.

I will not at present advance any opinion on the cause of the discharge, nor assert its specific or its non-specific nature. Although, in the great majority of instances, it results, or seems to result, from impure intercourse, it frequently occurs independently of such infection. The observations which follow will therefore apply to urethral discharge, whatever its origin may be.

The disorder presents itself under three forms, severally indicative of its intensity:—Acute or Virulent Gonorrhœa—Mild or Chronic Gonorrhœa—Gleet. In the first, the symptoms are decidedly inflammatory; in the second, they are less so; and, in the third, no positive feature of inflammation exists. It will be convenient and useful to sketch the leading characters of each, in order to be in a condition to adjust to it the requisite modifications of treatment.

I. Acute or Virulent Gonorrhœa.

In a well-marked case we find the following symptoms. A *puriform discharge* flows in considerable quantity from the urethra. If the patient is robust it is usually creamy, thick, leaves on lint or linen some deposit, with a brimstone-coloured stain, and stiffens it strongly as it dries. In other instances, the discharge

is more of a bottle-green; and, in others, it is dark, from mixture with the colouring matter of the blood; occasionally this is distinctly poured out, the patient voiding some drops of it after the urine, or suddenly losing a large quantity.* When the habit of the patient is cachectic, or in persons of a highly irritable temperament, the discharge is not unfrequently thin, copious, and dirty-looking. It has seemed to me, that a dark discharge has generally boded a protracted and troublesome disease.

The glans penis is often turgid and red, the orifice of the urethra invariably florid and tumid. If the lips are separated, and the mucous membrane examined with a speculum or glass, there will be noticed a punctuated vascularity, enlargement of the veins, or even spots of extravasation and abrasion of the epithelium.

Sometimes the inflammation extends to the cellular membrane and the prepuce. The whole penis is

* Profuse hæmorrhage from the urethra (I do not refer to hæmaturia from diseases of the bladder or kidneys) rarely happens, except from the excitement of coition. It may occur independently of gonorrhœa; many cases of this kind are related. I have known a young gentleman lose so much blood in the act of connection as to faint. But such bleeding is more common where the patient labours under gonorrhœa or stricture, when the vessels of the mucous membrane are congested. I have had under my care a gentleman who had suffered, for some time, from stricture and thin yellow discharge. Whilst engaged in sexual intercourse, he suddenly lost a quantity of blood, which he *estimated* at nearly a quart. He infected the female with gonorrhœa. Hæmorrhage sometimes takes place during chordee.

swollen, and more or less phymosis may exist. If the foreskin has been naturally narrow, or cleanliness indifferently observed, balanitis may be added.

There is *pain in the urethra,* in micturition, which may last for some time after it. The pain is commonly severe; in some instances intense. It is generally referred to the part of the canal just posterior to the glans, but occasionally is felt much farther back. A not unfrequent situation is opposite the scrotum, or it may be seated in the perineum. There is tenderness on pressure where the pain is felt.

Sometimes the urethra seems generally tumid, and is uncomfortable when touched or squeezed. This condition of the corpus spongiosum must not be confounded with actual inflammation of it.

It seldom happens that acute gonorrhœa is unattended with painful nocturnal erections. But painful erections are not *chordee.* In that, the penis is curved; in the former, it is not. Painful erections are much more common than chordee. The pain is, in most instances, experienced at the extremity of the penis, or immediately behind the glans; in some, it is seated farther back, or diffused in the urethra. It is difficult to imagine true chordee, without inflammation and some degree of thickening of the corpus spongiosum. But simple painful erection occurs independently of either, and is due to the inflamed mucous membrane being put upon the stretch.

An occasional symptom of acute gonorrhœa is frequency of making water, attended with uneasiness in

the region of the bladder, and irritation of that organ. Perhaps, in some instances, this is owing to the large quantities of liquid taken, or to the diuretic remedies prescribed. But, in other cases, it appears to be a feature of the original complaint : I shall notice it more fully when I come to the treatment of gonorrhœa.

Many patients complain of an uneasiness in the testicle. It feels heavy, or aches, or is tender to the touch. Something, perhaps, is to be attributed to fancy and to apprehension, something to the anatomical distribution of the nerves. In these cases, and indeed in all, it is advisable to direct the testes to be well supported.*

Such are the principal local symptoms met with in acute gonorrhœa, unattended with those accidental complications which I shall by and by describe. Of the general symptoms it is unnecessary to say much. They vary with the severity of the disorder and the constitution of the individual. In most instances there is little, if any, inflammatory fever or disturbance of the system. But in persons of a very sanguineous temperament they may occur; and in those of a nervous

* A *very* good suspender is a desideratum. Perhaps the best is an oval bag, the long diameter transverse, rising higher in front than behind, made of elastic thread, and attached a little below each corner to a string, which, passing along the groin to the loins, crosses there the string of the other side, and ties in front of the abdomen. Such may be obtained from Messrs. Sheldrake and Biggs, in Leicester Square.

habit, irritability, excitement, and pain, disproportioned to the occasion, may be exhibited.

II. Subacute, Chronic, or Mild Gonorrhœa.

The complaint may be originally developed in a mild form, or it may become so through the lapse of the acuter symptoms. When the latter is the case, it occurs gradually, though much more speedily in some persons than in others. It would be too prolix, and it is quite unnecessary, to discriminate accurately chronic gonorrhœa from the subacute, or either from a milder form. The terms imply the shades of difference, or of degree, by which these varieties are constituted. The succeeding observations will apply to them, therefore, in the aggregate, and may be made to fit each, with such slight allowances as even the student can suggest.

Discharge.—This ranges from a thick, yellow creamy matter, to a thin, nearly colourless, or dirty-looking fluid. Its quantity varies as much as its consistence. In one instance, the secretion, though thick and yellow, will still be copious; in another—and this is the more common case—a free discharge is only *yellowish* and thin; in a third, the discharge may still be considerable, but almost watery; at other times, we find the discharge trivial or scarcely observable at all.

As a general rule, subject, it must be owned, to a liberal discount of exceptions, when acute gonorrhœa lapses into subacute, the discharge grows more profuse

and thinner, its yellowness paleing in a proportionate degree. As the subacute form merges in the chronic, or the milder one, the quantity of the discharge again diminishes, until it has totally ceased. This would seem to be the orthodox course.

But, in many instances, as acute gonorrhœa declines, the discharge does *not* become abundant nor diminish in consistency. It simply decreases in quantity, until its final disappearance, remaining more or less thick to the last.

In other instances, the discharge is capricious. This may happen when the case has or has not been acute. The discharge seems to disappear, is absent for days or even for weeks, returns without any ostensible cause, and continues in this fluctuating state for an uncertain, and sometimes for a long period.

It is not uncommon, towards the close of gonorrhœa, for the patient to observe, once or twice in the twenty-four hours, a drop or two of yellow discharge in the urethra. This is usually noticed in the morning. It may continue for some length of time, neither getting worse nor better. I have known it last for two or three months, resisting every remedy that I could think of. I have also known it persist for some weeks, and then, without any obvious cause, be converted into a profuse discharge, attended with the other symptoms of acute gonorrhœa. In most instances it stops in the course of two or three weeks, under the influence of treatment or of nature.

Pain.—If the gonorrhœa is subacute, there is pain;

if chronic, or in its milder form, there may be little or none. When the complaint is slight from the first, there may be no pain nor scalding whatever; when it has been acute, some degree of pain very commonly survives the other severe symptoms. The pain varies in degree in different cases; its seat is usually just posterior to the glans, but it may be farther back, or more extensive. The state of health and habit of the individual exert great influence upon this symptom. Persons of a nervous temperament may suffer much and long from it.

Case.—A student at the hospital, of pale complexion, and rather nervous, contracted gonorrhœa. I did not see him until it had lasted for a month or two. He had taken copaiba during the inflammatory symptoms, with the effect of aggravating them. When he applied to me, there was a pretty copious, yellowish, and rather thin discharge, accompanied with much pain in and after micturition, as well as upon pressure, along the whole course of the urethra There was no induration of the corpus spongiosum. It is unnecessary to detail the particulars of the treatment. In spite of every means adopted for subduing irritation, pain continued; and it was many months before it ceased. It slowly yielded at last to the introduction into the bladder of metal bougies, and to *time*. In 1841, this gentleman contracted gonorrhœa again. Warned by the last, he this time adopted, from the very commencement, every possible precaution. But the same thing occurred. The pain along the urethra was as severe

and as obstinate as before, and it remained for nearly as long a period.

The ordinary course of things is this. As the acuter symptoms subside, the pain and scalding diminish, and disappear while the discharge is yet free and of yellow colour. The persistence of pain when the other symptoms are ameliorated, is the exception to the rule that I have stated.

Painful erections to any extent rarely attend on the milder forms of gonorrhœa. They decline as it declines, and have usually vanished even while uneasiness in making water is still present. In most instances they are scarcely experienced at all. Yet, like pain in micturition, they occasionally torment the patient of irritable habit, and exist to a degree, and remain for a time, which nothing but that habit will account for. I have seen some striking examples of this.

Glans penis and urethra.—The condition of the glans and of the orifice of the urethra is less marked in the mild, than in the severer varieties of gonorrhœa. But however chronic or however mild that disorder may be, there is rarely absent some degree of puffiness of the orifice of the urethra, some degree of redness, injection, or abrasion of the mucous membrane within. The appearance, indeed, is so characteristic that a glance often proclaims the existence of disease, even when there is little ostensible discharge. While redness and pouting of the orifice continue, the patient must not deem himself secure. Yet it happens in

those cases to which I have alluded, where the discharge is capricious, that the orifice of the urethra *may seem* healthy. And this may occur, too, in those other cases, where a drop or two of matter alone can be observed in the course of the twenty-four hours. Even here the orifice is seldom sound; some redness or congestion of the membrane existing in the greater number of instances.

Itching.—As the disorder wanes, the patient not unfrequently complains of itching. Sometimes confined to the orifice alone, it occasionally extends to a good part of the urethra, and may even involve the perineum and the anus. Though not a pleasant symptom, it is generally a favourable one. Like the pruritus that attends the healing stage of blisters and of burns, it may be deemed an omen of recovery. It is not always so.

Case.—A gentleman, of a strong but excitable habit, and prone to fulness about the head, became the subject of gonorrhœa, of not an acute character. This he neglected for six months or more, when circumstances rendered it indispensable that he should endeavour to get rid of the complaint. He placed himself under my care. In four or five weeks, the discharge was arrested, and, save a slight redness of the orifice, nothing seemed left of the disease. The patient, however, occasionally felt a sense of itching in the scrotal part of the urethra; and notwithstanding the encouragement I gave him, could not bring himself to think that he was well. His presentiment was a correct one. After several weeks of total freedom

from discharge, this burst out suddenly, and continued to recur at uncertain intervals for months. Prior to its ultimate cessation the urethral itching disappeared.

III. Gleet.

If the line of demarcation between acute and chronic gonorrhœa was not a bold nor a distinct one, neither is that between chronic gonorrhœa and gleet. As all are but degrees of the same affection, they slide into one another. What began as acute or as mild gonorrhœa terminates in gleet; and, *vice versâ*, what began as gleet may end in decided gonorrhœa. The presence or absence of a certain amount of vascular action seems to constitute the difference. Is *it* present, there is gonorrhœa; is *it* absent, there is gleet. It is difficult, or impossible, on any other supposition to explain the facts,—to account for gonorrhœa of every shade subsiding, as it does, into gleet,—or for gleet being excited, as it often is, into every form of gonorrhœa. I mention this, as some seem to suppose that there is a *specific* difference between gonorrhœa and gleet.

I would be understood to restrict the latter term to a thin mucous discharge from the urethra, colourless, or only slightly coloured, attended with no pain, except in some rare instances, and unaccompanied by any inflammatory symptoms.

The discharge varies in quantity, but is almost always inconsiderable. It is usually greater after

exertion; is most noticed in the morning; is irregular in its appearance, coming and going without obvious cause; is sometimes aggravated, sometimes unaffected, by free living; sometimes sympathises, sometimes does not, with the state of the bowels, the bladder, the health. Nothing, in short, is so inconstant as gleet; no disease, nor symptom of disease, so worthy of the character,—"varium et mutabile semper."

Gleety discharge produces a slight stain, like that of white of egg, upon the linen. Occasionally it assumes a yellowish tint, or becomes opaque and whitish. We may presume, when this occurs, some increase of action in the vessels. It is generally traceable to something calculated to give rise to that effect,—indulgence in wine, venery, or exercise.

In some instances, the only evidence of latent gleet is a more than usual moisture on separating the lips of the urethra. While this obtains in a person who has recently had gonorrhœa, he cannot be considered safe.

In other instances, the sides of the orifice are glued together. This is principally witnessed in the morning. It is evidence of the existence of some discharge, sufficient to come to the surface and dry there, but not sufficient to do more. Few have gonorrhœa but present this at its termination; it is in them a sign of the subsidence of the disease. But in protracted gleet, it is of no such good augury. In either case, it shews that the patient is not *well*, and that treatment is not to be abandoned. This indication of unsoundness is often disregarded by the patient and the surgeon too;

yet so long as it exists, both should scrupulously persist in the measures calculated for recovery.

The glans penis is unaffected in gleet, unless it is accidentally conjoined with balanitis. In many instances, also, the urethra seems healthy; but in some, the orifice is tumid or pouting, and a varicose condition of the veins, or a red point or two, or abrasion of the epithelium, may be rendered apparent by the speculum.

Pain.—As a general rule there is in gleet no pain connected with the act of micturition, nor is there tenderness in the course of the urethra, nor are painful erections experienced. But independently of those complications, which I shall afterwards describe, there are, in some few instances, pain and tenderness in the urethra. The patients most prone to suffer in this way are of pale complexion and of nervous temperament, the frequent subjects of exalted sensibility and of neuralgic affections. It is scarcely necessary to remark that gleet may depend, and often does so, on morbid states of the urethra, independently of gonorrhœa. Stricture, affections of the prostate gland, calculus in and irritation of the bladder, not uncommonly give rise to it. But here, gleet is the symptom, not the substantive affection; and to the latter form it is that these observations are addressed.

I may take this opportunity of alluding to a circumstance which not unfrequently alarms a patient, and is taken advantage of by quacks. In straining at stool, particularly if the bowels are costive, a glairy discharge

will sometimes escape from the urethra. This is often the case with those who have gleet; as often with those who have none. It results, no doubt, from the pressure exerted on the seminal vesicles, prostate, and urethra. It is most usual in persons of a lax fibre, and in such as have indulged in venereal excesses. In itself of little consequence, it may, however, be an indication of local or general debility. The charlatan, I fancy, makes the most of it, under the attractive and alarming name of "seminal weakness."

I shall revert to this subject—a melancholy and disgusting one—on a future occasion.

THE SEAT OF GONORRHŒA.

It is the popular opinion that gonorrhœa consists in an ulcer of the urethra. The pain, the puriform discharge, and the occasional tinge, or even flow of blood, are not unnatural grounds for such an error. Absurd as the notions of the public may be, in regard to medical subjects, it will be found, in a large proportion of cases, that they are nothing more than the descendants and remains of exploded medical doctrines. Such is the case in the present instance. It was believed by the profession that, in gonorrhœa, there was actually ulceration of the urethra, till morbid anatomy proved that there was none.

From some dissections, as well as from the observations of surgeons, it would appear to be now supposed by many that *the* seat of gonorrhœa is the fossa navicu-

laris of the urethra. I have myself examined the urethra of two persons affected with gonorrhœa, who died from other causes. In both there was a slight degree of vascularity about the navicular fossa, and there was little more. But it seems to me that conclusions founded on such data are not to be implicitly received. In the first place, there is no organ the vascularity of which is more affected by disease and death, than the urethral mucous membrane. In the second place, we have the evidence of our senses, that, in almost every case of acute gonorrhœa, a much greater extent of mucous membrane than the navicular fossa is directly implicated. The extent of the scalding; the red and turgid or œdematous orifice; the abraded urethra within; the amount of it painful to the touch or in erection, all demonstrate the diffusion of the inflammatory action. The quantum of that diffusion varies with the case, and, although we may admit that, under ordinary circumstances, it is limited to the first inch or two of the canal, we must remember that that limit is neither constant nor necessary. The intensity of the diseased action, the character of the constitution, and the nature of the treatment, may drive it towards the bladder, or the testes, and confer on it the erysipelatous type.

CAUSES OF GONORRHŒA.

Contagion.—Of course there can be no doubt, that the ordinary cause of this complaint is intercourse with a female who is labouring under it. It is the result, in

the great majority of cases, of the direct application of a morbid poison.

The latent stage of the disease—that, I mean, which intervenes between the exposure to infection and the appearance of the symptoms—varies most materially. Its average duration is about three days, when itching, smarting, a slight discharge, or some other indication of gonorrhœa shews itself. But though the third or fourth day is usually the one on which it makes its appearance, that is frequently postponed to the fifth or sixth, and occasionally witnessed on the second. Sometimes, and this is not *very* rare, the disease commences within twelve hours from contamination; and when it does so, I have generally found that it proves severe. The occurrence of symptoms may be protracted to the seventh, or eighth, or even tenth day. In a very few instances, I have known it so late as the third week, and, on two or three occasions, after the lapse of a month. It is evident, that, when the deviation from the ordinary course is so extreme, one cannot but be sceptical of either the good faith, the memory, or the observation of the patient. In most instances it is wiser to discredit *him*, than to suppose that the usual laws of disease have been disturbed. The experience of the surgeon begets, I am afraid, distrust, for he detects too many errors and too many falsehoods to pin his faith on what is told him. But not being given to credulity, and making every allowance of this kind, I am still disposed to think, that, now and then, the interval is as prolonged as I have mentioned.

It is hardly worth while, at this time of day, to discuss the question of the identity of the syphilitic and the gonorrhœal poisons. It is well known that John Hunter asserted that identity, and brought forward experiments in proof of it. He performed inoculation with gonorrhœal matter, and believed that with it he produced "chancres." Unfortunately, the work of John Hunter on the Venereal reflects no credit on his memory. Conceived in an unphilosophical spirit, it displays the worst faults both of his reasoning and style, and is more the production of a disciple of Aristotle than of a follower of Bacon. Starting with an arbitrary standard, the creature of his own imagination, he bends all facts and all doctrines to it; and, while we read, we are tempted to inquire, "could the man, who writes thus, have really understood what induction meant?" The work of Hunter did incalculable mischief, for it perverted the notions and the practice of a generation of surgeons, which is not yet entirely past. Happily, that work is consigned to the limbo of false doctrines and forgotten things, and the few who study it can hardly experience any other feeling, than that of bewildered surprise.

The experiment of Hunter, though frequently repeated, has not been attended with the results that he obtained. Even within the last few years, M. Ricord inoculated with gonorrhœal matter in a great number of instances, and never produced syphilis. How we are to reconcile the statement of Hunter with the fact, I shall not stop to ask; but I may observe, that, setting

experiment aside, analogy, experience, reason, were alike opposed to the view that he supported. The question is so conclusively settled, that argument is superfluous; and it may be received as an undoubted axiom, that the gonorrhœal and the syphilitic poisons are distinct.

There is, however, a form of Syphilis, which may be confounded with Gonorrhœa, and which, I dare say, has led to some of the confusion that existed regarding their affinity. It is the *syphilitic sore in the urethra.* A brief account of this, will not, perhaps, be considered misplaced, in connection with the present subject.

This sore is found in two situations—at the orifice of the urethra,—or, at a greater or less depth within it.

1. *The syphilitic ulcer of the orifice* sometimes begins with induration, and a sort of *balanitic* redness. The induration increases till the orifice feels like a solid ring, and the superficial abrasion deepens into distinct ulceration, involving either its entire circumference, or a considerable segment of it. The ulcer is of a yellowish red colour, gives rise to a purulent discharge, tinged, perhaps, with blood, and is usually the seat of much pain and scalding, when the urine passes over it. This sore is very liable to be accompanied with bubo, and if it proceeds unchecked, will probably be followed, like other forms of indurated syphilis, by psoriasis, and white ulceration of the mouth.

In gonorrhœa, both acute and chronic, an indurated state of the urethral orifice is occasionally witnessed; but that obviously results from the inflammation involving the

structure of the glans, and is unaccompanied with ulceration. Abrasion of the epithelium there may be, but a positive ulcer there is not. This suffices to distinguish the two cases, independently of their after course, which is essentially different.

In other instances, the syphilitic sore of the orifice is not preceded by any induration, and is not attended with much. It is of more yellow colour, no less painful, may be accompanied with præputial or other ulcers, and resembles, in its characters, the simple form of venereal, which it probably is. I have heard this called by hospital surgeons "the gonorrhœal ulcer." As I do not myself exactly understand what "gonorrhœal ulcer" means, I must, at present, content myself with believing it to be, what I have described it—syphilis. The only thing, which, by any latitudinarianism, I can conceive to constitute gonorrhœal ulceration, is that very superficial form of it which waits on *Balanitis*.

2. *The syphilitic sore in the urethra* is neither so common, nor so easy of discovery, as that which occurs at the orifice. I have not myself witnessed more than three unequivocal cases:—one at the Lock Hospital; one at St. George's Hospital; and one in private practice. They had all some features in common, and, if they represent such cases in general, the history of the affection would be this:—

After exposure to infection, the patient presents, in due course of time, heat and pain in making water, discharge from the urethra, painful erections, and the ordinary symptoms of gonorrhœa. The pain in making

water is not, however, so decidedly referred to the navicular fossa, or the orifice, as in that complaint; and the discharge is darker, and more inclined to be bloody. The remedies for gonorrhœa are unattended with benefit, and bubo, perhaps, appears. If no particular examination of the urethra is attempted, the case is treated as one of aggravated gonorrhœa, and, most probably, copaiba, cubebs, and injections, are resorted to, with the inevitable effect of aggravating the symptoms. If this course is persisted in, the corpus spongiosum may become extensively involved. Sooner or later, an eruption of the skin, with, probably, an ulcerated throat, reveals to the well-informed surgeon his mistake, or utterly confounds the bad one. Secondary symptoms have appeared,—most likely, exanthematous patches, or psoriasis.

But, long before this, a careful examination of the urethra itself *would* have detected an indurated spot, and *might* have prevented much mischief. The induration in question is found from an inch to an inch and a half from the orifice, is circular, yet flattish—about the size of a three-penny piece, or less—tender to the touch —and gives to the finger just the same impression as is conveyed on pinching up an indurated syphilitic sore upon the surface.

That this *is* a syphilitic sore is proved by the occurrence of secondary symptoms, and by the effects of mercury. So soon as the patient is under the influence of the latter, the seeming gonorrhœa begins to yield; the indurated spot subsides; and a course of the medicine

has, *cæteris paribus*, much the same effect, as when it is given for venereal sores of the integument.

Possibly I may be excused for subjoining a brief account of the three cases that I have alluded to.

Case I.—A young man was under my care, as out-patient, at the Lock Hospital. He had, apparently, the symptoms of gonorrhœa, for which he had been treated by a hospital surgeon, and for which I continued to treat him. But the remedies were productive of no good effect, and, after the lapse of about two months from the commencement of the disorder, an eruption of exanthematous character, combined with psoriasis, showed itself. This opened my eyes, and led me to inspect the urethra carefully. I found about an inch and a half from the orifice, a circular induration, flattish, tender to the touch, circumscribed, and feeling like a syphilitic sore. I concluded that it was one, and put the patient on a course of blue pill. The effect was decisive. The discharge, pain, and hardness all diminished, and disappeared; the eruption faded *pari passu;* and the patient was cured, by precisely the same treatment as would be adopted for syphilis, in its usual form.

Case II.—A gentleman consulted me in 1843 on account of what he supposed was an aggravated gonorrhœa. He had been, for between two or three months, under the care of an eminent surgeon, who had treated him for that complaint. The discharge was dark and bloody, the pain in making water diffused in the passage, and the "chordee" distressing. He had taken a

variety of remedies,—among the rest, copaiba, cubebs, and the Chios turpentine, in no inconsiderable doses. Nothing had relieved him, but, on the contrary, almost everything had made him worse.

I examined the urethra with attention. About an inch from the orifice, I discovered an induration of the sort already described. I had no doubt of its character, and told the patient my opinion, informing him, at the same time, that, probably, secondary symptoms would present themselves. This prediction proved too correct, for, before the end of the week, he was covered with the exanthematous eruption, followed by ulceration of both tonsils.

I had already put the patient on a course of blue pill and sarsaparilla. This he continued for seven weeks. In about a month from beginning it, the hardness in the urethra had vanished, the discharge soon followed it, and all the local symptoms were speedily removed. The secondary ones proved much more troublesome, and it was nearly two years before they were completely gone. This gentleman has since had healthy children, and continues well.

Case III.—An out-patient of mine at St. George's Hospital, presented himself with, what he called, an obstinate gonorrhœa. He had been under medical care for some weeks, but experienced no sort of benefit. On pressing the urethra, I found, in the usual situation, a hardness resembling that in the two other cases. This patient had indolent bubo in each groin. I pointed out to the pupils what I conceived to be the nature of the case, and observed that, as so long a period had elapsed

before mercury was given, secondary symptoms would be most likely to ensue. So it happened. There soon came psoriasis, white ulceration of the tonsils and palate, and syphilitic iritis. The mercurial treatment removed pretty quickly the local disease and the iritis, and greatly benefited the secondary symptoms : but, before the latter were extinguished, the man discontinued his attendance at the hospital.

I need not be at the pains, at present, to point out the very obvious differences between this sort of case and enlargement of the lacunæ, or induration of the corpus spongiosum. Those consequences of gonorrhœa will be described in their turn.

3. *Is there such a thing as syphilitic gonorrhœa?* In answer to this question, I shall relate two cases, which I give as they occurred to me, without pretending to offer any positive opinion on their nature.

Case I. — A footman, large, fat, and addicted to drinking, became the subject of gonorrhœa. He applied to me. The symptoms were not particularly inflammatory, and they soon lapsed into a mild form, which ended, in its turn, in gleet. For this I tried a number of remedies, without effecting any good, when he was attacked with acute synovial inflammation of the left knee-joint. With leeching, cupping, and a blister, this was speedily subdued, but it was only to give way to an exanthematous eruption, tawny-coloured, inclined to desquamate, intermixed with spots of psoriasis, and resembling, in all respects, secondary syphilis. The period at which this happened was about three months

from the commencement of the gonorrhœa. I had all along examined the urethra carefully, to ascertain if there was any discoverable cause for the continued gleet. I now redoubled my investigations, but with no result. There was neither hardness, nor particular tenderness, nor any clue whatever to the unusual symptoms, to be found. While I was waiting, surprised, and rather puzzled, to see what turn affairs would take, the poor fellow was seized with furious hæmoptysis, from which he escaped only to die, in a very few weeks, of phthisis pulmonalis. During the short period, which elapsed between the occurrence of the eruption and his death, the former grew rather fainter, but did not alter its characters.

Case II.—A young man, a miller, after exposing himself freely to infection, found that he had, as he supposed, gonorrhœa. He had discharge from the urethra, scalding, and the usual symptoms of the inflammatory form of it. He put himself under the care of a chemist, who gave him, from the first, cubebs, copaiba, and other medicines of the same description. Between two and three months of this treatment had elapsed, and finding himself no better, but rather the reverse, he consulted me. The discharge was abundant and puriform, the inflammatory symptoms considerable, and a small, but distinct, lacunar enlargement was felt, about an inch anterior to the scrotum. Of course, I prescribed the antiphlogistic plan, and advised leeches to the penis and a blister, which the patient was unable, from the nature of his avocations, to

apply. At first he improved; but, one evening, being in company, and unwilling to appear unwell, he drank one or two glasses of gin and water. The natural result was a return and an increase of the inflammation.

This had a second time begun to subside, when he came, in great alarm, to complain of a fresh symptom. An ulcer had appeared at the orifice of the urethra, two-thirds of the circumference of which it involved. It was yellowish, slightly cupped, with a distinct areola, a hardened base, and exhibited all the characters of the syphilitic sore of the orifice. At the same time, a bubo had formed in the left groin, and was tender to the touch, and menacing. I taxed the patient with some fresh misconduct, but he earnestly protested his entire innocence, and he was so thoroughly frightened at the present, and sick of the past, that it was impossible to disbelieve him. I waited three or four days, before I made up my mind to order mercury; but finding, at their expiration, that the syphilitic features of the case were more pronounced, I put the patient on blue-pill and sarsaparilla, and applied black-wash to the sore. So soon as the mouth exhibited the mercurial influence, the sore began to heal, and in less than three weeks completely cicatrized, leaving, as usual, induration behind it, to be removed more gradually. The bubo yielded as satisfactorily, and, what is worthy of remark, the urethral discharge, which had proved so obstinate to the remedies for gonorrhœa, disappeared with rapidity. What resisted the mercurial action most, was the enlarged lacuna.

Every one may speculate to his own satisfaction on these sorts of cases. Exceptions to the ordinary course of facts, they are too rare and too anomalous to impair our general views, or modify our general treatment. And yet they warn us against uncompromising dogmatism, and teach us the necessity for cautiousness of opinion, carefulness of observation, and circumspection of management.

4. There is a case, which I have witnessed more than once: and more than once heard quoted, as a proof of gonorrhœa giving rise to secondary symptoms. This is how it presents itself:—

A man comes to a hospital on account of a papular eruption, having all the characters of syphilitic lichen. Most likely, there is increased vascularity of the fauces: perhaps, some slight ulceration of the tonsils. There may be, too, or there may have been, iritis. Along with this group of syphilitic symptoms, the surgeon will, in all probability, find an elongated prepuce, or complete phymosis. If the foreskin admits of retraction, there may be no indurated cicatrix discoverable, but there will be balanitis, or its traces. There may be a slight gleety discharge, or the urethra may be healthy.

When the patient is questioned, ten to one he will tell this story:—*that*, some two or three months previously, he had phymosis, more or less complete,—*that* from the preputial orifice there issued discharge, which he and the surgeon took for gonorrhœa,—*that*, with time and treatment, the discharge subsided, and, pos-

sibly, the phymosis also,—*that* six weeks, or so, from the beginning of the disorder, the eyes inflamed, the eruption shewed itself, and his present symptoms were developed. This is a sketch from nature; and, I dare say, there are few hospital surgeons who have not witnessed the original.*

I think it must be evident, that we cannot look on this as a satisfactory example of gonorrhœa giving rise to secondary symptoms. For, first, there may never have been gonorrhœa; and secondly, there may have been superficial syphilitic sores within the prepuce. It is certain that these will sometimes leave behind them no appreciable induration, and yet be succeeded by secondary symptoms, which, so far as I have seen, are mostly papular; whilst the discharge which such sores

* The history given by patients should, in most cases, be listened to with reservation. Even in private practice, and amongst the educated classes, we have too often to remark imperfect observation, defective memory, and a disposition to deceive. In hospital practice we are still more exposed to all these sources of error; and it would be laughable, if it were not melancholy, to witness the flagrant contempt for truth which is continually displayed. I remember one man, a gardener, who applied to me, as an out-patient, at St. George's. He was married, and presented himself with as well-established an inflammatory gonorrhœa as could possibly be seen. When asked, when and how he had contracted it, he asserted, with a face which nothing could disturb, that he had, that very morning, gone up a tree, to lop some of its branches, and when he came down he found all the symptoms fully established! The pupils' laughter, and my own ire, were equally thrown away; and he stuck, to the last, to this most grotesque lie.

would produce, issuing from within the phymosed prepuce, might readily be mistaken for gonorrhœa, not only by the patient, but even by the inexperienced or incautious surgeon. I do not mean to deny that there may have been gonorrhœa only, but I do say that I have seen a great many cases of that complaint, and, where I could watch its course and knew what happened after it, I have never witnessed anything resembling what has been above described.

II. *The Menstrual Secretion.*

If positive contagion is, nine times out of ten, the immediate cause of gonorrhœa, it certainly is not the sole one. There can be no doubt, that the menstrual secretion, occasionally, and not *very* rarely, gives rise to it. It so often happens, from accident, or otherwise, that the intercourse of the sexes takes place during the catamenial period of the female, that, in the majority of instances, this is probably innocuous. When it does produce urethral inflammation and discharge, these run the usual course of gonorrhœa; and I know of no means of distinguishing them. The symptoms and the treatment are alike; the duration and severity the same.

How does it happen, that the menstrual discharge occasions disease in some instances, and is applied with impunity in others? I confess my inability to answer. The only suggestions I can offer are in the form of interrogatory.

Is the catamenial secretion of some women more

acrid and more irritating than that of others? Is it more so, in the same female, at one period than another? I am disposed to say "Yes," to both these questions.

Does the state of the male constitution, or of the male urethra, at the moment of exposure, affect the liability to suffer from it? I would again say "Yes." There is so much of inflammation mixed up with gonorrhœa, however it originates, that a condition of urethra predisposed to inflammation is, *ipso facto*, predisposed to gonorrhœa also. I am perfectly sure that drinking, high living, plethora, have this effect; and so has local excitement. The person in whose case such circumstances operate, may be affected by the menstrual flux, which to another, or to him, under different auspices, would be innocuous.

III. *Leucorrhœa, or other discharges of the female.*

Many women are subject to a yellowish discharge, perhaps in considerable quantity, just before, or, what is more common, for two or three days after, their periodical illness. The discharge proceeds from the uterus, and is due to the congestion still remaining in that organ. The cervix and the glandulæ Nabothi participating in the local fulness, contribute, no doubt, to the secretion.

This sort of discharge is apt to be very irritating to the male urethra. I have seen enough cases of gonorrhœa produced by it, to speak very positively on

this subject. Whoever has intercourse at such a time with a female, be she his own wife, or

"Chaste as the icicle
That hangs on Dian's temple,"

does so at some risk. One of the worst cases of gonorrhœa that I ever had to treat, happened in this way. A young gentleman, a personal acquaintance, paid a visit to a female, whom he had known before. Three days afterwards, he came to me with gonorrhœa, which, from the first, assumed a most inflammatory type, and, in spite of all care, produced inflammation of the bladder and testicle, and long and great suffering. The lady protested her innocence, and demanded an examination. I found that, immediately before the intercourse, the catamenia had quitted her; and that, at the time, she had, what she was mostly used to have, for one or two days or more, a yellow discharge from the vagina. When I made the investigation, which I did with every care, this had left her, and she was perfectly well. She confessed to me that, on a similar occasion, she had once before affected another individual.

A female, of rather dissolute habits, applied to me for advice. She was a milliner, and eked out her scanty earnings, as too many are compelled to do, by the assistance of some *friends*. Latterly, she had found, to her dismay, that these were falling off, in conse-

quence of her presenting them, from time to time, with what they did not bargain for—a gonorrhœa.

I found, on a sufficient investigation of the circumstances, that her menstruation was rather profuse; that, for nearly a week afterwards, she had been annoyed for the last year or two with a copious yellow discharge; that, when this ceased, she was perfectly free from whites, or any unusual secretion, till the following menstrual period; and that it was by intercourse during the continuance of the discharge, and by such intercourse only, that gonorrhœa was communicated. The cervix uteri was rather tumid and tender, and the glands of Naboth perceptibly hypertrophied.

It was evident that over-excitement of the uterus had produced an irritable state of it, accompanied with periodical inflammatory congestion of the cervix. Quiet, the application of leeches to the groins, mild aperients succeeded by gentle tonics, and injections of the acetate of lead, relieved the patient so much, that, after a while, she discontinued her attendance on me.

From what I have seen of cases of this kind, I am disposed to doubt, if the cure can always be depended upon. The uterus has acquired a habit of morbid excitability, and the repetition of exciting causes is apt to recall it into life.

IV. *Are the natural secretions of some females noxious, under some circumstances, to some individuals?*

Though I put this in the form of a question, I

entertain little doubt that it is so. The following cases are the grounds for this opinion.

Case.—A young man, a journeyman saddler, was a patient of mine, at the Lock Hospital, for some venereal affection. It was, if I remember rightly, superficial præputial sore, with verrucæ. He speedily got well, and being disgusted with such complaints, resolved, on a fitting opportunity, to marry. In the course of a twelvemonth it occurred, but, before "proposing," he consulted me, to ascertain if he was free from any possibility of taint. He was so; and I gave him a clean bill of health.

A short time after this, he presented himself one morning with a look of utter despair:—

> "A countenance so wan, so woe-begone,
> Drew Priam's curtain, in the dead of night,
> To tell him that his city was on fire."

On asking him what was the matter, he said that he had not been married a week, and he had got a gonorrhœa. And so he had, and a bad one, for the inflammation was violent, and the case ran an ample course. I examined the wife with the speculum. She was a strong and handsome young woman, the very picture of cleanliness and health, and with not even the slightest trace of leucorrhœa. The man had been moderate in intercourse, and there was nothing to explain what had occurred.

In seven or eight weeks he was cured. I interdicted

the marriage bed for six weeks after that, and then, he appearing perfectly sound, had once more connection. It was followed, in three days, with the same result—a decided and inflammatory gonorrhœa.

Active treatment—a still longer probation after cure—every possible precaution—were succeeded, a third time, on the resumption of communication between this unfortunate couple, with precisely the same consequences. All this time both remained under my immediate observation, and while the man had three successive attacks of gonorrhœa, the female had nothing whatever the matter with her. I may observe that, among other things, I made her employ injections, cold hip-baths, aperients, and such measures as would tend to correct improper secretions, if any such there might be.

The third gonorrhœa exhausted the saddler's patience. He sent his wife home to her friends, and he went into the country. Two or three years afterwards, he called on me. They were still separated, but he confessed that he had since had intercourse with others, without any bad results.

Case II.— A gentleman, of middle age, married a lady, rather, but not much, younger than himself. Both were, to all appearance, in good health. In early life, he had formerly had two or three attacks of gonorrhœa, but none for some years before this marriage. The immediate consequence of it was gonorrhœa. He was treated for it—contracted it a second, third, fourth time; on each occasion, in fact, when he attempted con-

nubial intercourse All the while the lady had nothing amiss, except the slightest possible leucorrhœa, apparently vaginal rather than uterine. She employed, notwithstanding, a variety of medicines, and of local applications, which I need not enumerate, as nothing prevented the occurrence of gonorrhœa on the husband's part; a separation ensued. I was distinctly told that connection with others did *not* give rise to disease.

I am induced to think, from the case which I am about to cite, that, under certain circumstances, the tendency to suffer, in this singular manner, wears out by degrees.

Case.—A gentleman conceived a passion for an actress, who became his mistress, and resided with him. The immediateeffect was a gonorrhœa. I treated him for it, and, in a short time, it had disappeared. Examination of the lady led to the discovery of nothing whatever wrong. When he was pronounced well, the intercourse between them was renewed, and again there followed gonorrhœa. His infatuation was such, that he resolutely refused to forego the *liaison*, and so soon as the attack had passed away, it was resumed. Matters went on in this way for a year or more, five or six distinct episodes of gonorrhœa having enlivened it. But the complaint lost force as it went, the latter seizures being much less violent than the early ones. Gradually the tendency to be affected vanished, and the parties lived together for a considerable time, without any annoyance of this kind.

Such cases as these tell their own story, which is not

much the clearer for attempts at explanation. The inferen e which appears to me the most legitimate, is that which I put in the form of a question, as a heading to the section :—that the natural secretions of some females are, under some peculiar circumstances, noxious. Whether they would be harmless to one man, although injurious to another, I possess no means of knowing ; I suspect they would be found to be so.

V. *Local Excitment or Irritation, Injuries, and so forth.*

The mucous membrane of the urethra, like mucous membranes elsewhere, is subject to inflame from over-excitement. If purulent ophthalmia is produced by the glare of an Egyptian sand—conjunctivitis by the reflected light from our own chalk cliffs—laryngitis, acute or chronic, from the exertions of the singer—gastritis from over-feeding or from drinking,—it is consistent with analogy and with fact to believe, that gonorrhœa may result from over-excitement of the urethra. I have seen enough to convince me that it is so, and, in one very severe and inflammatory case, there could be little doubt that this was the only cause. Excesses carry with them the seeds of their punishment always—immediate retribution sometimes.

Any direct irritant applied to the urethra may occasion inflammation of it. The introduction of caustic, strong injections, the passing of instruments, the escape of a calculus—anything, in short, which irritates the mucous membrane, may inflame it. I have known a

gonorrhœa brought on by a debauch on champagne, independently of any other cause.

Injuries of the part may, of course, produce a similar effect. In one instance, which occurred to me, a gentleman was riding in the Park, and was thrown with violence upon the pommel of the saddle. Much contusion of the perineum was the consequence, and acute urethritis.

VI. *Morbid Constitutional States.*

I entertain no sort of doubt that gonorrhœa is occasionally a symptom of constitutional disorder. There is no physiological, nor other reason, why it should not be so. If there are such things, which notoriously there are, as scrofulous, or gouty, or rheumatic ophthalmia, there may surely be similar kinds of gonorrhœa. That they are not frequent is certain; but it seems to me just *as* certain that they exist.

It must be remembered, that morbid states of constitution create rather a *disposition* to local disease, than actually produce it. The exciting cause is some irritant or stimulus, that acts directly on the part. A strumous child, for instance, has a tendency to inflammation of the eye—exposure of the organ to cold sets it up. A scrofulous habit may be more disposed to gonorrhœa than another, but *its* exciting cause being usually impure connection, it is laid, when it comes, exclusively upon the latter. Yet, who that observes the facility with which some persons contract gonorrhœa, compared with the impunity of others, can shut his eyes to the influence of constitutional predisposition?

It must be remembered, too, that the agency of constitution in the diseases of some organs, is more easily determined than in those of others. This is the case in the more compound organs, those into which several distinct tissues enter. The eye has a mucous tissue, a laminar tissue, a fibrous tissue, a contractile tissue, a vascular tissue, and a nervous one. One morbid state of constitution selects one tissue; a second pitches on another, as that which it peculiarly predisposes to disease. This very selection makes discrimination easy. Scrofula, in the eye, affects mainly the conjunctiva and the cornea—gout and rheumatism, the sclerotica—syphilis and mercury, the iris—fungus hæmatodes, the expansion of the optic nerve. But the textures of the urethra are too few, too simple, and too homogeneous, for this selection to be exercised, or the diagnosis to become so clear.

If I were to generalise upon the matter, I should say, that the gouty and plethoric habit is the one most disposed to gonorrhœa, and that in which it is most inflammatory—that the scrofulous habit is disposed to it too, but rather to the chronic form—and that the nervous and irritable habit is that in which it is most apt to be mixed up with inflammatory affections of other parts, besides the urethra itself.

But independently of gout or scrofula *predisposing* to gonorrhœa, I am mistaken if those peculiar states of system do not, occasionally, produce the complaint, without the interposition of any obvious exciting cause. The reader must judge whether the following cases will warrant such a conclusion.

Case I.—An old Baronet, in a northern county, one of that school whose loyalty was only equalled by its love of port, had been accustomed, for many years, to an attack of gout every spring and fall. In April, 1843, he found the well-known premonitory symptoms coming on, and made the usual preparations for receiving the enemy—that is, bottle in hand, he defied him. But, to his great astonishment, the twinges in the toe and ankle all at once disappeared, and a profuse discharge, with pain in making water, and every appearance of violent gonorrhœa, showed itself. He posted up to London, in a fright, to put himself under my care. Of course, I taxed him with knowing more about the matter than he chose to tell, but he solemnly assured me that a sexual cause was out of the question, and, his great age corroborating his assertions, I believed him. His alarm and excitement on the subject were too great to allow him to deceive me. The attack was as inflammatory as it could well be in a young man of 20, and he required and bore a degree of antiphlogistic treatment, that none but the gouty of his years could support. He got well, however, and I never heard of any bad consequences from the complaint. He has since had gout, as before, but no more *urethritis*. I should not forget to observe, that he was in the habit of passing, from time to time, lithic acid in the urine.

Case II.—A young gentleman, belonging to a family almost every member of which had suffered from scrofula in the cervical glands, had himself, when a boy, suppuration in them. About the age of 19, these

glands again took on enlargement, with some degree of inflammation, and everything promised a troublesome scrofulous affection. The next symptom that showed itself was strumous pustular ophthalmia, and this had not disappeared when the glands in one axilla were affected. A cough, with slight hæmoptysis, succeeded, but did not long continue. I began to entertain some apprehensions on account of him, when, to my surprise, urethral discharge, with little or no scalding, but with enlargement of the inguinal glands on both sides, supervened. He positively repudiated all idea of infection, which, indeed, his wretched state of health made most unlikely. I concluded, therefore, that this, like the otitis of scrofulous children, was but a symptom of struma. As such I treated it. It may readily be imagined that such a patient did not speedily get well. After using steel, sarsaparilla, the iodides, &c. for some months, he required a summer at the English coast, and a winter at Naples, to restore him. In that way, he regained his health, and has, ever since, preserved it.

VII.—*Can Gleet produce Gonorrhœa in another?*

In every argument, it is indispensable that those who engage in it, should be perfectly agreed upon its terms. The fable of the Chameleon is continually renewed. Sir Astley Cooper, I think, observed in his Lectures, that he used to suppose a gleet not infectious, until a patient, acting upon his advice, and marrying with it, communicated gonorrhœa to his wife. The conclusion that Sir Astley drew from this, was, that gleet *may* be infectious.

If this question admits of a satisfactory answer at all, it can only be by determining accurately, beforehand, what gleet is. I have already observed, that many, both in the profession and out of it, give a liberal acceptation to the term. In their point of view, almost any discharge, unattended with pain and inflammation, is a gleet. If that be the definition of it, I am confident that no man can tell, *à priori*, whether a given case will have infectious properties or not. But, if the denomination be restricted, as it has been in the preceding pages, to a discharge from the urethra of a glairy character, colourless, or with the slightest tinge of colour, and unattended with pain or inflammation, then, all I can say is, that I never saw it give rise to gonorrhœa, nor do I think it would do so.

There is, however, *one* circumstance to be taken into the account. Inflammatory urethral discharge, whatever causes it, is, to all intents and purposes, gonorrhœa. Gleet implies an unsound state of the mucous membrane; that state may be lit up into actual inflammation, by local or by general excitement; and, being so lit up, there is the machinery for the production of gonorrhœa in another.

This, I take it, is the explanation of those apparent anomalies that have been witnessed, and I believe that whoever marries with a gleet upon him, incurs, or makes another incur, a risk, which, however small, has still, in a calculation of chances, *some* numerical value.

Miscellaneous Causes of Urethral Discharge.

1. *Epidemic Gonorrhœa.*—This I have neither seen nor expect to see. Were urethral discharge, like the catarrhal flux, produced by atmospheric influence and changes,—or, like the epizootic diseases, the produce of animal miasmata, we might expect that it would obey the same laws, and exhibit epidemic phases. But, as it is the result of direct contagion, it would be as reasonable to look for an epidemic gonorrhœa, as for an epidemic vaccination.

2. *Worms.*—Such is the physiological connection between the urethra and the rectum, that worms *may* occasion discharge from the former. I cannot say I ever saw them do so. We are told that this is common in female children. Worms are frequent enough in the childhood of both sexes; but urethral discharge, in the boy, is a rarity; and, in the girl, is usually explicable, when it does occur, in a much less recondite fashion. The sympathies of the organs of the body are numerous, but the fancies of writers are still more so.

3. *Hæmorrhoids.*—It is so orthodox a point of belief, that hæmorrhoids give rise to gleet, that I presume it would be heresy to doubt it. One cannot prove, and one should not, therefore, assert a negative. But, with all the disposition in the world to be convinced, I am compelled to own, that I have, in no one instance, been thoroughly satisfied that piles have given rise to gonorrhœa. In an irritable state of the urethra, a gleety dis-

charge is so readily and so frequently produced, that, as most people have hæmorrhoids, more or less, the two affections, in the chapter of chances, must occasionally go together. The patient himself is always willing to father, or to foster, an idea of this kind. It screens his foibles, salves his conscience, and tranquillizes his alarms.

4. *The accidental application of gonorrhœal matter.*—Could one only be so complaisant as to believe what one is told, this would be a *very* frequent cause. Nothing is more common than for a patient to hint, with hesitating accent and with downcast look, that he has a *little* discharge from the urethra, which he *rather* thinks he owes to the water-closet. That cross-examination, which, by the strange perversity of men, is almost as necessary, for the discovery of truth, in the consulting-room as at the bar, lays bare the flimsy fraud. Without utterly denying the possibility of occurrences of this description, I must confess that I have little faith in them. The surgeon's belief will be large enough, if he credits one story in a thousand.

TREATMENT OF GONORRHŒA.

It is difficult to enter on the treatment of gonorrhœa, without some degree of embarrassment. The general plans and individual remedies, in vogue at one time or another, have been almost as various as their authors. Each has been vaunted with a degree of confidence, staggering to those whom experience has not often undeceived. The most flattering promises and bold as-

surances have ushered in methods of the most opposite description, their only common features being marvellous success, and undisguised empiricism. Specific after specific has been cried up as infallible, the virtues of one not appearing to render one whit less necessary the equal virtues of the next.

To collect and compare all these modes of treatment, to weigh their merits with impartiality, and pronounce an unimpeachable decision on their claims, would be no easy and no pleasant task. Nor would the profit compensate the pains, such a critical catalogue of nostrums being calculated rather to perplex than to instruct; to nurture scepticism with regard to all treatment, than to fix the principles of any.

I shall endeavour to lay down those principles in a simple and consistent form—to bring gonorrhœa within the pale of diseases *rationally* treated—and merely sketch the leading methods, in order to point out the dominant ideas of which they are the representatives.

I. *Expectant Method of Treatment.*—The simplest treatment is that which once found, and perhaps still finds, more advocates upon the continent, than amongst ourselves, and consists in doing very little. This Hippocratic practice relies on the "vis medicatrix naturæ," and presumes that, with slight help, she will effect a cure. Its disciples imagine that gonorrhœa, like the catarrhal flux, has a tendency to run a course, and arrive at a spontaneous termination. To a certain extent they are right. But, be the analogy true or false, experience does not confirm the expectations founded on it. The surgeon who calculates, in a san-

guine manner, on this natural cure of gonorrhœa, will probably be more remarkable for patience than success, and will find that, like the rustic,—

> —— expectat dum defluat amnis, at ille
> Labitur et labetur in omne volubilis ævum.

The remedies that compose the *expectant* pharmacopœia may be very readily summed up: mild purgatives, enemata, diluent and mucilaginous drinks, saline medicines, hip baths, or general baths, constitute its main items.

Of the *diluents*, as barley water, linseed tea, &c. with or without gum tragacanth or gum arabic, I need not speak; they are given with the view of augmenting the amount of urine, and of rendering it less acrid. A large quantity of liquid will, of course, have the effect, under ordinary circumstances, of occasioning a proportionately large quantity of urine; and, its salts being diffused through so copious a menstruum, the fluid must necessarily be rendered less irritating. Observation confirms so obvious a dictate of common sense, patients almost always experiencing relief from the liberal use of diluents. But it is not so certain, that the addition of mucilaginous ingredients increases the efficacy of the drink. The popular, if not the professional idea, that they tend to sheathe the urinary passages, and lubricate them as they pass, is probably founded on an erroneous chemistry, for there seems good reason to suppose that these vegetable proximate principles are digested, and do not reach, as such, the kidneys or the bladder. Yet it must be owned that they can do

no harm, and whilst they afford a mild sort of nutriment, they look more medicinal and are somewhat more palatable than plain water.

The operation of *saline medicines* is of a less questionable character. They excite the action of the kidneys, and affect the composition of the urine. But if acid urine irritates the bladder and urethra, an alkaline state of it occasions irritation also; the frequency of making water, uneasiness in the passage, and even tenesmus, being not unfrequently considerable. The condition of the water should, therefore, be looked to, and, if alkalescence is found to exist, the salines should be withheld or modified.

The use of *hot baths* in gonorrhœa would seem to be carried to a preposterous extent upon the continent. Patients are immersed in them for hours together, and are nearly parboiled every day for months.

Case.—A young gentleman, who had just entered the Army, consulted me on account of a gonorrhœa, which had existed for nearly three months. He had contracted it in Paris, and had been under the care of a French surgeon in that capital. In addition to the liberal use of ptisanes and lavements, he had been directed to remain in the warm-bath for five or six hours daily. Indeed, it had been hinted to him, that it would be well if he spent the greater part of his time in it. After a maceration of upwards of two months, perceiving that the discharge was as free as ever, he set out for England, and soon after his arrival applied to me.

It is unnecessary to pursue the consideration of this method of treatment. I would not be understood to say, that, under its use, gonorrhœa will never disappear. In good constitutions, the disease may wear itself out, with little or no assistance from art. But the process, under the most favourable circumstances, must usually be a protracted one, and its tediousness leads to the commission of irregularities, which tend to protract it still more. In many instances, if not in the majority, a cure may never take place at all. A chronic discharge, or a gleet, is set up, which may annoy the patient for years, or for his lifetime, and which offers a premium on the subsequent occurrence of swelled testicle, or stricture, or some other of the evils that wait on a morbid state of the urethra. Experience and reason have combined to condemn the *expectant* treatment.

2. *Antiphlogistic Method of Treatment.* — Contrasted with the advocates of *that*, are those who are all for *strong* measures. In their opinion, gonorrhœa is an inflammatory disorder, a real *urethritis*, to be put out, like other inflammations, by depletion. It is singular, that both sects have flourished most upon the continent; one extreme, we may imagine, conducing, by a sort of inductive process, to generate the contrary. The human mind seems naturally disposed to vibrate in an arc, like that of the pendulum—the farther it goes to one side of the perpendicular, the more it swings to the other.

I will not say, that general bleeding and antiphlogistic treatment of an active character can *never* be

requisite in this complaint. In persons of a plethoric habit, the inflammatory symptoms may be so acute as to demand it. But I have never seen a case in which venesection was requisite for gonorrhœa, independently of any of the complications that may wait upon it, and I apprehend that, in general, measures of a very lowering character are neither needed nor judicious.

3. *Empirical Method of Treatment.*—The numbers, however, who treat the disorder indiscriminately by either of the methods I have touched on, is not to be compared with those who resort to the empirical employment of "specific" or "revulsive" remedies. Copaiba, cubebs, injections, even mercury, have, or have had, their respective partisans, who laud their favourite plan as of sovereign efficacy, and employ it in almost every case, under almost any circumstances.

Confidence in specifics marks a low state of medical science, and is usually in an inverse ratio to its cultivation. Before the nature of the morbid actions which constitute disease was understood, each group of symptoms was erected into an individual malady, and a search was commenced for its appropriate antidote. The pharmacy of uncivilised nations is made up of substances, which, however simple, have marvellous properties attached to them. As medicine made progress, symptoms were found to be merely the exponents of certain actions, common to apparently different disorders, and the discrimination of such actions, and their regulation, came to supersede the blind application of nostrums. But, along with the development

of physiological and of pathological views, pharmaceutical discovery produced, from time to time, some drug possessed of such remedial powers as to approach very nearly to "specific." The Peruvian bark, mercury, sulphur, iodine, are instances of this description. The introduction of such remedies has generally been characterised by extravagant anticipations of their value; and their employment has been as indiscriminate as their virtues were exaggerated. It is only when observation and experiment, assisted by analogy and reasoning, have taught us to direct the administration of these remedies by our physiological and pathological knowledge, that it has become successful, or even safe. I fancy, that if the benefits and evils of mercury were impartially summed up, the former would be found to leave us little cause for exultation.

I should feel disposed to apply these observations to the case before us. Copaiba and cubebs, and medicines of that character, exerting, as they do, an indisputable influence over urethral discharge, have been, not unnaturally, invested with more than they actually enjoy. The symptom which they control has been considered the sum of the disease; and the different conditions of the urethra that attend it have been either disregarded, or esteemed of subordinate importance. The presence or absence of inflammatory action, and its probable influence upon the treatment, have been thought unworthy of attention; and whilst most surgeons have used these stimulating drugs without any reference to it, some have even gone so far as to protest

that the existence of inflammation renders their beneficial operation more decisive.

The result of the prevalence of such views has been, a looseness in the observation of the phenomena of gonorrhœa, carelessness in the examination of the urethra, neglect of the morbid states of its constituent parts, and the most unscientific and unsatisfactory treatment of them. Persons who give copaiba or cubebs, or employ injections, during the inflammatory stage of the complaint, may use the same means, and undoubtedly do so, for enlargement of the lacunæ, induration of the corpus spongiosum, or ulcers within the canal. Such improper management, though sometimes the consequence of not knowing better, is more often due to the recklessness I have alluded to, and to inattention to the actual condition of the parts.

Rational Method of Treatment.—While I view with scepticism the reputed powers of these sorts of remedies, I am disposed to lean to those principles of treatment which constitute the basis and the pride of modern medicine. The general views at which we have arrived, founded as they are on observation, obtained at such a cost of time and of experience, consistent with reason, and wearing the attributes of that philosophy which has done so much for the natural sciences, seem to me as applicable here as in other parts of the body. If it be both scientific and successful to put down inflammation of the mucous membrane of the throat, the larynx, the lungs, or the intestines, before we venture upon stimulants, I cannot see,

à priori, why it should not be as scientific and as successful to endeavour to put down inflammation of the urethra before we stimulate *it*. It may be answered: —"The reasoning is specious; but facts establish the contrary." If that answer be given, I join issue *on* the fact. I contend that the practice is *not* successful, and that it *is* unsafe. If I am to trust the evidence of my senses, it constantly fails in effecting a cure, and frequently induces troublesome or serious results.

Before I became house-surgeon to the Lock Hospital, I was in the habit of using stimulants (such were the lessons and the practice of the day) during the inflammatory stage of gonorrhœa. At the Hospital, I had an opportunity of testing that practice on an extensive scale, and of closely watching its effects. I soon grew disgusted with it, and perceived—what all my subsequent experience, public and private, has confirmed—the necessity for some principle on which our treatment should be based.

That principle I believe to be, to look on inflammation as a substantive thing, *plus* the gonorrhœal discharge; to be met by means adapted for itself; and forbidding, whilst it lasts, the use of stimulants.

I am afraid that the treatment of gonorrhœa will always be in some degree unsatisfactory. Peculiarities of constitution, and the irregularities of patients, will occasionally render a discharge obstinate, or give rise to secondary complications. A plan which shall in all instances effect a cure—"citò, tutè, ac jucundè"—is yet, and is likely to be, a desideratum. Gonorrhœa is

too unstable a thing, constitutions differ too radically, to allow us to indulge the hope, that one remedy will ever be discovered applicable to all stages and all forms of the disorder. But the rational treatment which I am advocating has, at all events, the merit of being the safest, and is, I conscientiously believe, the most successful of any. Now and then, a case will be cured off hand by rough measures; but balance against that the chronic discharges, gleets, enlarged lacunæ, strictures, swelled testicles, inflamed bladders, that are pendents to them, and the profit side of the account will be found a shabby one.

This picture may be considered overcharged. I do not think it so. Every year strengthens my conviction of the danger of stimulating treatment, and furnishes fresh proofs of its bad consequences. It would extend these observations beyond their proper limits, to adduce even a tithe of what has come under my own observation. I may, perhaps, be pardoned for a brief account of two or three cases,—not, perhaps, the strongest I could cite.

Case.—*Inflammatory Gonorrhœa—Exhibition of Cubebs—Acute Inflammation of the Bladder—ultimate Death.*—A student of medicine contracted gonorrhœa, which, when I saw him, presented the usual inflammatory symptoms. I recommended this gentleman to be purged, to live low, remain quiet, take diluents, and pursue the antiphlogistic treatment. But he was caught with the opinion, then in fashion, that

the inflammatory stage was *the* stage for cubebs, and he took it. After a few days, the urethral discharge diminished, and acute inflammation of the bladder was set up. For two or three months this young gentleman voided, with the urine, large quantities of pus, occasionally tinged with blood, and accompanied with all those distressing symptoms which may be readily imagined. The attack slowly passed away, but left him much impaired in health and strength. His constitution, indeed, had received a fatal shock; for, ever after, exposure to cold, or more exertion than usual, brought on an inflammatory condition of the bladder, and profuse discharge of pus from it. Independently of other mischief, a secondary abscess was found, after death, in his liver.

Case.—*Inflammatory Gonorrhœa—Copaiba—Abscess in the Perineum—Death.*—A groom, who was labouring under inflammatory gonorrhœa, took large doses of copaiba, and continued to ride on horseback. What he called chordee succeeded, and then he was unable to evacuate his bladder properly. Some few days after this he was brought to St. George's Hospital, and when I saw him, he was in a typhoid condition. Urine dribbled from the bladder, which was excessively distended. There was a certain degree of fulness in the perineum. I introduced the catheter with great difficulty, being obliged to give it a more abrupt curve than usual. An immense quantity of water was drawn off. Supposing that there was a putrid abscess, I cut

deeply in the perineum, and let out much stinking matter. But the patient did not rally, and two days afterwards he died. On examination of the body, there was found to be an extensive sloughy abscess, stretching into the pelvis. All the contiguous parts were in a gangrenous condition. The mucous membrane of the urethra was entire, although the muscles and cellular tissue, surrounding the membranous part, were involved in the suppurative and sloughing process.

CASE.—*Inflammatory Gonorrhœa—Copaiba and Injections—Acute Inflammation of the Bladder—"Lacunar Abscess."*—A young medical student, of good constitution, and in excellent health, contracted gonorrhœa, which assumed its usual inflammatory symptoms. He took copaiba, and injected into the urethra a very weak solution of the nitrate of silver. Inflammation of the bladder instantly succeeded, and he placed himself under my charge. The symptoms of this last affection were severe, and required active treatment and the greatest care. In the course of two months he was sufficiently recovered to remove into the country. Unfortunately, he was much shaken on a rough cross-road, and the inflammation of the bladder returned. He contrived to get back to town, and I again saw him. With some trouble, I managed to subdue the vesical symptoms once more, when a lacuna of the urethra, which had enlarged after the injections, took on an increase of inflammation, and ended in an

abscess in the corpus spongiosum. This I laid open; and with infinite pains, and only after the lapse of some months, I got the sinus to heal, having happily prevented, what seemed almost inevitable, an urinary fistula. It was nearly twelve months before this gentleman was perfectly restored to health.

CASE.—*Chronic Bubo—Fresh Gonorrhœa—Sudden suppression of the discharge—Extensive and nearly fatal Suppuration in the Thigh.*—I have detailed this case elsewhere,* and will transcribe only the heads of it.

A gentleman had a venereal sore and bubo. The latter was opened, and the wound healed, leaving, however, some glandular enlargement still. He went about and rode as usual, having at times some pain in the groin. He now contracted a fresh gonorrhœa, and went to a chemist, who gave him something extremely strong, apparently a compound of copaiba, which at once stopped the gonorrhœa. But, *pari passu*, the swelling in the groin increased, and the thigh participated in the enlargement. He applied to me. The front of the limb, below the ligament of Poupart, looked globular, and presented some subcutaneous œdema, with obscure deep fluctuation.

Believing that I had to do with deep-seated abscess of a formidable kind, I directed him to go to bed, and foment and poultice the limb. In the course of a day or two I cut down on the most prominent part, which

* Medico-Chir. Review, No. 76, April 1, 1843.

was then nearly opposite the ligament of Poupart, and discharged about a quarter of a pint of matter. Another fluctuating point soon presented itself, near the pubes; this I cut upon also, and found that it communicated with the former. But still there were deep-seated swelling, pain, and, I thought, fluctuation in the limb: I therefore cautiously laid open, by a crucial incision, the fascia lata, two inches below the fold of the groin. It was gratifying to perceive that matter welled up freely from the interior of the thigh, apparently through the channel that the arteria profunda femoris traverses. But, although the discharge was now profuse, it was evident that pus was collected in the limb. This was of great size, and œdematous, particularly on the inner side, while the constitutional symptoms were alarming. It appeared to me, that, as the matter took the course of the profunda, the only chance of effectually discharging it, and rescuing the patient from destruction, was to cut on the inner side of the limb, behind the gracilis muscle, and, turning up its border, arrive at the inclined plane of the adductor magnus, which would probably lead to the seat of the accumulation. I requested the assistance of Sir Benjamin Brodie, who supported the view that has been stated. It was acted on with the happiest results. After dissecting very deeply in the direction referred to, I had the satisfaction of observing the matter ooze out from the bottom of the wound.

For some little time the situation of the patient was precarious, but the matter drained off, the constitution

rallied, and, after the lapse of two or three months, he was in a situation to remove into the country, and ultimately returned in perfect health to India.*

I could easily multiply cases of this kind, but the few I have related are striking in their way, and I shall have occasion to refer to others, when the "complications" of gonorrhœa come before me. It is difficult to specify the amount of evidence requisite to satisfy some minds. It varies apparently with the position of the argument; those who resist what is tantamount to demonstration, when it contradicts their views, displaying a remarkable absence of such stubbornness when it happens to tally with them. Boswell used to say, when supporting some opinion against Dr. Johnson, "Well, well! what won't fill a quart pot will fill a pint. I'm filled." In this matter, I confess, that, like Boswell, I too am filled. It is nearly twenty years since I first published remarks upon this subject, and ventured to contend for the view I am still supporting. All that I have since seen, in hospital practice and in private, has tended to rivet more firmly in my mind the principle which I reiterate—that, whilst inflamma-

* Though travelling out of the record, I cannot resist the temptation of observing, that this case affords a whimsical example of what a surgeon or physician may occasionally bargain for. If ever I saved the life of a man, I believe I saved this patient's. He was a person of family, if not of fortune, and held a high official appointment. His gratitude was so unbounded, that, he assured me, he never could repay me. He kept his word—he never did.

tory symptoms exist in gonorrhœa, the stimulating treatment is unsafe.

I shall now endeavour to point out the best means of managing the disorder, in the several stages or forms that it presents. The just discrimination of them, and of their remedies, constitutes the distinction between scientific treatment and empiricism.—I may add, between success and failure.

1. Treatment of the Early Stage of Gonorrhœa, prior to the Occurrence of Inflammatory Symptoms.

A patient not unfrequently consults a surgeon, under some such circumstances as the following:—Two or three days, perhaps, previous to his visit, he has had connection with a female. On the day of the visit, or perhaps on the preceding one, he observed a slight discharge, or a little uneasiness in the urethra. Examination of the latter leads to the detection of some redness and pouting of the orifice, or slight abrasion of the epithelium, or a punctuated redness of the mucous membrane. Along with these appearances of congestion, or incipient inflammation, there is discharge, varying from the slightest increase of the natural mucus, up to muco-purulent matter. There may be itching, or an uncomfortable sensation, about the navicular fossa, or no morbid feeling whatever.

These are the symptoms which usually usher in an

attack of gonorrhœa. Inflammatory action is not yet established—a few hours may make it so. But, in many cases, if not in most, prompt measures may prevent it altogether, and cut the disorder short.

Such measures will neither be safe nor successful, if inflammation *has* set in: at all events, if there is enough to occasion scalding, or pain in making water, or redness and swelling to any *extent* about the orifice of the urethra. On this point I would insist.

Of all the remedies for incipient gonorrhœa, injections are the most effectual. Cubebs and copaiba exert some influence, but that of injections is most to be relied on.

Some surgeons have used these injections of great strength. A concentrated solution of the nitrate of silver has been applied in this manner; or the nitrate of silver has been applied in substance. Undoubtedly, this plan is, in some instances, successful. But, within my own knowledge, it has too often proved the reverse. I have seen several cases of gonorrhœa, of a most obstinate and serious description, after its adoption. I have also seen inflammation of the bladder, enlarged lacunæ, stricture in the anterior part of the urethra, and acute synovial rheumatism, follow it. One case terminated most unfortunately.

Case.—A gentleman, of a highly nervous temperament, consulted me, shortly after observing the appearances of gonorrhœa. Inflammatory symptoms were just dawning, and that was all. From my pre-

vious acquaintance with his constitution, I hesitated to have recourse to any injections, and advised diluents, rest, and aperients. Dissatisfied with so circuitous a course, he applied to an eminent surgeon, who introduced the nitrate of silver into the urethra. Violent inflammation of the canal was the result. The bladder became implicated—large quantities of pus were voided with the urine—the constitution sympathised deeply—and, in a few months, the patient died.

I may mention another instance of a less fatal character.

Case.—A medical friend, between 30 and 40 years of age, whom I was in the habit of meeting in consultation, requested my opinion on his own case. Some six weeks previously, he had contracted gonorrhœa, and being most desirous to check it at once, he had, so soon as he perceived it, thrown into the urethra a strong solution of the lunar caustic. A great deal of inflammation was set up, and, whilst this was at its height, he was seized with inflammation of the synovial membrane of one knee. The other knee was afterwards affected, and he was laid up for many weeks. The discharge had much diminished, when the joints became involved, but it never disappeared, and, when they got well, it returned in greater quantity. From that time to this, between three and four years, a gleet has continued. On more than one occasion, it has been aggravated, from slight causes, into a decided gonorrhœa; and, once, was again accompanied with synovial

inflammation of the knee-joint. Any attempt at active measures has generally proved worse than useless.

A gentleman, who had had the nitrate of silver successfully applied for incipient gonorrhœa, protested to me that he suffered so much, both at the time and afterwards, that rather than again submit to it, he would allow the complaint to do its worst. I believe, however, that though far from being a pleasant remedy, it is not usually so severe as that.

On the whole, this plan is, in my opinion, open to grave objections, and I am disposed neither to practise nor to recommend it. The case *may* arise, where the patient, for the chance of a speedy cure, is willing to encounter any hazard. He may voluntarily submit to this, but I should certainly dissuade him from it, the same benefits being attainable by a milder method, at a slighter risk.

That method consists in the *reiterated use of weak injections*. Perhaps the precise kind of injection is not of such moment, as its dilute character, its early employment, and its frequent repetition. I have made trial of the sulphate of zinc, of the acetate of zinc, of the combination of the sulphate of zinc with the acetate of lead, of the sulphate of copper, of the nitrate of silver, and of many others.

I prefer the diacetate of lead to all. Its action is that of a sedative astringent,—it produces contraction of the small vessels of the mucous membrane, and more particularly of its veins, without exciting irritation, or leading to reaction. Taking it altogether, it

is, in my opinion, and certainly has proved in my practice, more safe and more successful than any other preparation. So satisfied am I of this, that I should care little if deprived of all the rest; and I believe that, with the lead alone, as many cures would be effected, and less mischief would be done, than with all the array of injections now in vogue.

The solution of the diacetate of lead may be used, with advantage, of greater strength than, I fancy, is commonly employed. The formula that I adopt in general is this:

℞ Liq. Plumbi Diacetatis . . ℥ij.
Aquæ distillatæ . . . ℥vj.
M. ft. injectio.

I have prescribed it as strong as four drachms of the Liquor Plumbi to six ounces of distilled water, but, in general, half that strength is better.

If the sulphate or acetate of zinc is selected, it should be of the strength of about half a grain to the ounce of distilled water. I have tried many proportions, but the one recommended has proved the best. If the nitrate of silver is preferred, one grain of it may be dissolved in six ounces of water.

The patient should be directed to throw up the injection as soon as it can be procured, and the surgeon should shew him the method of doing so; this answering the purpose of saving time, as well as of instruction.* The injection may be repeated every three

* Glass syringes are the best. Ellis's patent, with the metal

or four hours, or, in urgent cases, even oftener than that.

Yet to this frequency there must be a limit. The very application in excess comes to be a source of irritation, and excites a discharge instead of subduing it. After twenty-four hours, the intervals between its use should be prolonged, and, in two or three days, it should be resorted to only three or four times diurnally.

Along with the injection, we may give, in most instances, purgatives. A sharp one should be taken at starting, and may be repeated every, or every other morning, for the first few days. Some surgeons seem to dread purgatives in gonorrhœa, and I recollect the time when it was looked on as almost a heresy to order them. It has always seemed to me that they were unobjectionable in theory, and I am sure they are beneficial in practice. They act as a diversion in

piston-rod, bone nozzle, and ringed handle, is the most convenient. A cheap and useful one has been introduced to the profession by Mr. Acton. The syringe should hold from one drachm and a half to two drachms of fluid. The orifice of the urethra should be squeezed round the nozzle, and the sides of it compressed when the syringe is withdrawn, in order to retain the injection. This should be kept in the urethra for a few minutes, and then a second syringeful *may* be injected. I am usually content with one. The liquid should be thrown in with perfect gentleness, and no pressure need usually be made on the canal, to prevent its going too far. A couple of drachms *insinuated* into it, need inspire no apprehension. Yet I have known an injection pass into the bladder, or *appear* to do so.

carrying off the blood from the urethra, and tend, as evacuants, to ward off inflammation.

There is no reason why cubebs or copaiba should not be prescribed in these cases. Injections seem to me to deserve most confidence, but the medicines alluded to are not without utility. Many persons are cured of incipient gonorrhœa by one or the other alone. Peculiarity of habit determines the superior efficiency of either. If the patient has had gonorrhœa before, his experience may assist us in our choice. If he has not, the surgeon will be guided by his own. There are those who are passionate advocates of cubebs. They have been more fortunate with the medicine than myself, for, so far as I can judge, capivi is, in general, more efficacious. The capsules of the latter obviate objections on the score of taste, and commonly answer very well. Three of them may be given twice or thrice daily, and continued until the discharge has ceased, when the dose may be diminished, and gradually withdrawn.

It is a common practice, on the part both of patients and surgeons, to give up the remedies so soon as discharge is no longer visible, or even whilst *a little* still exists. A dangerous mistake, continually giving rise to a recurrence, or to a continuance of the complaint. It is difficult to assign the exact length of time which must elapse after the cessation of discharge, before the patient can be considered safe. I have known it recur, without ostensible cause, after an absence of more than a month. This, of course, is the exception.

As a general rule, I would recommend the continuance of injections twice daily for a week after its cessation; and once daily for another week or two, after the apparent cure. This may be looked upon as over-cautious. I have not found it so.

The time that it takes to arrest gonorrhœa, in its incipient stage, by the preceding treatment, varies with the case. As a general rule, the discharge is stopped in a few days. It may never appear after the first injection, or, what is more common, a slight moisture and redness of the orifice may remain for a short time, and gradually subside. In some instances, a drop or two of matter will present itself in the morning, at the mouth of the urethra, for two or three weeks, or even longer. This is provoking, but patience is the remedy. The secretion would seem to be kept up by habit. Sometimes a stronger injection removes it,—sometimes giving up injections does so. It is usually best to continue the employment of a mild one.

It occasionally happens that the orifice of the urethra assumes a natural, or nearly natural appearance: no unusual moisture is perceived in it—no discharge escapes on moderate presusre along the course of the urethra,—yet, from time to time, a thick drop or two of yellow muco-purulent matter oozes out. This is most common in the morning, but it is not confined to it. Such cases are too often tedious. What is the precise source of the discharge? That it is not the urethra in general, is probable—that it is not the navicular fossa, is evident—and, I imagine, we must

seek it in those lacunæ, which are infinitely more developed in some individuals than in others. We may readily conceive that a slight degree of inflammatory action may subsist in these minute recesses, escaping the influence of injections, and leading to the formation of discharge, which, when the lacuna is filled, escapes from it, and makes its way to the exterior.

I must observe, that this is a different case from that in which the lacunæ are the seat of decided inflammation, and consequent thickening of their walls, —a complication of gonorrhœa which will be described hereafter.

I have hitherto said nothing of regimen. The reader will find some observations upon that head farther on. At present, it may be sufficient to observe, that the wisest plan, on the patient's part, is to be reasonably quiet, to avoid fermented liquors, to bathe the penis daily in cold water, or to keep a rag dipped in it or in Goulard water wrapped round the organ, and to have the testicles suspended.

The statistics of success are not easily determined. From all that I have seen, I should say that a large proportion of those who apply in a few hours from the commencement of a gonorrhœa, or before much irritation or inflammation is set up, may reasonably expect a speedy cure. But, whilst the plan that has been sketched may be employed with a tolerable degree of confidence, it must not be pushed in the face of inflammatory action. Should that come on, injections, and

all other stimulating treatment, ought to be immediately abandoned.

Those cases promise best, in which the urethra is accustomed both to disease and remedies, in consequence of former gonorrhœal affections. A first attack is usually, although not always, inflammatory; and does not, in general, yield so quickly, nor bear stimulating treatment so well, as later ones.* I am acquainted with many persons, prone to this disorder, who are in the habit of applying to me so soon as they discover it, and in whom it is always cut short by injections. But there are those who labour under an irritable state of the urethra, liable to become inflamed on slight occasions, and disposed to some of the complications of the complaint. Such persons do not recover quickly, and occasionally bear injections ill. I think I have observed that they who have actually suffered from scrofula, or display the characteristics of that diathesis, are difficult to cure. The same thing may be said of those who are broken down by mercury, or are cachectic from other causes.

* It is not so much the ordinal number of the gonorrhœa which makes it violent or otherwise, as the condition of the patient. I do not dispute the greater tendency to inflammation in a first attack than in later ones, but other circumstances operate. The constitution of the individual, his mode of life, his abstemiousness or his intemperance, repose or exercise, good treatment or bad, tell infinitely more on the character of the attack than its chronological date.

II. Treatment of Acute Gonorrhœa.

Acute gonorrhœa is the form to which I shall next advert. The first object is to remove the inflammatory symptoms; the second, to get rid of the discharge. Such are the principles I would urge, with all the earnestness due to a conviction of their truth.

The means to be adopted to put down inflammation will be measured, of course, by its intensity. If that runs *very* high, it *may* be requisite to bleed from the arm, although, as I have remarked already, I have never seen it so. Leeches on the penis, or cupping on the perineum, are often of great service. After the former, the organ should be immersed in warm water, and the hæmorrhage encouraged by that and by a poultice. On two or three occasions, I have opened the dorsal veins of the penis with advantage: it is less troublesome than leeching. Cupping on the perineum is particularly applicable when the irritation is seated there, or when the bladder is involved. Leeches on the perineum are more tedious and unsatisfactory.*

Hip baths, even general warm baths, and frequent soaking of the penis in hot water, are advisable. The latter proceeding ought, indeed, to be continued, so long as inflammatory symptoms remain.

Purging appears to me as necessary and as serviceable in gonorrhœa, as in any other inflammatory

* If they *are* employed, the bleeding should be encouraged by the patient sitting in warm water.

disease. It should be such as will carry off the secretions of the alimentary canal, and produce a decidedly lowering effect. In a person of robust habit, and when the symptoms are acute, the following prescription answers very well :—

℞ Hyd. Chloridi . . .	gr. iij.
Antimonii Potassio-Tart. .	gr. $\frac{1}{8}$.
Ext. Colocynth. Compos. .	gr. vj.
Saponis Veneti . . .	gr. $\frac{1}{2}$.
Olei Carui	gtt. j.

Misce secundùm artem. Ft. Pil. ij. omni nocte sumendæ.

℞ Infusi Sennæ . . .	℥iss.
Magnes. Sulph. . . .	℥ss.
Tinct. Sennæ . . .	ʒiij.
Vini Seminum Colchici . .	ʒj.

M. Ft. haustus omni mane sumendus.

A less plethoric system, and milder symptoms, require less active medicines, and we may substitute blue pill for the calomel, and manna for the salts. But the composition and amount of the dose must be regulated by the circumstances of the case, and predilections of the surgeon. To his judgment must be left the period to which the purging is to be extended. For my own part, I do not hesitate to pursue it energetically, so long as inflammatory symptoms remain.

"There is no rule without exception," in medicine,

as in other things. The great majority of gonorrhœal patients bear purging well. Their usual age, and the inflammatory type of the complaint itself, combine to that effect. But there are individuals who support badly, upon most occasions, excessive action of the bowels; and, when they are the subjects of gonorrhœa, they do not cease to exhibit this peculiarity. Such persons are commonly of that habit to which I have alluded more than once, and to which I shall have occasion to allude again. Pale in complexion, nervous, excitable, irritable in temperament, prone to inflammation, yet easily knocked down by the remedies adopted for it,—these are the worst subjects for almost every disorder with which we are called upon to deal. It signifies little whether such an individual contracts gonorrhœa, or a syphilitic sore, or inflammation of the lungs, or meets with a compound fracture. Things rarely go straight with him. Is it gonorrhœa that he labours under? there is irritable bladder, or swelled testicle, or a tedious discharge in the perspective. Is it syphilis? beware of suppurating bubo, or of phagedæna. Has he inflammation of the lungs? ten to one there will be several relapses, and perhaps pleural effusion. Does he break his leg? he will probably get suppuration, and is just the subject for the secondary deposits. In short, a patient of this description does not bear either the disease or doctor. He requires the gentlest handling.

Of *salines*, I have already spoken so favourably,

that it is needless to reiterate the arguments for their employment. If they are calculated for other inflammatory disorders, they are adapted also for this stage of gonorrhœa. At one time, I fancied that they tended to occasion gleet: the idea appears to be groundless. Perhaps this may be found a not ineligible form:—

℞ Sodæ Bicarb. . . ʒv.
Potassæ Nitratis . . ʒj.
Antimonii Pot.-Tart. . gr. ½ ad gr. j.
Syrupi simplicis . . ℥j.
Aquæ distillatæ . . ℥xxiij.

Misce. Adde dein secundùm artem,

Acidi Citrici . . . ʒiijss.

Ft. mistura, cujus bibat æger coch. iv. maxima ter quaterve indies.

If inflammation runs high, the quantity of the tartar emetic may be increased, or colchicum may be added to the mixture. If there is excessive pain and irritation, I frequently combine Dover's powder with it. It will be observed that, in the formula, there is a considerable excess of soda. This has seemed to be advantageous, by diminishing the acid condition of the urine.

I may be excused, perhaps, for repeating the caution, that alkalies *may* be overdone. Not only does too alkaline a condition of urine occasion irritation of the urinary passages, but excess of alkalescence in the blood is not free from injurious consequences to the

constitution. The tone of this is lowered—there is an increased tendency to hæmorrhage—and, where there is a predisposition to phthisis, I am not sure that it might not be developed.

In the cases of those persons who exhibit any leaning to the alkaline diathesis, or who evince a consumptive tendency, the carbonates of soda or potass should either be struck out of the prescriptions, or lightly introduced into them. With such individuals, all treatment must be gentle, and mild demulcents, and very moderate purging, and time, and nature, must be trusted to. They require *coaching* through all complaints, and not the least through these. The following melancholy case is happily a rare, though an instructive one :—

Case.—A young gentleman, of rather consumptive make, and whose mother had died of phthisis, had enjoyed good health, and exhibited no symptoms of that disease, when, unfortunately, he contracted gonorrhœa. Neglecting it for a few days, the inflammatory stage was set up, and proved severe. The treatment, though not violent, was antiphlogistic, and lowered him a good deal. The inflammatory symptoms being subdued, the discharge was met, and speedily mastered, by copaiba, when phthisis in its most rapid and deadly form attacked him, and in spite of an instantaneous removal to the South of France, in a couple of months he was no more. It was one of the worst cases of "galloping consumption" that I ever witnessed; and my conviction was, that the debilitating nature of the

treatment, operating on a system predisposed to phthisis, was the immediate cause of it.

Demulcents are prescribed by most surgeons, and looked for by most patients. Perhaps, as I have stated, their efficacy is, in some measure, an illusion. Barley water, gum water, linseed tea, are orthodox. I have made the experiment, and could never convince myself that one sort of drink was much superior to another. The patient may be permitted to consult, in the choice of it, his convenience or his fancy.

A not inelegant demulcent is the almond mixture*— a portable and useful one is the powder of tragacanth.† One remark on this subject may be permitted me. A patient will frequently complain of great scalding on first making water in the morning, while he suffers comparatively little in the day. It will probably be found, that his diurnal urine is diluted by liberal draughts of fluid, while that voided in the morning is

* ℞ Mist. Amygdalæ . . ad ℥viij.
Potassæ Bicarb. . . . ℥ss. ad ℥j.
Potassæ Nitratis . . ℈j. ad ℥ss.
Ant. Pot.-Tart. . . . gr. ½ ad gr. j.
Syrupi . . . ℥ss.
M. Bibat æger vicibus partitis quotidie.

† ℞ Pulv. Tragacanth. C. . . ʒj.
Potassæ Nit. . . . gr. v.
Ant. Pot.-Tart. . . . gr. $\frac{1}{24}$ ad gr. $\frac{1}{12}$
Sod. Bicarb. . . . gr. vj.
M. Ft. Pulvis, ex aquæ poculo amplo ter quaterve indies sumendus.

stimulating, from the want of such nocturnal drinks. A simple remedy, and usually an efficacious one, is to desire him to have a copious draught by his bed-side, and to take it during the night.

Quiet is a valuable, if not an essential ally of medicine. Repose upon the couch is an excellent thing—too excellent to be commonly attainable. But if repose is impossible, abstinence from any thing like severe or long-continued exercise is indispensable. Some of the most troublesome cases of gonorrhœa that I have seen have been in individuals compelled to be constantly upon their legs,—bankers' clerks—messengers—footmen. In the acute stage of the complaint, great exertions, or much walking, aggravate the inflammation, and dispose to those complications which are often worse than the original disease; in the chronic stage, they render the discharge obstinate, perhaps almost interminable.

Rest, to as great an extent as possible, is most desirable.

Fermented Liquors.—It may appear superfluous to insist on the necessity of avoiding all stimulating drinks, during the presence of the inflammatory stage of gonorrhœa. I would denounce them in all its stages. They give intensity to the inflammatory one—they perpetuate the chronic one—and, when the disease is apparently arrested, they continually resuscitate it. There is nothing which is a source of such annoyance to the surgeon, and of such mischief to the patient, as the tendency of the latter to indulge, more

or less, in this respect. Whilst pain exists to any extent, there is seldom much difficulty in enforcing abstinence. But, when inflammation is removed, and discharge alone remains, especially if that discharge prove tedious, the patient has seldom courage to resist the temptation of "*one* glass of wine," or "the *least* drop of beer," or "a *very* small tumbler of gin and water;" and, nine times out of ten, he pays for it. To the surgeon's disgust, the case that was doing well, perhaps, after an infinity of trouble, all at once goes wrong again: the scalding increases or returns—the redness of the orifice augments or reappears—the discharge is aggravated, and the Sisyphean cure is to be begun once more.

The subjects of these disorders are mostly young, often careless, and sometimes reckless. Many submit with a very bad grace to any restrictions at all—the majority kick against them after a time. Preach as he will, the surgeon, if listened to, is rarely obeyed, and his injunctions with regard to fermented liquors are those most often contravened. Independently of the force of custom, and the bent of inclination, the patient is desirous of concealing his complaint, and an obstinate and prolonged refusal of the accustomed beverage is a suspicious symptom. What with one thing and the other, he seldom gives himself or his surgeon fair play, and, when just recovering, or nearly well, the unlucky glass mars all. Were it not so provoking, it would be amusing, to observe the pains which the sinner takes to disguise his fault, professing

astonishment at the relapse, laying it on all causes but the true one, and when, at last, compelled to confess, by being positively taxed with it, seeking refuge in the excuse of the mother of the illegitimate child :—" it was such a *little* one."

I need not say much of those individuals with whose treatment one is occasionally cursed, who systematically indulge in excesses, in spite of all prescriptions and remonstrances. Doing neither credit nor justice to themselves, nor indeed to anybody else, they are a perfect nuisance to the surgeon, whose patience they abuse, and whose ability they not unfrequently impugn, in order to screen their own folly. Can we be astonished, when we look at the patients with whom we have to deal, that inflammatory complications, chronic discharges, obstinate gleets, and future strictures, should prove as frequent as they do? The wonder is that they are not more common. They would be so, if youth and the powers of nature were not better friends to the delinquent, than his own resolution and appetites.

I know that some persons long accustomed to wine or beer, and not of an inflammatory turn, will take a certain quantity of stimulant, in the latter stages of gonorrhœa, without apparent disadvantage. These are the exceptions to the rule, and I repeat that, *as a rule*, I would denounce, in the strongest terms, the use of fermented liquors in this complaint.

Diet.—While inflammation lasts, this ought to be low,—the lower the more acute the inflammation. This is obvious. But there are certain articles of food,

which, harmless or useful in some inflammatory maladies, are prejudicial in this. Such are fruits and the vegetable acids. The reason is simple. Such substances affect the composition of the urine, render it more acid, and so irritate the urethra.

Painful Erections and Chordee.

I have already observed that the two are not synonymous terms; painful erections being an usual symptom of inflammatory gonorrhœa, and chordee a rare one. The latter must, in most instances, depend on acute or chronic inflammation of the corpus spongiosum. The treatment of the one is the treatment of the other, and I shall reserve what I have to say on that subject. But though painful erections are a part and parcel of inflammatory gonorrhœa, and the remedies for it are, in the main, the remedies for them, yet they require some degree of special management too. Soaking the penis frequently in warm water—avoiding unnecessary bedclothes—sleeping as much as possible on the side, rather than on the back—emptying the bladder in the course of the night, are all simple, obvious, and advisable precautions.*

* The physiological reason for the two last recommendations can hardly escape the anatomist. When the bladder begins to fill, towards morning, the urine, especially in the supine posture, presses on the trigone, and excites, more or less, the seminal vesicles, the vasa deferentia, and the prostate. Hence the erections which most men experience at that period. The increased irritability of the urethra during gonorrhœa, sufficiently explains the rest.

But opium, in some form, can rarely be dispensed with, if the erections are severe. Perhaps, the Dover's powder is as good a preparation as any. Five to fifteen grains of it may be added to one of the demulcent powders, or to a demulcent draught, and taken on going to bed. The old and favourite prescription was the solid opium, with camphor: or the soap and opium pill with it. I was never thoroughly convinced that the camphor had much to do with any benefits obtained, which are mainly owing, as I imagine, to the opium. However, in such matters, surgeons have their whims.

Irritability of the Bladder.

Inflammation of the mucous membrane of the bladder is one of the complications of gonorrhœa, which I shall describe in its proper place. A certain amount of irritability of that organ is, as I have already observed, an occasional accompaniment of this complaint. It is mostly found in the inflammatory stage, but is not confined to it; sometimes surviving the inflammatory symptoms, and sometimes succeeding them. It may even happen, that it remains after the disorder has disappeared,—a sort of legacy of gonorrhœa, in the shape of weakness of the bladder.

The characters of the affection are plain enough. The patient finds that the frequency of making water gradually grows upon him—the oftener he makes it, the less, *cæteris paribus*, he makes at a time—the desire is so urgent, that he is scarcely enabled to prepare duly for the act—there is little or no pain,

though there may be some vesical tenesmus—there is no discharge of mucus or of blood – and the composition of the urine is little, if at all, different from what the medicines and the diluents would naturally render it. There is, in some instances, a sense of tenderness, fulness, or undefinable uneasiness in the perineum; but this is not a constant feature, nor is it even a common one. This irritable condition of the bladder is a source of inconvenience and annoyance. It renders the patient distrustful of his power of retaining urine, and unfits him for travelling, and for society.

It is difficult, in some cases, to assign a satisfactory reason for its occurrence. Like many other of the accompaniments, or consequences, of gonorrhœa, it is chiefly found in individuals of a nervous temperament, with which it is undoubtedly connected. Occasionally, it follows close on the improper use of stimulants, or of injections; or it may be traced to cold, or to fatigue. I have thought that the excessive or even the moderate employment of diluents has led to it, where the bladder was naturally weak, or had been rendered so by previous ailments.

Whatever the origin, opium is the remedy. The Dover's powder is the best form, where it does not nauseate. The milder sedatives, such as henbane, may be given too. Diluents should be taken with moderation; the diuretic salts, such as nitre, ought to be withheld, and even the alkaline carbonates watched, lest they affect, in too great a degree, the composition

of the urine. The warm hip-bath is generally serviceable—cold, fatigue, and even exercise, the contrary. Local depletion *may* be requisite, but, for my part, I have not generally found it so.

When this state of the bladder remains as a solitary or prominent symptom, after the disappearance of the rest, it implies weakness of the organ, and, probably, of the constitution, and is best met by change of air and scene, sea-bathing, and tonics. It is then that the tinctura ferri-sesquichloridi is of great advantage, and I have seen the tinctura lyttæ serviceable. It would lead me too far, to enter into more details upon this subject.

Duration of the Inflammatory Stage of Gonorrhœa.

It is generally admitted, nowadays, that the pyrexiæ have a disposition to run a course, which it is not well to meddle with. The inflammations, on the contrary, have a tendency to produce disorganization of the structures they attack, rather than to terminate harmlessly. This is especially the case when the molecular tissue of the great viscera is involved; and everybody knows what consequences may be expected from allowing pneumonia, or phrenitis, or hepatitis, to go on unchecked.

But it is not so, to an equal extent, in inflammation of the mucous membranes. That leads in them to great increase of secretion, and this, in its turn, relieves the gorged vessels, and abates the inflammation. No fact more certain. Inflammation of the mucous

membranes, then, resembles the pyrexiæ in this respect, that it tends to run itself out, though not with the same ease, nor in the same measure. It holds a sort of middle place between them and inflammation of the fibrous tissues, or of the parenchymatous organs. Practice bears out the theoretical statement. Take one instance. Influenza is a pyrexia, a catarrhal fever, and to bleed for it is hazardous. Pneumonia is inflammation of the air-cells, and, *cæteris paribus*, bears and needs depletion. Bronchitis is inflammation of the mucous membrane of the tubes, and, whilst it demands more active treatment than influenza, it will not support the lancet like pneumonia.

I intend these remarks to bear upon gonorrhœa. Its seat being in the mucous membrane, the inflammatory stage of it has a disposition to run out, and the discharge is the medium of its doing so. In that stage, then, the more free the discharge the better; and he disregards both physiology and experience who endeavours to extinguish it. What should we think of the physician, who, in the inflammatory stage of bronchitis, applied all his remedies to arrest the bronchial secretion?

As the rational treatment of gonorrhœa is directed to curtail the duration of the inflammation, by moderating its intensity, and not by checking discharge, it is difficult to say exactly what the course or the duration would be, if both were left to nature. I presume that, in some cases, the disease would disappear—in a large proportion it would end in gleet—and when *that*

would cease, it would be no easy matter to predict. But taking acute gonorrhœa as it is, and treating it actively and properly, I believe it will be found that the average duration *of the inflammatory stage* is about three weeks. Between the second and third week, it usually shows symptoms of abatement, and in the course of another it most commonly subsides.

Its duration is frequently protracted in those whose temperament is naturally irritable, and in those who have rendered it so by excess. And, if I am not much mistaken, I have observed, that, in persons who exhibit the signs of a consumptive tendency, the inflammatory stage of gonorrhœa is apt to prove particularly troublesome and tedious.

III. Treatment of the Discharge after the Subsidence of Inflammation.

We will suppose the inflammatory symptoms subdued—the next object is to arrest the discharge.

As a general rule, it is advisable to wait until all pain in making water disappears, before this attempt is made. But there are some cases in which this is neither advisable nor necessary, the pain, which had resisted antiphlogistic measures, yielding immediately to cubebs or copaiba. I know of no features by which such cases may be early and confidently recognised. But when, without inflammatory appearances to account for it, scalding or pain persists in the canal, beyond a reasonable time, a cautious trial of stimulating reme-

dies may very fairly be made. If, on former occasions, the patient has been benefited under these circumstances by the use of cubebs or copaiba, the reasons for a trial of one or the other acquire additional force. Yet, even in such a case as this, our expectations may be disappointed; and the experiment should be made with circumspection.

Case.—A gentleman applied to me on account of gonorrhœa, which had lasted for a week. There were pain in making water, redness of the glans, pouting of the orifice, and the usual inflammatory symptoms, in a moderate degree. I recommended demulcents and remedies of that description, but was assured by my patient, that previous attacks of the same kind, and in the same stage, had been readily cured by capivi. I prescribed it, but instead of allaying pain and irritation, both were greatly aggravated—the prepuce became swollen—chordee set in—and, in short, the gonorrhœa was converted into one of a highly inflammatory nature, requiring the most decided antiphlogistic treatment, and proving extremely troublesome.

I might mention other cases of a similar description. But it is enough to state, that a previous tolerance of cubebs or capivi (painful micturition still existing) is no guarantee of present benefit from the same medicines in the same state. Whenever we employ them under such circumstances, we do so with uncertainty and risk.

I will presume, then, that scalding and pain in making water are gone, that there are no painful erections, or that they are very trivial, that the redness of the urethral orifice has given place to an œdematous, or merely congested appearance, and that the discharge, though possibly as profuse as ever, is less thick, creamy, and puriform. The time is unquestionably come for the use of those remedies, direct or indirect, which experience has shewn to possess the power of checking urethral secretion. The principal are :—

Copaiba,
Cubebs,
The Turpentines,
Certain Tonics or Astringents,
Injections.

It is not my intention to discuss, at any length, the physiological mode in which these various substances act. I may observe, however, that, with respect to those which are first upon the list, they probably have more or less of a local operation, although taken by the mouth. The peculiar smell of the urine of a person who has swallowed copaiba, cubebs, or the turpentines, is sufficient evidence of the presence, in that fluid, of their odorous principles, at all events. Received into the blood, they are eliminated, more or less, by the kidneys ; and as this is apparently the main route they select, they influence, as they go, the urinary passages.

But whatever the force of this influence may be, I suspect that it is taking too mechanical a view, to

attribute all to it. In the first place, if it were so, the direct application of copaiba or cubebs ought to be still more efficient—which *it is not;* and, in the second place, it is a matter of fact that they produce other physiological effects, which cannot be unimportant. The odour of the breath, even when capsules have been taken, is evidence of the existence of the elements of copaiba in the blood; and the free, and sometimes the excessive action of the bowels, proves the purgative powers both of copaiba and cubebs. From these, and from other considerations, I conclude, that the *modus operandi* of these sorts of remedies is partly general, through the medium of the blood, and through their action on the bowels; and partly, perhaps principally, local, by means of their exit with the urine.

I have already observed, when speaking of the treatment of the ante-inflammatory stage of gonorrhœa, that, so far as I can judge, copaiba is the most powerful of those internal remedies which check discharge. As soon as it is proper to attempt this, I would recommend the capsules which contain it, to be taken. Three may be swallowed twice or thrice daily, and beyond this it is rarely expedient to go. The object, I imagine, is, to keep up an equable and constant effect upon the urine,—an object accomplished better by repeated small doses, than by less frequent large ones.

I cannot conceive any good reason to exist for the exhibition of those filthy formulæ, which were till lately in vogue. Whilst pure capivi can be administered,

without taste and without odour, in capsules, it would be equally extraordinary to give or to take it in any other shape. I need hardly observe, that as it is the copaiba itself which acts, all the mixtures, "specific" or otherwise, in which it is prescribed or puffed, can have no other possible effect than to make it dearer, weaker, and nastier.

I think it is, in general, advisable to give cubebs along with capivi. Remedies of the same class, there is, of course, neither incompatibility nor inconsistency in their conjunction. The majority of patients are more susceptible of the influence of copaiba—some are particularly affected by cubebs—it is a matter of constitutional peculiarity, which we cannot predicate beforehand, and there can be no harm in combining them.

It *was* my practice, to prescribe the capsules of copaiba in the course of the day and at night, and the powder of cubebs in the morning. But cubebs in that shape is peculiarly repugnant to some people, and, unless the pepper is freshly pulverised, it loses much of its efficacy. The balsam of cubebs is an improvement on the powder, but the capsules of cubebs are decidedly the preferable form. Three or four, or more, of them are a dose, which may be swallowed in the morning, and followed by the capivi later in the day, or at night.*

* There are some capsules prepared by Mr. Bowden, of Charles Street, Haymarket, in which the capivi and cubebs are mixed. I dare say they are useful, but, on the whole, I prefer the plan I have recommended. The tincture of cubebs is not as efficacious as the balsam.

Both copaiba and cubebs will occasionally purge. A moderate operation of that sort is, as I have stated, beneficial—at least, I have always thought it so. But if it is excessive, opium in some form must be given; and if it is not stopped by that, it may be necessary to suspend, or even to abandon these remedies.

I believe it is the practice of some surgeons to give large doses of copaiba, and try a *coup-de-main* on the discharge. This sort of thing may occasionally answer —I have known it do so—but it will often fail, and it is in many points objectionable. It is liable to occasion excessive irritation of the mucous membrane of the stomach and bowels—in one instance I saw nearly fatal gastro-enteritis caused by it—it may give rise to inflammation of the kidneys, which I have also seen—and, I believe, it is much more likely, than are moderate doses, to dispose to inflammation of the testicle.

In persons of weak digestive powers, copaiba should be employed very gently indeed. In numerous instances, I have been consulted in aggravated cases of dyspepsia, where the patients entirely attributed their complaint to over-dosing with capivi. Nothing is more probable; for the gastric mucous membrane is the main seat of indigestion, and capivi will in some persons sadly disorder it.

At the same time that the copaiba and cubebs are given, we should also employ injections. Their action is of course direct, and its precise character must vary with their nature. It may be stimulating, or sedative, or astringent, the two latter qualities often going together.

For my part, I prefer beginning with a sedative and astringent injection. It must be recollected that inflammation is but just subdued—its recurrence is not unfrequent—and, such being the case, an irritating or stimulating application must surely be hazardous. As a matter of fact, I believe that it is so. I *never commence* the treatment of discharge with an injection of that description. The solution of the diacetate of lead constitutes, as I have observed before, the best with which I am acquainted. Its effects in cutaneous inflammation, of the erythematous and erysipelatous character, prove its sedative properties, and its astringent ones are evident.

Pari passu, then, with the use of capivi and cubebs, we may employ the lead injection; resorting to it from twice to four times daily, according to the circumstances of the case.

During the inflammatory stage of gonorrhœa, the local applications were warm; they should now be exclusively cold,— the bidet, cold sponging, soaking the penis in cold water, in some instances wrapping it in rags saturated with evaporating lotions. During the remainder of the case (unless inflammation returns), the patient can hardly overdo the use of cold water.

In the majority of cases, these means exert not only a decided, but a speedy influence on the discharge. In the course of two or three days, the diminution of quantity is palpable, and the puriform gives way to the mucous character. This diminution is progressive, and in a case that *does well* (a not uncommon one), the

discharge, in ten days or a fortnight, has ceased. But there still remains a more or less puffy state of the orifice—too moist a mucous membrane within—perhaps a slightly abraded epithelium—almost certainly too full an appearance of the veins. The snake is scotched, not killed. Abandonment of the remedies, too much exercise, a premature resumption of old habits, fermented liquors, may recall the disease that is well nigh gone. If, under such circumstances, it does reappear, the patient will have to thank himself, should it prove a troublesome companion.

With care and caution, we need not anticipate this; and the discharge, having once ceased, does not revive. The medicines should be gradually discontinued—the injection diminished, in strength first, and in frequency of use afterwards—the return to exercise and to full diet should be circumspect—and, for some time, it will be well to bathe the parts with cold water, or even to inject it.

I do not think that the medicines should be given up under less than ten days after the disappearance of discharge; and the injection should not be discontinued altogether, for three weeks, or a month.

Unfortunately, we cannot always bargain for an issue so steady and so favourable. From some cause or other, the discharge having fallen to a certain level, sticks there; or it see-saws up and down, now better now worse, but never well. This is the case that sorely tries the constancy of the patient, and the resources of the surgeon.

The cardinal point is to determine, if possible, what keeps up the disorder. Is it some fault of the patient? he must mend it. Is it something wrong in the functions or the structure of other organs? we must ascertain, and, if we can, correct it. Is it some morbid change in the urethra itself, superadded to the simple gonorrhœa? we must look for it, and, if there, treat it. This may be laid down as an axiom:—if discharge persists, examine the urethra frequently and carefully. Omitting to do so, the surgeon may expose himself to great discredit, and his patient to unnecessary suffering. I could mention instances enough of such negligence. The following occurred to me a little while ago, and is a sample of all:—

Case.—A gentleman applied to me under these circumstances:—He had contracted a gonorrhœa between three and four months previously, and had consulted a surgeon of some little reputation. This gentleman had used a variety of remedies, in the choice of which he did not appear to be restrained by the presence of inflammatory action. A few days before my seeing the patient, he assured him that he was all but well, and that a week's bathing at Brighton would make him quite so. The gentleman's own feelings not perfectly corresponding with this announcement, he came to me. On examination, I found a considerable puriform discharge—decided pain, on making water, in the whole of the urethra, anterior to the scrotum—redness and tumefaction of the glans—and thickening of the corpus

spongiosum. In short, it was a case of chronic inflammation of this structure. I need hardly say, that I was compelled to undeceive the patient, with respect to the proximity of his recovery, and to inform him that it was neither near nor likely. Leeches, blisters, and antiphlogistic treatment, were actively employed for upwards of a month, before the induration of the spongy body was removed, and then, only, the remedies to stop discharge could be resorted to. It was nearly three months before he was perfectly well.

But it happens too frequently, that, without any very ostensible cause, the discharge will not disappear. Perhaps it decreases to a certain point, and there remains stationary—perhaps it nearly or quite ceases, and breaks out again.

When either is the case, the surgeon may be called on for all his ingenuity, and all his knowledge. It would be a tedious task to describe everything he *may* do, and I shall merely glance at the principal expedients that are open to him.

1. *Full* doses of copaiba and cubebs may be ventured on, provided the stomach is one that will bear them.

2. The Chios turpentine is sometimes, though, I apprehend, not very often, useful. Ten grains twice or thrice daily are the dose.

3. If the patient is pallid, of lax fibre, and of strumous habit, the Tinctura Ferri Sesquichloridi may be of service. Fifteen to thirty minims may be taken in water twice daily.

4. I have seen advantage from the combination of Liquor Potassæ with a bitter. There is not much to be expected from it.

5. In more than one instance, I have cured the complaint with sarsaparilla and the iodide of potassium, after all the "specifics" had been used in vain.

6. I have succeeded, sufficiently often, in the following manner, to render the trial worth making. After capivi, cubebs, and so forth, have been amply administered, I have discontinued all medicines of the sort, and prescribed three grains of the blue pill with one of ipecacuan every night, followed by an aperient mixture in the morning. Accompanied or succeeded by injections, I have, on more than one occasion, found this prescription answer.

7. It is to *injections* that we must mainly trust. The one that I have recommended to begin with, was that of the diacetate of lead. If the discharge does not yield to it tolerably soon, the sulphate of zinc may be added to it. The proportion of the latter, commencing with half a grain to the ounce, may be raised to two grains in that quantity. Beyond this, I am not disposed to go. If it fails, we may try the acetate of zinc, one to two grains being dissolved in the ounce of distilled water.

It is not a bad plan to use an injection of lead or zinc, every morning and evening, and a saturated solution of alum in the course of the day. Some surgeons have a predilection for the decoction of pomegranate,

or the infusion of tormentil, and many are very partial to an injection of tannin. The last is (they say) the best of the three.

A weak solution of the nitrate of silver, or of the sulphate of copper, may be tried, and I might easily swell the list of these local applications. Each may answer and all may fail, chance being often the *Deus ex machinâ* that selects the right. As far as my experience has gone, I should be tempted to give the injections I have enumerated the following order of precedency :—Lead—zinc and lead—acetate of zinc—the nitrate of silver—alum or tannin.

A chronic and obstinate gonorrhœal discharge lapses so gradually, and sometimes so insensibly, in "gleet," that one finds it difficult to assign, with strictness, its appropriate treatment to either. But as I now proceed to that last stage of the disorder, I shall reserve what remaining remarks I have to make on the means of arresting discharge.

IV. Treatment of Gleet.

In any given case of gleet, an indispensable precursor to all treatment is to determine on what the discharge depends. Is it the sequence of other stages of gonorrhœa—is it possibly the prelude to them—is it a substantive thing, the effect of direct irritation of the urethra—or, is it a symptom of stricture, or of some affection of the bladder? Such are the questions which

the surgeon must resolve, with as much accuracy as he can, before he may expect to meet with any degree of success in the management of gleet.

As a few words will enable me to dismiss the subject of symptomatic gleet, I will commence with it.

If it depends on stricture, there will usually be other and characteristic signs of *that*. There cannot well be a permanent stricture, without *some* degree of impediment to the free and natural exit of the urine. The stream will be diminished in size, or otherwise altered in some manner. If there is only spasmodic stricture, the spasm, when present, will speak for itself.

Long-continued gleet, which has resisted all remedies, is commonly suspected to be a symptom of stricture, although there is nothing in the size or shape of the stream of water to indicate it. One must speak, upon this point, with some degree of hesitation. No doubt, it is occasionally difficult to decide if the stream is diminished in size, or not. The patient's recollection of what it was formerly is not much to be relied on. The quantity of urine in the bladder, and the nervousness of the individual, are disturbing circumstances. But the main obstacle to arriving at a correct opinion, will be found in the conformation of the canal itself. It is well known to anatomists, that the orifice of the urethra is, in general, the narrowest, and always the most unyielding part of it, owing to its being composed of a ligamentous ring. That ring, too, is not circular, but oval,—a kind of vertical chink. It is in

some persons much smaller, and much narrower, than in others.

The stream of water issuing from the urethra, must be greatly influenced, in form, by the *outlet* which it traverses. If that be narrow, the stream must be so too. That is self-evident. A diminished and a flattened stream *may* therefore depend on a small orifice, the rest of the urethra being in a healthy state; and, *vice-versâ*, a slight stricture may give little notice of its presence, the stream passing freely through a large orifice.

But, whilst I admit that it is right, in every case of persistent gleet, to examine, with an instrument, the state of the urethra; and, whilst there can be no question that we shall occasionally, in that way, discover a stricture, which gives little indication, save gleet, of its existence,—I am afraid that this proceeding is too often ignorantly or knavishly abused. A surgeon, not much accustomed to the operation, finds the point of the bougie or catheter hitch in a lacuna, in the bulb, in the membranous part of the urethra, or the prostate. The natural obstacle is mistaken for a morbid one, and a false passage, a pouch, or, at the least, an unnecessary course of instruments, is the consequence. Lucky is the patient who, under such circumstances, merely pays a few pounds for nothing.

There is a class of scoundrels who live, not by curing strictures, but inventing them. Let an unhappy wretch but fall into their hands, and, if his urethra

would admit a poker, they will still persuade him he is strictured. The duration of his case will be in the compound ratio of the extent of his credulity, and the fulness of his pocket. It is with such patients as with Chancery victims,—

> "And whilst their purses can dispute,
> There's no end to the immortal suit."

I have myself seen so many instances of gleets made the pretext for the needless or mischievous use of bougies, that a man, in my opinion, should be pretty sure that his surgeon is both an honourable and an able one, before he resigns himself into his hands.

The foregoing observations will apply to those other cases of gleet, in which the neck of the bladder is at fault. There will generally be some symptoms to direct attention to that quarter; and the surgeon, unless of a mature experience, should not be in a hurry to conclude, that his suspicions, or his first impressions, are well founded.

This has cleared the way for the consideration of the treatment of gleet, as it exists in a substantive form.

I apprehend, that it must essentially depend on a passively congested state of the vessels of the mucous membrane. Sometimes this congestion is limited to the vicinity of the orifice—sometimes it is spread over some extent of the urethra--and sometimes, though less frequently, it appears to be seated far back in it. I draw these conclusions from the effect of remedies, rather than from any positive data, and frankly admit

that it is not always easy, nor, perhaps, possible, to determine the site of the gleety action beforehand.

The principle that is to regulate the treatment of this affection is a simple one—the means of carrying it out, perhaps, empirical. Congestion of a passive character being its pathological condition, local stimulants, with or without general tonics, are obviously required for it. The analogous case of chronic congestion of the conjunctiva, or the fauces, demonstrates the influence of stimulants upon the mucous membrane; and when we consider its loose structure, and the facility with which its vessels, more especially its veins, become dilated, the fact is sufficiently intelligible.

As regards the remedies themselves, their selection is, in a great measure, arbitrary. Each surgeon has probably his favourite plan.

Injections are, of course, at the head of the list. They will necessarily be of a stimulating character, more so than when employed for ordinary gonorrhœa. It is unnecessary to repeat what has already been said in reference to them. As a general rule, I prefer the solutions of the nitrate of silver and acetate of zinc; but, in fact, it is impossible to single out any particular injection as decidedly preferable to the rest. One answers best in one case—another in another—and, in almost all, we are obliged to ring the changes on them frequently. If any given application produces no obvious effect in a short time, or, having produced some, stops there, it is well to resort to something else. A long continuance of the same injection seldom answers in gleet.

Bougies are a good deal employed,—and they are serviceable. They are necessary, of course, when the gleet is the consequence of stricture. They are also of great use, perhaps indispensable, when an irritable state of the neck of the bladder is the cause of it. But, independently of either of these affections, bougies will sometimes cure a gleet which has defied injections. Is it, in such cases, that the urethral mucous membrane is too *generally* implicated for the injection to act upon it—or, is an irritable state of the muscular fibres of the bulb, or membranous part of the canal, propagated to the mucous membrane, and relieved by the bougie? I can offer no opinion on the why or wherefore, but can speak positively to the fact.

The general treatment of the patient must be determined by his constitutional condition—by the causes that appear to have been instrumental in producing the affection—and by the nature and effects of previous remedies.

Is he one who lives freely, has a loaded tongue, deranged secretions? it would be absurd to give *him* tonics. Blue pill and ipecacuan, aperients, taraxacum, salines—the remedies adapted to restore the functions of the digestive organs, and the kidneys—are what such a case requires. They may, and sometimes do, effect a cure themselves. I have known them remove gleets of a very obstinate description. But even when the benefit falls short of this, they clear the way for successful remedies afterwards.

If the patient is naturally weak, or has in any way

been rendered so, tonics may prove of service to him. The bitter infusions with the alkaline carbonates, quina, the mineral acids, chalybeates, sarsaparilla, may be selected according to the circumstances of the case, or tried more empirically in succession.

Should the habit be decidedly scrofulous, or gouty, corresponding modifications in the treatment will, of course, suggest themselves. Even when no evidence of gout has existed, I have seen colchicum of use. In one instance, which fell under my observation, full doses of colchicum (they produced much purging) removed a gleet of long standing.

We are frequently consulted in cases where the patient has run the gauntlet of copaiba, cubebs, and drugs of that sort. It is useless continuing on the same tack. Sometimes, reversing the plan, abstaining from those medicines altogether, and substituting for them alteratives and aperients, will be attended with success. Sometimes, on the other hand, large doses of capivi, cubebs, the turpentines, or even lytta, will cure, when lesser ones have failed. The muriated tincture of iron is more serviceable in gleet than in chronic gonorrhœa; and, in the pallid, or the strumous, it will occasionally be most useful. The lytta requires to be given with caution. I think that those who try it often, will be disappointed; and those who push it far, will, perhaps, regret it. I have combined it, now and then, with the tincture of iron, with advantage.

There are few cases that are not the better for those measures which improve the general health, such as

change of air and cold bathing, more particularly in the sea. This will, at times, effect a cure, when all other means have failed. But it commonly requires more perseverance than can be, or than is extended to it.

Low living is rarely requisite, or beneficial. A moderately generous diet is the best. There are exceptions to the rule no doubt, but it is a good one. A judicious regimen can do no harm, and may do some service.

It must be confessed, that, after all such means have been resorted to, there are still instances of failure. Whether the obstinate character of the disease, or the follies and irregularities of patients be to blame, the fact unfortunately is so. The gleet has become a *habit* of the urethra, and strong measures only afford any prospect of destroying it. It has happened, that a fresh and inflammatory gonorrhœa, supervening upon gleet, has cured it. The usual effect is, unquestionably, to confirm it; but still such cases have occurred. Surgery may take the hint. A new and violent action of the vessels may be artificially induced in the urethra, with the chance of superseding the old one. *Malum antiquum, remedium acre*, is the Galenic aphorism, and is applicable here.

The nitrate of silver, in some shape or other, is the best and most manageable agent for the purpose. It may be introduced into the urethra in substance, by means of the "armed bougie,"—or a strong solution of it may be injected—or it may be applied in an ointment, with which the bougie is smeared. Of the

three methods, I prefer the last. The caustic in substance is apt to produce too violent, too partial, and too irregular an action. Some portions of the urethra are cauterized, and some escape entirely. The injection, if it be a strong one, may penetrate too deeply or not deeply enough—we cannot accurately limit nor direct it. The ointment of the nitrate of silver, smeared evenly on a bougie, can be introduced as far as we like, distributed in the way we like, and managed altogether very easily.

The distance to which the bougie should be passed must depend upon the nature of the case, as well as on other circumstances. If we are pretty confident that the source of the discharge is limited to the front of the urethra, it would be unnecessary to carry the bougie farther. But as it is, in general, difficult to determine this, it is better to introduce it to a greater distance. I would not recommend it to be passed beyond five or six inches, which would take it to the bulb. The introduction should be cautious, gentle, and slow; and, in withdrawing it, the instrument may be made to turn upon its axis, which secures the dissemination and uniform application of the ointment.

The application is always painful, sometimes intensely so. The first effect is a kind of watery discharge, which is succeeded, in a few hours, by a muco-purulent one. This is occasionally profuse. There is pain and scalding on making water, and a temporary inflammatory gonorrhœa is set up again. This lasts for about a week or ten days, when the gleety secretion has usually

reappeared, though, perhaps, in diminished quantity. The one application *may* cure, but rarely does so. If the discharge seems to have again arrived at a stationary point, the ointment may be requisite a second time—perhaps a third. Beyond this, I do not feel inclined to go. If so strong a measure as three successive cauterizations fail, there is no encouragement, in my opinion, to proceed. In a large proportion of cases, it answers. Even when it does not remove *all* gleet, it greatly benefits it: reducing it to something very inconsiderable, and taking from it, as I imagine, not only any infectious properties, but the tendency to be lit up, on slight occasions, into something worse. On the whole, I entertain a very favourable opinion of the ointment of the nitrate of silver, in cases of obstinate and protracted gleet.

But I would not lead the surgeon or the patient to infer, that there are no *per contra*. In the first place, it is, commonly, a very disagreeable, or even painful measure. Secondly, like all stimulating applications to the urethra, it is apt to induce inflammation of the testicle, or of the bladder. It is true that I have rarely seen either ensue from it, but, from the nature of things, such accidents are not improbable. Thirdly, the inflammation set up in the mucous membrane is so great, that its corium is apt to be involved, and a bad form of stricture may ensue. This I have witnessed on two occasions, and one of the most troublesome cases I have had to deal with, was of this description. For the latter reason more particularly, I would seldom em-

ploy caustic myself, nor counsel others to use it, except as a last resort. Even then, the patient should be apprised of the risk, and if, knowing, he accepts it, he accepts the responsibility along with it. I can neither understand the good faith nor the policy of the course which some surgeons pursue. They too frequently subject a patient to a hazard, of which he is never informed, and which, if he were acquainted with it, he might refuse to encounter. If all goes well, the surgeon, it is true, gets credit—but if it turns out ill, can he be considered blameless? For my part, I think not ; and the public would appear, by the verdicts that it passes, to be of the same opinion.

Blisters on the penis are a valuable remedy for confirmed gleet. They are not a pleasant one, and must, therefore, be classed among those kept in reserve, to be employed only when milder ones have failed. It is not a single blister which will answer, several, in succession, being necessary. They should be resorted to if the nitrate of silver has been unsuccessful, and has led to any chronic inflammation of the mucous membrane.

There is a feature of gleet, which, while it is an odd one, is too marked to be passed unnoticed. I allude to its capriciousness. The very same application or remedy which has been tried already, without benefit, may succeed, at last, as if by magic. In another case, the cure will be evidently due to a drunken orgie,—drinking, in most instances, being the very cause that keeps it up. A third patient gets well (not often) on

† See Braithwaite, Part XXIV Page 271—

the water-cure. A fourth, who has tried everything without avail, is obliged to take a long and fatiguing journey—he imagines that this will make him worse than ever—on the contrary, it sets him all right. Another meets with an accident which lays him up—the confinement cures him. Many patients perpetuate gleet by venery—I have known gleet instantaneously removed by it. There is no end to these apparent inconsistencies, which resolve themselves, after all, into this simple formula,—that gleet, being a morbid action in the part, slight in itself, but sustained by habit, *may* be cured by anything which excites a new action, and so breaks that habit.

There is this consolation for patients, that time almost always brings a remedy. It happens very rarely indeed that *mere* gleet does not, sooner or later, disappear. Its long continuance should always breed a suspicion of stricture, or of something wrong about the bladder; and its persistance will make that suspicion almost certainty. What *is* wrong, it is the surgeon's business to discover.

This completes the account I proposed to give of the several forms which gonorrhœa presents. Before I proceed to its consequences,—a subject of more extent and importance than might at first be imagined,—I will take the liberty of summing up, in a very few words, the principal conclusions I would draw. They are these :—

Gonorrhœa, whatever its origin or nature, has, for its essential feature, inflammation of the urethral mucous

membrane. This is analogous to inflammation of other mucous membranes.

So long as the inflammation remains, it must be looked on in the same light, and treated on the same principles, as inflammation of similar tissues.

The presence of inflammation is a bar to the use of "specific" remedies, and of local stimulants.

The period for their employment is that which precedes, and that which succeeds inflammation.

The efficacy of "specifics," even with these restrictions, has been overrated, and local applications are those which exert the greatest influence.

As local applications, those of a sedative and astringent character are, on the whole, the best.

Strong, stimulating, and escharotic applications are adapted to exceptional cases only, and, even when appropriate, are hazardous.

To some, these conclusions may appear so obvious, as to be almost truisms. Whatever may be said, they are anything but that in practice. Had I found them so, this work would never have been written. If I entertained a doubt, it would be removed by the perusal of a clinical lecture, published this very day.* The lecturer recommends the use of an injection of chloride of zinc, an escharotic substance. He employs it during the inflammatory stage, when the glans is red and swollen, the erections painful, the discharge puru-

* Dec. 28, 1850. Lancet.

lent, and the scalding great. He assures us, that this is most successful: and, in the cases that he quotes, a few days suffice to effect a cure. To me those very cases are unsatisfactory, but I let *them* pass. Be they what they may, I oppose to such practice my reason, my experience, and my senses. It matters not what the name of the ingredient may be, or what the precise powers partiality or fancy may assign to it, a stimulating injection is a stimulating injection still, and never can be safe when directed against inflammatory symptoms. Their authors may laud, as they have ever done, such methods and such nostrums, they may chronicle their virtues, and trumpet their success. *Credat Judæus.**

* I am afraid I shall be thought little better than a bungler, for assigning such periods as I have done, to the duration of gonorrhœa. Messrs. Sloane and Co., and gentlemen of that description, disperse, as they are candid enough to inform us, the most inveterate cases in a week. Some of my more orthodox colleagues *promise* almost as liberally as the Messrs. Sloane. A few days are enough for the chloride of zinc, or the nitrate of silver, or some other pet prescription—enough in *their* hands, but in no one else's. May I be permitted to introduce a couple of cases, that appear to me to be *pat?*

A gentleman called on me the other day, to request my advice for a gonorrhœa. It was in full blossom. He asked if I would undertake to cure it in a week. I replied that I never undertook anything, except to do my best. "Oh," said he, "there is Dr. R., of Paris, who settles these things in no time. I went to him, five years ago, with gonorrhœa and syphilis. He put me to bed for the syphilis, and kept me there three months, before the sore would heal. I asked him, at the first, if he would not cure

CONSEQUENCES AND COMPLICATIONS OF GONORRHŒA.

If any argument were wanting, to shew the essentially inflammatory nature of gonorrhœa, the character of those affections, immediate or remote, which spring from it, would be sufficient to establish it. They are all more or less inflammatory, and several of them are direct extensions of inflammation, by continuity of tissue, from the original seat of the disorder.

The consequences of gonorrhœa differ, *toto cœlo*,

the gonorrhœa. 'N'importe,' he told me, 'ce n'est qu'une affaire de cinq jours.' When the syphilis left me, he took the gonorrhœa in hand.'' I had listened attentively for the denouement, but as it did not appear to me to have arrived, I ventured to inquire if the gonorrhœa *was* cured in the five days that were agreed upon. "No, confound it!" returned my patient with good-humoured *naïveté*, "I went on under his hands for four months more, when I could stand it no longer, and came back to England. I saw you, on my way to Scotland, and you wrote a prescription, which did good to the discharge. But it ended in a gleet which lasted two years, and the caustic injections which Dr. R. threw up gave me a stricture for life."

"Very pleasant," I answered; "and after one such cure, you want me to promise another?"

The second case that I shall mention was that of an old patient of mine, who was in the habit of consulting me for those *affaires de cœur*, to which he was rather liable. I got him through a few of them without much trouble, or any damage. During my

from those of syphilis. As the primary phenomena of that disease are little of an inflammatory, and mainly of a specific character, so its secondary effects display the same disposition. They are palpably the results of constitutional contamination, that is, of infection of the blood, and, through its medium, of the solids, by the absorption of a poison. Whether we regard the primary affections, or their respective consequences, the points of distinction are salient and decisive.

Nor is this a mere speculative subtlety. However your "practical man," *pur sang*, may affect to despise those generalizations which he damns in the lump as theory, he is himself one of the worst, because the narrowest, of theorists. He denounces, indeed, great

absence, he caught gonorrhœa, as usual. Having heard of the reputation of a gentleman in this town, one of the "cinq jours" school, he went to him. He received from him some strong medicines (he knew not what, for no prescription was given him), and, in spite of the presence of inflammation, he was subjected to the most stimulating treatment. Getting worse, and feeling very ill, he ventured to remonstrate with the surgeon. "Pooh, pooh!" cried he, "*Prince* G. was a great deal worse than you—the third day he said he must give in—the fourth day he was well." On the principle, I presume, that—"Le Bon Dieu est avec les gros bataillons," the "Prince" was in better luck than the plebeian: for my friend, the latter, so far from being well on the fourth day, was seized, at that auspicious epoch, with furious inflammation of the kidneys. The late Dr. Prout was called to him, and though assisted, I believe, by Sir Benjamin Brodie, had great difficulty in saving his life. Even when the nephritis had ceased, his *spolia opima* were a discharge spun out for nearly twelve months, and a broken constitution.

principles, but is a bigot in little ones: and, unable or unwilling to grasp facts in the mass, he clutches them hard in detail.

What has led to centuries of pernicious practice in these diseases, if not the application of false theories—if not the imperfect generalization of facts? Why was gonorrhœa considered as identical, or, at all events, closely allied with syphilis? Because both sprang from impure connection: both were *therefore* the result of a morbid poison, and morbid poisons *must* be much alike. Why was mercury *the* remedy for syphilis? Because every poison had its antidote—a superstition older than the days of Mithridates—and facts proving the influence of mercury: *therefore* it was a *specific*. Why was mercury so frightfully abused in primary and secondary syphilitic symptoms? Because, being the specific, the worse the disease, the more, *therefore*, that specific was required. Why have copaiba and cubebs been given in all stages of gonorrhœa? Because, they were the reputed specifics for *it*, and *therefore*, from the analogy of syphilis and mercury, the more intense the gonorrhœa, the more it needed them. Why, in gonorrhœal rheumatism,—a pure inflammation of synovial membranes,—has it happened that cubebs and capivi have been administered? Because of that same analogy. I might proceed much farther in this strain, but it is needless. The gross errors I have quoted, have been those of "practical men," who, while they scouted all theories, were still acting upon wretched ones.

The consequences of gonorrhœa are naturally divided

into the immediate and remote. The former are those which proceed directly from the primary complaint, occurring while it still exists, or has been but recently extinguished; the latter shew themselves at a later period, and, in some instances, can only be traced to gonorrhœa, as a matter of analogy and inference.

I. The immediate consequences are, first:—A continuance of morbid action in the mucous membrane, originating in previous gonorrhœa. As instances of this, we find,—

Pain in the Urethra unconnected with Discharge

The "Irritable" Urethra.

II. Secondly:—Those affections which result from the extension, along a *continuous* tissue, of the urethral inflammation. Such are externally:—

Balanitis, or Inflammation of the Glans,

Phymosis and Paraphymosis,

Verrucæ,

Erythematic or Erysipelatous Inflammation of the Integuments of the Penis and Scrotum, including Diffuse Inflammation of the Dartos.

Internally:—

Inflammation of the Lacunæ,

Retrocession of Inflammation to the posterior parts of the Urethra, the Prostate, the Bladder, the Kidneys,

Inflammation of the Testis.

III. A third order of these Immediate Consequences, is where the inflammation spreads to *contiguous* tissues. Such are:—

Inflammation of the Corpus spongiosum,

Inflammation of the Absorbents of the Penis,

Bubo,

Inflammation of the Cellular Tissue of the Perineum.

IV. A fourth series of the immediate consequences of gonorrhœa consists of affections of distant parts, sometimes produced by the application to those parts of gonorrhœal matter, sometimes by less intelligible constitutional causes. They are :—

Gonorrhœal Ophthalmia,

Gonorrhœal Rheumatism.

V. The remote consequences of gonorrhœa consist of

Stricture of the Urethra,

Affections of the Prostate and the Bladder.

The list is neither a small nor slight one. The majority of young men have, some time or other, gonorrhœa. They seem to consider it like the chicken-pox or measles,—a complaint that they are pretty sure to get, and no great matter neither. Perhaps, in general, it is so; yet many suffer much from it—some lose their health: a few their lives—and a considerable number owe to it, in after years, strictures and diseases of the prostate and bladder, that contribute neither to ease nor to length of days.

The plan I have adopted of devoting three separate publications to Gonorrhœa and its immediate consequences—Strictures of the urethra—and Diseases of the bladder and prostate gland, will prevent my describing the affections just enumerated, exactly in the order that has been assigned to them. I must postpone my remarks on inflammation of the bladder, the prostate,

and the kidneys, till I treat of those organs more particularly. Abscess in the perineum is a more frequent concomitant of stricture than of gonorrhœa, and will be noticed along with the former. To the rest I shall now proceed.

The first that I shall consider are those consequences of gonorrhœa which depend on a continuance of morbid action of the mucous membrane.

I. Pain in the Urethra, unconnected with Discharge.

This may be regarded either as a sort of symptom, or as a consequence of gonorrhœa. I prefer, however, ranking it in the latter category. The information I possess upon the subject is so limited, that it will chiefly consist in the narration of the cases I have witnessed.

In alluding to pain, as it occurs in chronic gonorrhœa, I observed that it assumes, at times, an exaggerated character in persons of a nervous temperament. It is principally in such persons that we find it remain, a solitary symptom, after all others have vanished. It is usually referred to the vicinity of the glans, but it may be seated farther back, and, occasionally, it shifts its situation. It is mostly felt in, or after, making water; is sometimes acute; and may leave, like neuralgia, a burning sensation after it. There is no discharge, the erections are not painful, nor is any

hardness or other morbid change discoverable in the urethra.

I am as ignorant of the causes that produce this affection as I am of the state of the urethra which constitutes it. From the character that it assumes, and the individuals that it attacks, I should conceive that it is frequently neuralgic. It is likely, however, that, in some instances, there may be partial vascular action in some part of the canal. The uncertain, indeed opposite, effects of remedies in different cases, render it probable that the nature of those cases is different also. But this, of course, is conjecture.

It will be found, I apprehend, that this affection principally occurs in those who have taken stimulants, or used injections, or committed excesses during the inflammatory stage of gonorrhœa. It is unquestionably most common in free-livers.

The treatment is far from satisfactory. It must be determined, in a great measure, by the circumstances of the case, the history of the complaint, and the condition of the patient. It will usually be found, that regulation of the secretions is indispensable, and this alone will sometimes be sufficient. Leeches, however, or counter-irritation, more especially the latter, are a most always requisite, and it may be necessary to blister pretty freely. After counter-irritants, the belladonna plaster may be serviceable. Where the tongue is loaded, and the liver torpid, I have seen decided benefit from blue pill, pushed so far as slightly to affect the gums. One case that occurred to me was

cured by sarsaparilla, with the iodide of potassium and colchicum. Another was, apparently, on the point of cure, from the exhibition of the syrup of iron with quina; the patient discontinued his visits before he was absolutely well, and I have never since heard of him. In this instance, the affection had much of a neuralgic character, and I presume that to such, chalybeates or other tonics are more particularly applicable. I have tried bougies, but have seen little reason to approve of them. Change of air and sea-bathing may be safely recommended, when local excitement is subdued.

A brief sketch of some cases that have come under my notice will complete what I have to say upon this subject.

Case I.—An out-patient of mine at the Lock Hospital, aged 52, had had pain in micturition, referred to the inferior surface of the penis, for seven weeks prior to his application. It had been preceded by discharge. Blistering the penis, and the liquor potassæ, were productive of no benefit. Blue pill, with ipecacuan, every other night, succeeded by an alkaline aperient in the morning, had almost removed the pain, when the patient ceased to attend. He had enlargement of the prostate gland; and had drunk freely.

Case II.—J. R. aged 19, received as out-patient at the Lock Hospital, with pain in micturition, following discharge; it had existed for eight or nine months.

The following means were ineffectually tried:—the ointment of the emetic tartar—the ointment of mercury, iodine, and the emetic tartar—blisters on the penis—aperients of the sulphate and carbonate of magnesia—salines, with the sulphate of magnesia—and the liquor potassæ. A little, and but a little, benefit had been obtained, when the patient disappeared.

Case III.—M. B., aged 43, received as out-patient at the Lock, with sores on the penis, and much pain in the urethra after micturition, unattended with discharge. The patient went through a course of mercury, with purgatives, which cured the sores, but left the pain in micturition unrelieved. Sarsaparilla was of no service. A bougie aggravated the pain in the urethra. Cupping on the perineum removed it.

Case IV.—J. A., admitted my out-patient at St. George's Hospital, with pain in the urethra, just anterior to the scrotum, in and after the act of micturition. No thickening, or other lesion, discoverable. He had had several attacks of gonorrhœa - the last, five months previously. It was inflammatory, and he used injections whilst it was so. The discharge ceased in the course of three months; the urethral pain remained. A variety of means had been employed before I saw him. I ordered leeches, blisters, mercurial and saline purgatives, the iodide of potassium, with sarsaparilla—the liquor potassæ—cupping on the perineum. Nothing was of much service to him. He left the Hospital, and

I am ignorant of the result. He was, and had been, a drunkard.

Case V.—An old colonel in the Company's cavalry, of rather convivial habits, contracted inflammatory gonorrhœa, in 1845. He appears to have taken cubebs very freely, and to have employed powerful injections. The discharge continued for six months, when it ceased; but pain in the urethra, about the navicular fossa, remained, and baffled the prescriptions of several London surgeons. In June, 1846, he consulted me. He was plethoric and gouty. I ordered mercurial purgatives, with sarsaparilla, adding to the latter the iodide of potassium and colchicum. The effect was almost instantaneous. In less than three weeks the pain had quite vanished, and has not since returned.

Case VI. – A delicate young gentleman was affected, in 1843, with acute gonorrhœa. It was treated very injudiciously, and inflammation of the bladder and testicle succeeded. The urethral discharge ceased, but pain, apparently of a neuralgic character, was still felt in the urethra: with, occasionally, distressing nervous sensations in the testicle. He had been in this state for nearly eighteen months when I saw him. After trying several remedies with little benefit, I ordered the iodide of potassium combined with the ammonio-citrate of iron—the application of an ointment of belladonna to the penis—and tepid salt-water shower-baths. He improved very much, and went to Homburg, where

he bathed and drank the waters. This completed the cure.

I think it must be evident, that no one remedy can be depended on in cases of this affection. What is, or seems, successful in one, is of little service in another: and the treatment must be founded on a careful consideration of the circumstances, assisted by the surgeon's experience, and by chance. Fortunately, the affection is more troublesome than common, for I have seen a very limited number of cases in the course of twenty years.

It must not be confounded with another complaint of a far more serious character. In that also there is pain in making water, unattended with discharge. But, probably, there has never been gonorrhœa, with which that symptom is altogether unconnected. There is usually great frequency of micturition, and general loss of health. The *urine is albuminous.* No calculus nor disease of the bladder is discoverable. The disease is in the kidneys, and begins with a sort of chronic inflammation of them, which ultimately ends in their disorganization. It is almost always fatal.

The frequency of making water, albuminous state of it, and progressive destruction of the health, distinguish this affection from the one I have described as a consequence of gonorrhœa. I regret that it is not in my power to offer a more satisfactory account of *that.*

II. The Irritable Urethra.

There is a condition of urethra which has not, so far as I am aware, attracted the attention of surgical writers, nor, indeed, of surgeons themselves. I have met with it from time to time, and it has appeared to me of sufficient consequence to justify the present notice.

The subject of the affection is invariably a person of nervous temperament, and is usually dyspeptic. He is rather prone to an irritable condition of the mucous membranes of the throat and intestinal canal:—the fauces and the pharynx being apt to be affected with relaxation and congestion—the stomach disposed to pyrosis and acidity—the bowels sometimes torpid and sometimes loose—and the rectum not unfrequently the seat of hæmorrhoids, pruritus, or a spasmodic condition of the sphincter. The physician will recognise the kind of patient I describe, and is aware that this peculiar idiosyncrasy is connected, in most instances, with a liver that acts badly, or a gouty habit.

If such an individual contracts a gonorrhœa, the chances are it will be troublesome. If he has the misfortune to suffer from several (and he is peculiarly liable to do so) his urethra will probably take on an irritable state, that may long prove a source of annoyance to him.

That irritability is exhibited in many ways. It is excited by connection, independently of infection—by

derangement of the digestive organs—by acid urine—by an attack of piles—by catarrh—by exertion. Its character is fitful and capricious. The circumstance that gives rise to it on one occasion, may actually remove it on another—the remedy that, at one time, appears to cure, at another is inert, or aggravates it. Its duration and its subsidence are as uncertain as its appearance. Now, it yields with rapidity and ease—now, it drags on for weeks, or more, and doggedly resists all treatment.

It is recognised with ease by the experienced eye. The orifice of the urethra is pouting, vascular, or raw—a gleety discharge, sometimes more and sometimes less coloured, usually trivial, but always variable in quantity, issues, or may be pressed from it—there are soreness and tenderness in the act of making water, seldom long confined to any one spot, but often shifting their seat—the bladder itself is disposed to be irritable, and micturition to be frequent—there is a tendency to nocturnal emissions, as well as to that sort of discharge from the urethra, during the passage of the fæces, which is known as "seminal weakness"—there is a proneness to balanitis, præputial herpes, and even to an œdematous condition of the foreskin—and, lastly, there are those vague and fugitive pains, now here now there, which stamp the nervous character of the patient, and often tempt one to suspect, in spite of one's humanity and judgment, that they only exist in a hypochondriacal imagination.

The management of this complaint is so completely

the management of the constitutional conditions that give rise to it, that its consideration, in detail, would draw me much too far. The leading principles on which it should be founded are, however, readily expressed. They essentially consist in determining and treating the state of system, which seems, in any given case, to be mixed up with the disorder—in regulating the secretions—adjusting the regimen—giving tone to the health, by country or sea air, or even by appropriate tonics—in cold baths, if no local circumstances interfere with them, or in warm baths, if they are called for—and, finally, in the employment of local measures, which should generally have a sedative rather than a stimulating character. The lead injection, occasionally combined with zinc, and frequently with belladonna, is that which I have found the best; and I have rarely seen such medicines as cubebs and copaiba productive of material service. Where an irritable state of the digestive organs is complained of, the surgeon should be chary of these remedies, for they do great and irreparable mischief to the stomach. For my part, I either avoid them altogether, or prescribe them with extreme caution.

An enemy, under all circumstances, to that rough usage to which the urethra has been subjected, I would doubly condemn it in this affection. The delicate and irritable victims of it are not only keenly alive to pain, but highly susceptible of inflammatory action. Treated with caustic injections, and bougies, they are just the raw material for those strictures, swelled testicles, and

inflammations of the bladder, which are so often *their* fruits. To inflammation of the bladder they are particularly prone, and, at this very time, I have under my care an instance of it. The case is not destitute of instructive features.

A gentleman had, for some years, been in the habit of applying to me, on account of such an irritable state of the urethra as I have attempted to describe. He was of a gouty family, was subject to irregular action of the liver, and to an irritable condition of the gastro-intestinal mucous membrane. I had always cured him by mild aperients, the alkaline carbonates with taraxacum, and injections of the acetate of lead and belladonna. During my absence from England, he became the subject of one of his usual attacks, and applied to a hospital surgeon. This gentleman prescribed injections containing the nitrate of silver, and full doses of cubebs. The immediate effect was inflammation of the bladder, and, apparently, of the prostate gland. This unfortunately proved severe, and was attended with several relapses. Being much debilitated, he went to the South Coast, where the testes inflamed, one after the other, and suppuration took place in the tunica vaginalis of the left. So soon as the testes had returned to something like their natural state, the bladder, which had never ceased to be irritable, became inflamed again, and he was distressed with occasional spasmodic retention of urine. Bougies were passed, and a stricture was discovered in the membranous part of the urethra.

A few months ago, being apprised of my return, he placed himself under my care. He had then a slight permanent stricture—a distressing tendency to spasm, both urethral and vesical—occasional retention of urine, which always yielded to opium and the hot bath —adhesions of the tunica vaginalis to the left testis, which was knotted and irregular—and a very impaired state of general health. It is unnecessary to particularise the treatment that I have adopted; suffice it to say, that he has gradually improved, and is slowly regaining convalescence.

I would not be understood to say that copaiba and cubebs, and moderate injections of the nitrate of silver, are *never* to be had recourse to; nor would I proscribe altogether the bougie,—the latter, indeed, I have at times found serviceable. But, as a general rule, I object to all of them, and I believe that, in the majority of instances, a local treatment which approaches more to the sedative than to the stimulating, and a constitutional treatment which corrects whatever is wrong, and rather sustains than excites, will be found, in the main, both the safest and the most successful. The present is the day for short cuts to cures; but it happens in physic, as it does in the fields, that these short cuts may lead us a long way round.

II. I arrive at those affections which result from the extension, along a *continuous* tissue, of the urethral inflammation.

I. Balanitis,* or Inflammation of the Glans; and Inflammation of the Inner Prepuce.

It may almost appear an impertinence to observe, that the glans penis is covered by mucous membrane, continuous on the one hand with that of the urethra, at its orifice, and, on the other, with that which forms the inner layer of the prepuce. The mucous membrane of the glans is remarkable for its papillæ, and their sensibility, especially towards the *corona:* and for the sebaceous follicles, known under the name of *glandulæ odoriferæ*, situated just behind it. These follicles are much more developed in some persons than in others, and furnish in such persons, especially when the prepuce is a long one, an abundant, offensive, and irritating secretion.

The epithelium, or epidermis, of the mucous membrane of the glans, as well as that of the inner layer of the prepuce, more especially in those who have a tendency to phymosis, is extremely delicate. But though finer than that of the skin of the penis, which is itself fine, it is coarser than that which covers the mucous membrane of the urethral orifice. Starting from the pubes, we find successive decrements of density of the dermic and the epidermic tissues, in the penis, the prepuce, the glans, and the urethra.

The extent of the prepuce varies very much in different individuals:—in some, it is so short that the glans

* From βαλανος, *glans*.

is quite uncovered—in others, the glans is partially covered—and in others, again, the prepuce is so long as to conceal the glans, or even to constitute phymosis.

The delicacy of the mucous membrane that covers the glans, and lines the foreskin, will be in proportion to the length of the latter; and this elongation, as it gives rise to an accumulation of heat and moisture, seems to favour the development of the sebaceous follicles, and the activity of their secretion. However this may be, the chances of that secretion accumulating, must, of course, be greater as the prepuce is more elongated. Where the glans is perfectly bared, no such accumulation can occur; and, where there is phymosis, it cannot be perfectly obviated. Its quantity must, therefore, vary with the quantity of prepuce. In some persons, we observe merely an appearance of scurfiness, looking like small scales, adhering to the mucous membrane; while, in others, it seems smeared with a thick white paste, not unlike the ceratum plumbi.

The mucous membrane of the glans, and of the inner layer of the prepuce, is liable to inflammation. This may be acute or chronic. It may occupy the whole of the mucous surface, or may be confined to a portion of it.

1. *Acute Balanitis.*

This is suddenly developed. The patient may have gone to bed, without observing anything amiss, and he may find next morning the complaint established.

There is a sense of itching, sometimes of smarting, rarely of sharp pain, within the foreskin, and particularly around the corona glandis. The prepuce is a little swollen, perhaps slightly reddened. From within it there issues a puriform discharge, usually of a dirty colour, often profuse, and sometimes offensive to the smell. It is generally thickened with sebaceous matter; occasionally it is thinner, and more like ordinary pus.

If phymosis exists, the discharge may be supposed to come from the urethra. Its orifice may pout, and the point of the glans may look red and tumid; but, on wiping it with lint, and making pressure along the course of the urethra, no matter is observed to issue from the latter, whilst similar pressure behind the corona, and on the glans itself, occasions its exit from the præputial orifice.

It may be difficult to determine whether the discharge proceeds from the surface of the mucous membrane; or from ulcerations behind the corona, or on the inner prepuce. But if ulcers exist, there is more tenderness on pressure; and when they have lasted for any length of time, hardness may commonly be felt. This latter symptom is not so characteristic as might, perhaps, be supposed. Warts behind the corona may coexist with balanitis, and the sensation communicated to the finger, on making pressure from without, is so like what would result from indurated sores, that I have been more than once deceived by it. On the whole, it must be owned that it is occasionally difficult to determine,

in the first instance, whether the case is one of balanitis, or of sores; and the effects of remedies go a great way towards clearing up the question.

If phymosis is not present, the diagnosis of balanitis is simple. On retracting the prepuce, the glans, the gutter behind the corona, and the inner prepuce itself, exhibit a patchy redness, dependent on partial abrasion of the epithelium. On examining the surface with a glass, the papillæ on the reddest spots may be observed to be denuded. A creamy substance adheres, in places, to the mucous membrane, and its aspect and odour are equally peculiar.

What the effects of this disorder would be, were it permitted to proceed unchecked, I cannot take upon me to determine, although it is easy to imagine them. No doubt, it often ends in the chronic form, and I have known it give rise to extensive warts, ulcerations of the prepuce, and protrusion even of the glans through a morbid opening in the latter. This is an extreme case, but it occurred to me at the Lock Hospital, and I was obliged to remove a portion of the foreskin, and dissect up from the glans a large part of the remainder.

Balanitis may be, and it often is, attended with certain complications, such as inflammation of the absorbents of the penis—inflammation of the lymphatic glands on the pubes and in the groins—suppuration in the cellular membrane of the penis, which is rare—verrucæ of the glans, the corona, or the inner prepuce.

Causes.—They may be enumerated without difficulty.

The great predisposing one is too long a prepuce, with acrid, if not retained, secretions. The act of connection is usually the immediate cause. If the venereal orgasm is frequently repeated, or if the secretions of the female are morbid, the occurrence of the disorder becomes the more probable. Severe exertions, a long walk, local friction, however occasioned, all tend to produce it. Free living assists their operation, and I have more than once seen balanitis follow a dinner party or a debauch, independently of obvious local excitement.

Treatment of Acute Balanitis.

This is simple. If the prepuce admits of retraction, the whole mucous surface should be gently, but effectually, washed with warm water, so as to remove the secretion that adheres to it. Lint dipped in a solution of the liquor plumbi diacetatis, of the strength of about two drachms to the pint of water, should then be applied and retained. The lint should be changed twice or thrice daily, and the tepid ablution employed night and morning. Active aperients should be prescribed, and a cooling regimen, with quiet, should be recommended. In this, as in most other inflammatory affections of the penis, it is well to prevent its remaining dependent.

If there is phymosis, and the glans cannot be uncovered, warm water should be injected between it and the prepuce, so as to syringe out, as effectually as possible, the sebaceous matter. This should be followed by similar injections of the diluted liquor plumbi,

which ought to be repeated several times in the day. After the first, these Goulard injections should be cold.

I observe that M. Ricord advises the introduction of a stick of nitrate of silver between the prepuce and the glans. He sweeps it rapidly and lightly over the mucous membrane, and afterwards applies some lint, either dry, or dipped in water, or in the diluted liquor plumbi. He states that one application may effect a cure, or it may be necessary to repeat it twice or thrice, at intervals of two or three days. It appears to me that this practice has little in its favour. In the majority of cases, it is either unnecessary, or it is objectionable. If the prepuce can be retracted, it is unnecessary; for, with ablution, and the free use of the liquor plumbi, the complaint is generally cured in a day or two, and very rarely lasts so long a time as would seem, in some instances, to be occupied by M. Ricord's treatment. I have tried a strong solution of the nitrate of silver, but without such results as encouraged me to prefer it to the plan that has been recommended. If there is complete phymosis (and this is the only troublesome form of balanitis), the application of the stick of caustic would, in my opinion, be objectionable. If the phymosis was not inflammatory, this would tend to make it so, and, if it were inflammatory, this would aggravate it. Nor is it very clear how, in such a case, the nitrate of silver could be *properly* applied. M. Ricord, however, speaks very highly of it, and assures us that of all "resolvent"

methods this is the most effectual. For my own part, I must confess that I never experienced nor witnessed any difficulty in the treatment of balanitis, which yields, readily enough, to the milder means that I have indicated.

2. *Chronic Balanitis.*

This may succeed to attacks of the acute form, but, more frequently, it is independent of it. Like acute balanitis, it presents itself in connection with complete phymosis, or with a partial investment of the glans by the prepuce. But acute balanitis can scarcely happen, unless that investment be considerable, while chronic balanitis is not uncommon when the foreskin does not cover more than a third of the glans.

In acute balanitis, the surface of the glans, as well as the inner layer of the prepuce, are affected; in the chronic, the complaint is usually limited to the inner layer of the prepuce, contiguous to the corona; and to the gutter immediately behind the latter.

This portion of the mucous membrane is red, tumefied, and moist. If there is much prepuce, the sebaceous secretion may collect; if there is little, with ordinary cleanliness it will not. The surface is not usually abraded of epithelium, but, after coition, or much exertion, or a debauch, it may become so. The tendency to "excoriations" in connection is marked, and this very tendency predisposes to venereal sores. The subject of chronic balanitis can scarcely indulge in sexual intercourse, without either an abrasion, or ulce-

ration, or some other consequence of the extreme irritability of the part.

The affected surface is generally tender to the touch, particularly after the excitement of coition. I have seen the latter give rise to severe erysipelatous inflammation of the penis, and a small abscess behind the corona is common in cases of chronic balanitis.

When the disorder has lasted long, the mucous membrane at the angle thickens, warts are apt to spring up, the epithelium is easily abraded, and small ulcers, with a yellow surface and slightly cupped, are occasionally observed, independently of previous connection. These ulcers appear to be similar to the sores that are not unfrequent on the mucous membrane of the lips, and cheeks, and tongue, in persons with deranged digestive organs. They wear a similar aspect, looking as if a piece of the surface had been picked out with the nail; and they are observed in similar states of constitution. However this may be, such sores on the prepuce do certainly arise spontaneously, and heal without entailing secondary symptoms. I have seen them mistaken for "chancres," and a needless course of mercury resorted to.

I am inclined to believe that those who labour under chronic balanitis are peculiarly prone to herpes of the prepuce.

The essential cause of this affection is too long a foreskin. In some individuals, and particularly in those who commit excesses, sexual or dietetic, any degree of investment of the glans disposes to irrita-

bility and inflammation of the mucous membrane. This tendency may give rise to no material inconvenience, until gonorrhœa or syphilis has occurred, when either may act as an exciting cause of chronic balanitis, which ever afterwards proves troublesome.

Treatment of Chronic Balanitis.

This may be palliative or radical.

The former consists in ablution with cold water every night and morning—the retention of lint behind the corona, dipped in the diluted liquor plumbi acetatis, or in a weak solution of the sulphate or acetate of zinc, or in the lotion of the chlorinated soda—an occasional application of the lunar caustic in substance or solution—regulation of the secretions—and avoidance of excesses. If the cuticle is abraded, the black wash, or plain lime water, or any weak stimulant, or an application of caustic, will remedy it. The ulcers to which I have alluded should be touched every second day with the nitrate of silver, while the black or the chlorinated wash may be applied to them.

It must be owned that these measures are far from effectual. While they are perseveringly employed, the complaint is kept in abeyance; but, if they are neglected, it generally reappears. The least excess lights it up; sexual intercourse will most probably be followed by it; "excoriations" are constantly occurring; and the annoyance is great.

The only radical cure is circumcision, or the division of the prepuce. The former *must* succeed, because it

removes the peccant part. The result of the latter is eversion of the inner layer of the foreskin, and complete exposure of the glans—the mucous membrane is no longer kept in a moist and heated state—exposed to the air, and to contact with the clothes, the epithelium thickens—abrasions are not so easily occasioned—warts are not generated—and the liability to be affected by the syphilitic poison is very materially diminished.

If the patient is willing to submit to circumcision, and if the prepuce is *very* long and narrow, this is the preferable operation. But it is much the more severe one, and, in the majority of cases, it is perfectly unnecessary. Division of the foreskin is very successful, and, even when it is considerably elongated, the flaps of integument that depend on either side are ultimately so absorbed, as to occasion little unsightliness, if any.

I can scarcely dwell too earnestly on the advantages of this operation in cases of chronic balanitis. Where it has existed for any length of time, or is continually recurring, circumcision, or division, is the only remedy to which any confidence can be attached. I have performed the latter in a large number of instances, and have never seen it fail.

II. Phymosis and Paraphymosis.

Nature would appear to have not quite made up her mind, whether the organs of generation of the male should be *bonâ fide* external ones. The testes commence their career in the abdomen, and travel from

that to the scrotum,—a proceeding and a course which open a route to hernia, one of the most serious diseases that we suffer from. Whether the advantage is commensurate with the risk, I must leave to the optimists of physiology to settle.

In early life, the spongy body of the penis and the glans are at their minimum. The integument is so long as to extend over the latter, and to form a narrow orifice, where it is reflected on itself, and converted into mucous membrane, continuous with that of the glans, at the corona. This normal condition of the foreskin obtains during infancy and boyhood, and constitutes a sort of natural phymosis, which usually admits of the glans being uncovered, and is unattended with bad consequences.

The growth of the glans and of the spongy body is, in many, if not in most, individuals, unaccompanied with an equal growth of the integument. About the age of puberty, the glans becomes exposed, and the phymosis of early years is at an end.

In some persons, this change is incomplete: the prepuce opens, the glans is partially laid bare, and that is all.

In other individuals, the glans is not denuded, the foreskin continuing long and narrow, and its orifice contracted. Perhaps this may go to such an extent, as to preclude the protrusion of the glans altogether. There is then "Congenital Phymosis." This is rare. More commonly, the prepuce can, by moderate retraction, be drawn over the glans, when it embraces the

penis stringently behind it, giving it a strangulated aspect. If the prepuce is, under these circumstances, so tight, as not to admit of clearing the corona, and being again brought forward, it constitutes "Paraphymosis." This accident happens not very unfrequently in boys, but very rarely in men.

It has generally seemed to me, that the continuance, in manhood, of a long and narrow foreskin, is connected with imperfect development of the penis. Whether the former occasions the latter, or the latter the former, I shall not undertake to say. My impression is, that the faulty growth of the spongy body is the *fons et origo mali*. The foreskin, however, plays its part, for, after dividing it, so as to lay bare the glans, I have found that structure perceptibly increase.

It has been a question with some philosophers of the Monboddo School, whether the prepuce is not a piece of supererogation. It may have its uses in a state of nature, where it may defend the sensitive glans, and serve the purpose of the "sheath" in animals. But we are not likely to return to fig-leaves, and I think I may take upon myself to affirm, that, at the present day, and with our costume, the less we have of it the better. If very long, the individual is liable to phymosis—if it only partially covers the glans, to irritation or inflammation of the inner layer;*—while in either case he is exposed to balanitis—to verrucæ—to præputial herpes—to excoriations—syphilitic sores—and

* More particularly described under the head of Balanitis.

gonorrhœa. The *rationale* of this catalogue of liabilities is plain:—The long foreskin retains the secretions of the part, as well as infectious or irritating matter of extraneous origin—it keeps the surface of the glans, and its own, hot, moist, abraded easily, and irritable. I am mistaken if the tendency to gonorrhœa is not aggravated by a redundant prepuce; for, along with it, we often find a tumid and everted urethral orifice,—a condition well adapted to imbibe the poison.

A few words will dispatch the morbid states of the foreskin. Its lax cellular membrane contains no adeps, and is, therefore, easily infiltrated. It is enormously distended with serum in dropsy, especially in those forms of it which depend upon renal or cardiac disease. It readily becomes the seat of inflammatory œdema in acute gonorrhœa, or in connection with syphilitic or other sores; and it is apt to fall, when the inflammatory stage is past, into a chronic indurated state. These conditions constitute the "acute and chronic inflammatory phymosis," with which surgeons are familiar.

Should a long and narrow foreskin, in either of these states, be retracted behind the glans, it will probably strangulate it, and not be readily returned. Inflammatory paraphymosis is established. If suffered to continue, the glans may mortify: or, short of that, the retracted foreskin may contract adhesions of fold to fold, and of all to the spongy body, which will prevent its subsequent reduction.

Treatment of Phymosis.

This must depend on the condition of the parts.

1. If the swelling of the prepuce is merely œdematous, we need give ourselves little concern about it, however formidable it appears.

It *may* interfere somewhat with the exit of the urine —an inconvenience, at the worst. Evaporating saturnine lotions, the prevention of a dependent position of the penis, and, perhaps, the injection, within the foreskin, of the solution of lead, will commonly be sufficient, and frequently unnecessary. It must be a severe case of œdematous phymosis for which punctures are requisite. Should they be so, the acupuncture needle is the instrument.

2. If the phymosis is inflammatory, its management must essentially consist of such measures as are calculated to put down inflammation. I have dwelt on them enough. In addition to those general means, cold lotions and injections within the prepuce should be used, of course. The tendency to infiltration of the cellular tissue renders leeches objectionable, and, as a general rule, the knife should be withheld, till inflammation is gone.

3. When one or more attacks of inflammatory phymosis have induced a chronic induration of the foreskin, I think it is throwing time away to endeavour to remove it by lotions, liniments, and ointments. "*Ense recidendum.*" An operation is the quickest remedy.

Division of the Foreskin.

The cases which call for it are :—complete phymosis, whether congenital, or the consequence of inflammation—phymosis left after syphilitic or other sores—chronic induration and contraction of the prepuce—and, finally, that state of it which has been sufficiently alluded to, as giving rise to frequent attacks of balanitis, excoriations, warts, and chronic inflammatory irritation.

Simple as the division of the foreskin may be, the ingenuity of surgeons has discovered one good way of performing it, and two bad ones.

1. The right method consists in dividing the prepuce on its superior aspect, from the orifice to the reflection behind the corona. This is the deepest portion of it, and, by operating here, the surgeon insures the perfect denudation of the glans.

However trivial this proceeding, it is often done clumsily, and sometimes worse. I have seen a hospital surgeon, in a case of narrow phymosis, run his bistoury into the urethra, and slit up the glans. It is a common occurrence to divide the outer prepuce much farther than the inner, which makes a gaping wound, a tedious union, and an ugly scar.

There is no operation in surgery that I have performed so frequently as this. By attention to one or two small particulars, it is the quickest and simplest affair imaginable. Let the director be deep, and the bistoury narrow—oil the former well—be sure that its point arrives exactly at the angle of reflection of the

prepuce—tilt up the point of the director *there*, so as to make it project under the skin*—*then*, with the thumb of the left hand, draw back the integument of the penis towards the pubes, the only way to prevent too great division of the outer foreskin—and, all this being done, run the bistoury carefully along the groove of the director, transfix the prepuce where the point of that projects, and complete the division by cutting out.

The two layers of foreskin may or may not be united by sutures. I prefer them, but sometimes the *patient* does not. The choice may be left to himself. They make a neater job, and a quicker cicatrization. If employed, there ought to be one in the centre, and one on either side. If the needle is discarded, narrow strips of adhesive plaster should be its substitute. They require to be put on with care, and to be re-adjusted afterwards.

Subsequently to the operation, erections are the great enemy both of the patient and the surgeon. The penis should be enveloped in lint kept wetted with cold water, and the sutures, especially the dorsal one, should not be retained too long.

It may appear ridiculous to say so much on so small a matter. But, however small, it is often badly managed, and, if an operation is done at all, it should be done as well as possible.

When the line of incision has united, the redundant

* This serves three purposes :—it assures the surgeon he is *not* in the urethra—it tells him he *is* at the end of the prepuce—and it facilitates transfixion with the bistoury.

flaps of prepuce should be retained *behind* the glans, by a narrow strip of lint; and cold water should be liberally applied daily.

I observed that there were two other modes of performing the operation. I think them both objectionable.

2. One consists in cutting through a portion only of the foreskin, on its dorsum. In this way the orifice, undoubtedly, is laid open, and the risk of complete phymosis obviated; but the glans is still partially covered, and the patient continues liable to all the bad consequences which may accrue from that. Within the past week, I saw a gentleman who is constantly annoyed with balanitis, excoriations, and chronic inflammation of the inner prepuce. He had had congenital phymosis, and a distinguished Irish surgeon had slit up a portion of the prepuce for it. The glans continued nearly covered, although retraction of the skin was easy, and nothing like phymosis now existed. I explained to him, that the only effectual remedy would be to complete what had been commenced, and divide the prepuce perfectly. He did not altogether relish the idea of another operation, but he had been so long and so much annoyed, that he gave his consent, and I performed it.

I cannot see what valid reason can be urged, for *half* dividing the foreskin. It is as troublesome and painful as complete division, leaves the patient subject to most of the evils that the operation should prevent, and

must, perhaps, be followed by a second operation after all.

3. The other plan to which I have alluded, is to divide the prepuce below, on one side of the frænum. The worst proceeding of the three. The depth of the foreskin at that point is so trifling, that almost the whole of the glans remains covered after the operation, and little or no benefit is, or can be, derived from it.

It appears to me, that surgeons have frequently made the mistake of looking on phymosis as the only evil, and have not perceived, or have underrated, the inconveniences which arise from a partial investment of the glans. Hence these imperfect procedures.

Circumcision.

This is the most complete of all. It is chiefly required where the foreskin is thickened and irregular. For mere phymosis, it is seldom necessary. No doubt, circumcision is a neater operation than division, but it is also a sharper one. If the patient consults symmetry, and despises pain, he might do well to select it. The majority of persons have the bad taste, or the lack of courage, to prefer division.

If circumcision be performed, the prepuce should be pulled forward, as far as possible, over the glans. It should then be compressed tightly and flatly, in front of the glans, with a proper pair of dressing forceps. The foreskin beyond the forceps should be held upon the stretch, and a stroke of the bistoury, from heel to point, will sever it. In this operation, the outer

foreskin is removed to a greater extent than the inner, and the latter must be reverted to meet it, and should be secured to it by sutures. So much the better for the glans, which is thus sure to be denuded.*

Treatment of Paraphymosis.

It only remains for me to say a few words upon this point.

When paraphymosis first occurs, it can usually be reduced by compressing the glans with lint, or cloth, wetted with cold water, and by gently drawing the prepuce over it. A little trouble and a little patience almost always succeed. If they fail, we must seek the most constricted part of the paraphymosed integument, and lightly nick it with a bistoury. If no adhesions have taken place, the reduction can then be readily accomplished. If adhesions have occurred, and are only recent, they may be broken up—if consolidated, free incisions may be necessary. The surgeon must not let the glans slough, and, unless matters have arrived at the last extremity, he need not.

When the paraphymosis has been reduced, the case is one of phymosis, and must be treated as such.

* Some persons may suspect me of a leaning to Judaism from the manner in which I have dwelt on the evils of a prepuce. I confess that I think the Mosaic rite has a physiological bottom, and it would be a better thing for the public than the faculty, were it enforced upon all by Act by Parliament.

III. Verrucæ, Warts, or Vegetations.

The glans, the angle, and the inner prepuce, are the usual situations for these morbid growths. Occasionally, they choke up the orifice of the urethra, or may spring from the outer foreskin. Simple in structure, insignificant in importance, they do not merit the attention they formerly received, nor require elaborate notice.

They were once considered a form of syphilis. That error is abandoned. They are the result of heat, and moisture, and depraved secretions, and spring up like fungi under their influence. Almost always trivial in men, they attain their maximum in uncleanly women, and infect the labia, the nymphæ, the perineum, and the anus, to an almost inconceivable extent. That the secretions of some persons, particularly females, have a singular disposition to give rise to them, is a fact of which I entertain no doubt. I saw, or fancied that I saw, this displayed in an indisputable manner, in the cases of two women in the Lock Hospital. Both had chronic vaginal discharge, without inflammation or sores; and both had vascular warty growths of the nymphæ, labia, and their vicinity. Filthy in their persons, they had permitted the discharge to run down their thighs, and to collect upon them. In the principal channel which it took, might be seen vegetations, of the same character as those above. In such extreme instances as these, could verrucæ have been induced in

the male by sexual intercourse? Were it habitual, I should be disposed to imagine that they could. Casual connection would, more probably, give rise to gonorrhœa.

Vegetations have received very whimsical names, from the different forms they assume. Those forms are, for the most part, unimportant, and are chiefly the result of neglect, situation, or accident. A more practical distinction is into those which spring from a broad base, and those which have a narrow one.

The latter, which sometimes grow merely from a stalk, are very common in the male—the former are more frequent in the female. In her, they are often laminated, or arranged like the comb of the cock, or lumped into cauliflower-like masses. In the female, too, the ordinary vegetations may be intermixed with "Condyloma," which, indeed, is but a form of them.*

Condyloma may occur in both sexes. In men, it is mostly found at the anus—in women, there, at the "fourchette," and on the perineum. It is a sort of warty mass, not *very* vascular, of dirty red or whitish hue, rather flat than prominent, rather smooth than rough, and secreting a watery, and at times an offensive discharge.

* By "condyloma," I do not mean that singular affection which is also known under the name of "Mucous Tubercle." I believe that I was the first, in this country, to give anything like a complete account of it. This I did in the Cyclopædia of Surgery, under the head—"Condyloma." I confess that I prefer the *term* "Mucous Tubercle." I shall not describe *it* here.

The structure of warts and vegetations is simple.

Some of them are mere productions of the cuticle. They are not vascular. Exposed to the air, they dry, and become brown, like the common wart upon the schoolboy's hand—within the prepuce, on the vulva, or at the margin of the anus, they seem to absorb moisture, and are white and sodden.

The majority, and those the largest and the most important, are growths, not of the cuticle, but of the cutis. These are vascular, sensitive, bleed profusely when cut, grow freely, return quickly, and give every sign of vitality.

The causes of these growths are not obscure. They are exclusively, as I have observed, heat, moisture, and depraved secretions. This is why they select the sites that they are found in.

They can scarcely exist in the male after circumcision, nor indeed after division of the prepuce. They are the direct result of the investment of the glans, and the longer the prepuce, the worse, *cæteris paribus*, they are disposed to be. With complete phymosis, and as complete neglect, they may proceed to an extent that would hardly be anticipated. Inflammation and ulceration take place on the corresponding surfaces of the glans and foreskin—these become in parts united—the confined secretions, as well as the warts, press on some other portions of the prepuce—this ulcerates through—and, at last, we have a batch of vegetations, along with some of the glans, protruding from an opening in the prepuce, which is elsewhere adherent and distorted.

There is a condition of the parts which sometimes puzzles the inexperienced, and is not always clear to the initiated. A patient presents himself with profuse, dirty, bloody-looking discharge, issuing from within a phymosed prepuce. A lump is felt through the latter, at or behind the corona. This is often taken for an indurated syphilitic sore—it frequently proves a warty growth.

The disposition to vegetations in the female hinges on her liability to vaginal and uterine discharges. The formation of the nymphæ and the labia, the pouch at the "fourchette," the short perineum, and contiguous anus, nay, the very obliquity of her thighs, promote the lodgment of those secretions. Personal cleanliness is too often disregarded by that sex which so particularly needs it, and this is one of the penalties it pays. Delicacy in England assumes a questionable shape, when it enshrines itself in dirt. Modesty is a feminine virtue, no doubt, but I think it might be very usefully combined with a little more cold water and a bidet.

Treatment of Warty Excrescences.

If wet, warmth, and filth, produce verrucæ, it is idle to think of getting permanently quit of them, unless those conditions are reversed. Personal cleanliness is a *sine quâ non*.

In men, the prepuce being generally at fault, an operation is always useful, often indispensable. The latter is the case when phymosis exists, or those extreme

conditions of the parts that have been mentioned. But even when the foreskin is absolutely short, if the excrescences are considerable, if they show a disposition to reappear on slight occasions, or if they are combined with balanitic inflammation, the sooner the knife is used the better.

If the operation has been performed, or is unnecessary, almost any escharotics will destroy the warts. They all act much alike, and one or two are as efficient as a dozen. A good application to the vascular excrescences is the undiluted liquor plumbi. Lint dipped in it should be worn constantly, and the parts bathed with it twice or thrice daily. The growth is at once arrested—its organization, which, though seemingly active, is really feeble, receives a blow—and it gradually shrivels, peels off, and disappears, without pain, or even inconvenience. If the patient, or the surgeon, desires a quicker (and severer) remedy, he may choose the nitric acid, or the butter of antimony, or the potassa fusa. But, if the foreskin has been previously divided, or if it does not operate in maintaining the complaint, I have never found the liquor plumbi fail; and it is the mildest measure.

When the verrucæ are pediculated, some surgeons have amused themselves by tying them, in detail, with a fine silk thread—a great deal of unnecessary trouble, as well as unnecessary pain. The nitric acid, applied with a feather, is infallible destruction to these cuticular warts, and is scarcely felt by the patient.

Other surgeons, when the warts are of small size, and

numerous, whether they are vascular or not, snip them off with a pair of flat curved scissors, and touch each bleeding base with the lunar caustic,—a process more expeditious than agreeable.

The nitrate of silver, without the scissors, answers well enough when the growths are small, but I confess that I prefer the nitric acid.

By whatever means these excrescences are extirpated, if the prepuce is permitted to remain too long, or the patient neglects ablution, they will probably revive, sometimes with remarkable rapidity.

It is in women, however, that vegetations prove most annoying and obstinate. As they are almost always connected with discharge, it is useless attempting to act upon *them* unless *it* is treated too. Vaginal secretions are to warts in women, what too long a prepuce is to them in men. They stand in the relation of cause and effect.

The discharge must be treated, and, as a prelude to that, its nature must be ascertained. It may be uterine or vaginal—merely leucorrhœal—or, of a specific character, gonorrhœal or cancerous. I have seen two examples of the latter, which I think are worth recording.

Case.—The wife of a hatter came to me some years ago, with warts upon the labia and margin of the anus. At first, I mistook them for common verrucæ, more cutaneous than cuticular. She had rather a profuse discharge, which looked like ordinary leucorrhœa. I

made no examination of the uterus, which I regret. What I prescribed was of no service, and, after a while, both the excrescences and the discharge underwent a change. The transformation was so gradual, that it had made some little progress before it attracted my attention. At length, it was obvious that the warts were assuming a fungous character, and the discharge had grown watery, tinged at times with blood, and offensive. Before matters had arrived at this pass, I had convinced myself that there was "cauliflower excrescence" of the cervix uteri. The reader will guess the rest.

Case II.—I have mentioned elsewhere the particulars of the following curious, and, so far as I have seen, unique occurrence.*

Case.—A West Indian merchant, married, but not irreproachable in conduct, discovered a sore on the penis. He consulted more than one London surgeon, but, in spite of their advice, it gradually spread. Its characters were not phagedænic, but rather those of the slower forms of malignant ulceration. The glands in both groins enlarged, suppurated, and ulcerated also, the ulcerations there corresponding in appearance with that of the primary sore. When I saw this gentleman, he was reduced to a deplorable condition, the penis nearly destroyed, and the ulcers in the groins frightful.

* Medico-Chirurgical Review.

The disease was evidently cancerous. Soon afterwards, he died.

Some time before his death, his wife, a fine and healthy woman, began to suffer from discharge, which was succeeded by ulceration of the labia, nymphæ, and inferior commissure. She was seen, I believe, by several surgeons, and consulted my father, the late Dr. James Johnson. I was applied to, and prescribed for her, from time to time, for a period of several years. The ulcerations proceeded to a considerable extent, and exhibited the same features as her husband's. Their march was much slower, and that was the sole difference. When they had arrived at a certain point, they stopped, remained stationary for awhile, and slowly (very slowly) took to healing. All this time, there was a great discharge, and a very nauseous one. Where it ran, it excoriated the integument; and the perineum, margin of the anus, and contiguous thighs, were raw. In the two former situations, and especially around the anus, there sprang up warty growths, very like condylomata, and yet having a peculiar and undefinable aspect. No applications had any great effect upon them. The discharge was equally obdurate. I should observe that the uterus was not diseased. The case went on for several years, when I lost sight of the lady. The disease had gradually worn itself out, for, when she visited me last, the ulcerations and the excrescences were both exceedingly reduced. I am only too happy to believe, that she ultimately recovered.

To revert to the treatment of vegetations in the female. It is not only requisite to ascertain the nature of the discharge that she has laboured under, and to use the injections, or other measures, that are necessary; but the contact of the nymphæ, of the labia, and of any two cutaneous surfaces, must be obviated, by the application of lint or of linen steeped in the liquor plumbi, or in a solution of it. The utmost cleanliness must be enforced, and frequent hip-baths, warm or cold, should be made use of.

The liquor plumbi is as serviceable an application in the female as the male If the growths are not too large, it answers. But when they have passed certain limits, escharotics must be used, or the knife must be resorted to. When the excrescence has grown into a mass of any size, the latter is not only the most rapid, but also the most merciful measure.

In some individuals, the reproduction of vegetations, after their removal, is extraordinary. They shoot up like the hydra's heads, half a dozen sprouting where one had been destroyed.

Case.—A girl in the Lock Hospital, young, florid, and seemingly in excellent health, had a complete crop of vascular verrucæ on the nymphæ, labia, perineum, and anus. All escharotics were thrown away upon them, the growths pullulating underneath faster than the sloughs would separate. At last I took them seriously in hand, and *every morning*, for weeks, I cut off masses with the scissors, and cauterized the bleeding

wounds. It was all in vain. They still grew as fast as they were extirpated, and the patient and myself being mutually disgusted with each other, I gave up the case in despair, and the girl was dismissed the Hospital. I have seen nothing like it before nor since.

CASE.—The wife of a tradesman, recently married, consulted me last year, on account of these excrescences. They were individually small, but absolutely countless, and extended farther into the vagina than I had ever previously witnessed. She had slight leucorrhœa. They shrivelled up under the liquor plumbi, but reappeared most pertinaciously. They were removed at last by three months' bathing in the sea, accompanied with the use of the goulard.

In conclusion, I would again insist on the necessity of ablution and baths in both sexes, on attention to the secretions, on the influence of the prepuce in the male, and on that of discharges in the female.

IV. ERYTHEMATIC AND ERYSIPELATOUS INFLAMMATION OF THE INTEGUMENTS OF THE PENIS AND THE SCROTUM—DIFFUSE INFLAMMATION OF THE DARTOS.

As a consequence of acute gonorrhœa, or of inflammatory phymosis, as well as of venereal sores, an erythematic or erysipelatous inflammation may invade the integuments of the penis, and spread thence to the

scrotum and contiguous parts. If the inflammation is slight, and confined to the skin, it assumes the erythematous rather than the erysipelatous character, and is so readily allayed by lotions of the diluted liquor plumbi, combined with appropriate remedies, that it requires no further notice. Some slight degree of this inflammatory erythema is a very common occurrence.

I fancy it will hardly be disputed now, that the existence of erysipelas, or of diffuse inflammation, is, *ipso facto*, evidence of a low state of system. I do not know whether the doctrines of Mr. Lawrence still exert any influence, but I should doubt if many surgeons can be found, who would bleed, or employ depletory measures, in the manner that he recommended. However that may be, I must confess that I was never able to reconcile such practice with either what I thought or saw.

Erysipelas and diffuse cellular inflammation appear to me to be the same affection, in two different tissues. Erysipelas may exist alone,—a purely cutaneous inflammation. In point of fact, it rarely does so, the cellular membrane being usually implicated, sooner or later, and more or less. Diffuse inflammation of the latter cannot well occur without involving the skin, because its vascular supply has to traverse the cellular texture. When both tissues are decidedly affected, that implies the gravity of the affection, and constitutes what has been termed, I think improperly, "erysipelas phlegmonodes."

In nature, as well as in nosology, there are two

leading forms of inflammation :—the one disposed to assign limits to itself, whether by resolution, or by a barrier of lymph—the other as disposed to spread, and to separate from the blood its serous rather than fibrinous element. The first is phlegmonous or healthy —the second, erysipelatous or unhealthy inflammation. The effect of constitutional condition, in the production of either, is too notorious to be dwelt upon.

The influence of *tissue* is great also. Where the cellular membrane contains no adeps, its cells are readily distended with any accidental fluid. That distension exerts a mechanical influence on the vascular supply, not only of the tissue itself, but of the skin. If considerable, the small vessels that feed the cells are compressed, obstructed, strangulated ; if greater still, the vessels that traverse the tissue, to attain the skin, are compressed and strangulated also.

These considerations, brief as they are, account for the main phenomena which erysipelas presents. Offspring of a low or depraved state of system, it has a tendency to run over the tissue that accident has made it fasten on—disposed to pour out the serous and albuminous constituents of the circulation, (the fibrinous, I presume, being deficient) it occasions vesications on the surface of the skin : œdematous, semisolid, and purulent effusion in the cellular membrane – compressing the areolæ of the latter and their vessels, it gives rise to the frightful sloughing which we witness, and which all our efforts are directed to prevent —and, cutting off the vascular supply of the skin, it

leads to the destruction of the latter. So constant are these facts, that, given a deteriorated state of constitution and a loose cellular tissue, we may predict, almost with certainty, what inflammation will produce.

I have observed that the cellular membrane of the penis is unprovided with adeps. Towards the base of the organ, it blends insensibly with that peculiar tissue of the scrotum which is situated beneath the skin, and is termed the dartos.

The dartos, commencing in this manner in front, extends posteriorly to the sphincter of the anus, where it terminates in an angular projection. It rises laterally to the level of the cord, where it stops, and is replaced by the adipose cellular tissue. It forms an envelope for both testicles, but sends a prolongation between them, which constitutes the septum of the dartos. It is closely united to the skin of the scrotum superficially, but is lightly attached to the parts beneath, on which it freely moves, by delicate cellular membrane.

The structure of the dartos is considered by Cruveilhier, I apprehend with justice, intermediate between that of common cellular membrane and muscle. Traversed by numerous blood-vessels, reddish in its colour, made up of fibres, which, though irregularly interlaced, have a preponderating vertical direction, it possesses unquestionable contractility, and that of the "tonic" kind.

These details, which are perhaps more familiar to those who have made anatomy their study, than to the

generality of surgeons, are necessary for the complete elucidation of the affection I shall now describe.

An individual, too often of debauched habits, who is suffering from acute gonorrhœa, and who probably has been taking copaiba, or making use of strong injections, is seized with a rigor, accompanied, possibly, with nausea, and followed by pyrexia. If in a hospital, where such cases will most commonly be found, it is likely that erysipelas is epidemic at the time. These premonitory symptoms are sometimes very marked, and sometimes so slight as to attract no observation.

In a very few hours, the penis and the scrotum have become swollen, pit on pressure, and display a dull red tint. These appearances may cease at the groins and perineum, or extend to those parts in an undecided manner. The constitutional disturbance is not considerable, and the febrile action is of a low, rather than inflammatory type.

So far, the case seems one of ordinary erysipelas; and if that disorder happens to prevail, and the surgeon also happens to be ill-informed or inattentive, it will most likely be considered so. Erysipelas, indeed, it is, but seriously modified by the tissues that it has attacked.

Left to itself, or lightly treated, it makes rapid progress. The swelling augments, but not to an inordinate degree—the tint grows more dusky, but rarely livid, as in the lower limbs—the œdema becomes more solid first, and more "boggy" afterwards—and darkish vesications make their appearance on the scrotum.

These changes are less remarkable upon the penis; and the erysipelatous inflammation creeps slowly and reluctantly over the perineum and the groins, or scarcely spreads on them at all.

If the surgeon, still blind to the gravity of the affection, adopts no decisive measures, it marches fast to its denouement. The skin of the scrotum takes on the gangrenous hue—the vesications spread, and the cuticle separates, exposing ecchymoses in the cutis—to the "bogginess" beneath are added fluctuation and emphysema—and the odour proclaims mortification of the scrotum. Such, indeed, is the case. The skin, the dartos, the envelopes of the testicles, down to their vaginal tunics, have perished. Their separation, if the patient survives, is inevitable. In a few days, more or less, the testes will be laid bare, and, if life is saved, granulations springing from the vaginal coat, and cicatrizing slowly afterwards, will be all their future covering.*

I have said, if life is saved. It is not always so.

* That vaginal coat is covered by the cremaster, which descends on it in loops, and has received the name of the erythroïd tunic. The high organization of muscular fibre enables it to resist the erysipelatous inflammation, which destroys the cellular texture above it and around it. This is sometimes observed in a remarkable degree in compound fractures of the limbs, where the muscle still retains its vitality, in an atmosphere of putrid tissues. The same thing happens in the case of the cremaster. Its loops may be seen contracting on the surface of the testis, when skin, dartos, and subjacent cellular membrane have all been swept away.

Sometimes it happens, that, along with the progress of the scrotal mischief, the constitution sympathises deeply —the erysipelas spreads on the abdomen, the nates, and the thighs—the subcutaneous cellular membrane may be seriously involved—the patient sinks into typhoïd collapse—and muttering delirium, diarrhœa, and coma, close the scene.

Happily, the result is not usually so sad. The destruction of the scrotum consummates the mischief —the erysipelatous action is arrested—the powers of nature rally when the blow is spent—and the patient escapes, with the more or less complete destruction of the external coverings of the testes.

After this description, and the observations that preceded it, I conceive that the rationale of the phenomena is obvious. Erysipelatous inflammation has invaded the skin, and the tissue beneath it unprovided with adeps —a mixed effusion of serum and lymph has gorged and choked that tissue's areolæ—it has rapidly sloughed —and the skin has, of necessity, sloughed after it.

The salient features of this affection are:—suddenness of attack—insidiousness of origin—rapidity of progress—destructiveness as regards the scrotum—and tendency to pause, or, at all events, tractability, when it arrives at the groins and perineum. The adipose character of their cellular membrane sufficiently explains *that*.

I have placed this affection amongst the consequences of gonorrhœa, because, in many instances, it is one. But it is, at least, as frequent a result of stricture, and

it might with equal, or with greater justice, be described along with *it*. We can understand why it should be an effect of either.

At times it occurs spontaneously, in persons who are free from disease of the urinary organs. It seizes them, as they might be seized with erysipelas of the face, or of any other region of the body. Why should it attack the scrotum? Why should many maladies come when and where they do? One question admits of as satisfactory an answer as the other. Enough for the surgeon that it is so—that so serious an affection may steal on his patient, like a thief in the night—and that if *he* is ignorant or careless, the consequences may be most lamentable.

There are two inflammatory conditions of the scrotum, with which the preceding may be confounded. The first is simple erysipelas—the second, the result of effusion of urine.*

1. *Simple Erysipelas.*—This produces redness and swelling. But the latter is of the œdematous character: the tension inconsiderable: the mechanical obstruction to the circulation of the part slight: and neither the skin nor the cellular membrane is disposed to slough. The

* The accident that occasionally happens in the operation of injecting stimulating fluids into the tunica vaginalis, for hydrocele, affords another instance of diffuse inflammation of the dartos. The displacement of the canula permits the liquid to be forced into that tissue, *or* into the cellular membrane under it. We are all aware that incisions are the remedy, and, if made at once, an efficacious one.

scrotum is perhaps affected only by the extension of the erysipelas from elsewhere; and it probably will continue to pursue its course, over the trunk or limbs.

I do not believe that there is any generic distinction whatever, between simple erysipelas of the scrotum and the destructive erysipelatous inflammation of the dartos. The difference, I take it, is only one of degree; and what determines it is constitution. If that is depraved by mercury, by intemperance, by privations, by anxiety, the deeper and the deadlier action may follow an exciting cause, which, in a more propitious state of system, would produce the slighter one.

2. *Effusion of Urine.*—So far as the appearance goes, inflammation of the cellular tissue of the scrotum, occasioned by escape of the urine into it, is indistinguishable from erysipelatous inflammation of the dartos. It could not well be otherwise. The inflammatory action is, in kind, the same—the tissue invaded is the same—and the general and local consequences are the same—but the history and the treatment present some distinctive features.

Effusion of urine can only result from a breach, of some sort, in the bladder or urethra. An accident or operation may lacerate or divide them. Be it which it may, that speaks for itself. Stricture is the usual cause of it. The contraction, to effect this, must be severe, perhaps impermeable; the canal distended, and inflamed on the vesical side of it, ulcerates from within, and allows the urine to escape; or transmits to the parts around the inflammatory action, which gives rise

to ulceration, that invades the urethra from without. At another time, the mischief is the product of art, not nature—of a false passage, the result of an instrument and violence, or of the injury done by a caustic bougie.

The characters of the two affections that I am endeavouring to distinguish are not exactly alike. Erysipelatous inflammation of the dartos has a more constitutional cause, and is apt to roam over a wider range of surface. The tendency to pause at the confines of the dartos is often counteracted, and always modified, by the opposite tendency of all erysipelatous actions to be erratic and progressive. When urine is effused, the mischief is mainly, if not exclusively, when and where it penetrates. To that extent, the cellular membrane and the skin inflame and slough with deadly haste—beyond it, the morbid action is always mitigated, and not unfrequently exhausted.

As a general rule, erysipelatous inflammation of the dartos commences in the scrotum itself, or in the penis: effusion of urine, being commonly the consequence of stricture, or of operations about the neck of the bladder, as commonly starts from the perineum. Violent as erysipelas of the dartos is, its effects are neither so speedy nor so mortal as those of effused urine; and while, beyond it, the former loses half its force, the latter blasts the tissues as it goes.

Nor is the treatment quite the same. Instantaneous incisions are demanded, it is true, by both; but in inflammation of the dartos they may generally be

restricted to it—effused urine must be tracked by them into every recess.

Treatment of Erysipelatous Inflammation of the Dartos.

The principle which lies at the root of all treatment, in this and similar affections, is to arrest, at the earliest possible period, the distension of the tissue by serous or solid effusion. Incisions are the only means of effecting this—incisions prompt, free, and decisive—going to the full depth of the dartos—and carried to the confines of the inflammatory action. If employed in the first stage of the disease, while serum only is poured out, they will infallibly extinguish it. If erysipelatous redness, with little or no swelling, extends beyond the main seat of the complaint, a few punctures there, with the lancet, will be serviceable.

If this early stage is past, and lymph as well as serum occupies the tissue, incisions must still be practised. The section of the dartos looks like that of soft Dutch cheese, and its gaping sides are walls of sodden lymph. This will soften down, and be superseded by pus—the compressed cells will slough—but the skin will probably be saved. From time to time, small collections of matter will discharge themselves through the wounds, or require renewed openings.

Incisions are equally demanded, if the stage of sphacelus is come. The cellular membrane is lost, the skin past redemption, but life hangs in the balance. Without incisions, nature *may* arrest the mischief, and

tediously throw off the sloughs. But he must be a sorry surgeon who would trust to *her*. Before that process could be consummated, the extension of the erysipelatous action would probably have inflicted mortal injury on the cellular membrane of the trunk and limbs. The knife must be used with determination, chastened, of course, by judgment. Pus and putrid gas are to be allowed free issue—the same is to be secured for the rotten dartos—and provision must be made for the salvage of the cellular tissue beyond, and for what skin is recoverable.

A ridiculous dispute, fit for the Sorbonne, has arisen on the question of long cuts or short ones, in the treatment of diffuse cellular inflammation :—as if surgery could be squared by a carpenter's rule. Those incisions are of the proper length, whatever number of inches it may be, which adequately relieve tension in the early stages, and afford a free discharge to sloughs and matter in the later ones. The notion of gauging them by some ready-made standard is a shabby imitation of the Laputan tailors, who, Gulliver informs us, cut their coats upon abstract principles, but were the worst *fitters* that he ever saw.

It would be out of place to dwell on the details of local or of general treatment. Assiduous fomentations —poultices—lint or rags saturated with warm water, or with warm emollient lotions, and covered with oiled silk, are obvious and necessary applications. When matter and sloughs have been discharged, and there are wounds to dress, and granulations to encourage,

mildly stimulating washes will perform that office. The solution of the chlorinated soda is, I think, the cleanliest and the best. With the progress of the case, other and stronger stimulants may be required: the decoction of bark and myrrh—the friar's balsam—the red wash—the solution of lunar caustic—the nitrate of silver itself. Strapping and mechanical support will probably be needed at the last. The cardinal point throughout is to give free issue to any matter that may form, and small accumulations of it, from time to time, are a common incident in all erysipelatous affections.

The general treatment must be such as will support and rouse the constitutional energies. But stimulation should neither be precipitately commenced, nor indiscriminately pursued. In the early stage, there is a certain form and degree of inflammation mixed up with low pyrexia. To deplete for that, is, in my opinion, madness—to rush into the contrary extreme is almost equally unwise. Saline draughts containing excess of ammonia—gentle purgatives—beef-tea—are the safest items both of medicine and of food. If incisions have cut the affection short, or if it has advanced to the state of gangrene, more decided tonics, or the boldest stimulants, will be required. In the latter case, indeed, the administration of ammonia or bark, of wine or brandy, can have no limits but the prudence of the surgeon, and the circumstances of the case. He is playing double or quits with the disease, and must stake everything upon the throw. I have seen patients saved,

when they seemed past all human help and hope, by being kept in a condition of absolute intoxication for successive nights and days. Yet I would not be misunderstood. I am no admirer of the empirical bark and brandy practice, through thick and thin, in erysipelas. I think it bad alike in theory and fact. But when the subcutaneous tissues are sloughing, the surgeon who hesitates to stimulate, or counts the ounces of wine too carefully, will lose patients that a bolder man would save.

This notice of erysipelatous inflammation of the dartos has extended already beyond the limits that I contemplated. Yet, for more than one reason, I am tempted to relate two or three of the cases I have witnessed.

Case I.—This was the first that attracted my attention. It occurred in the Lock Hospital, in the year 1833.

A journeyman baker, aged 24, of dissolute habits and addicted to gin, contracted acute gonorrhœa. For this he took large doses of capivi, and did not exactly refrain from drinking. The inflammatory symptoms of the complaint increased; phymosis supervened; a slight chilliness, succeeded by pyrexia, was experienced; and, in this state, he was admitted into the Hospital, under the care of Mr. Briggs.

I prescribed for the patient, who remained for a day or two in much the same condition, when he was seized with a rigor. This was the precursor of erysi-

pelas, commencing at the prepuce, and spreading to the scrotum. The latter grew swollen, red, and œdematous. Mr. Briggs, who saw the patient, looked on it as common erysipelas, and prescribed bark and wine. Next day, the swelling was greater, and the scrotum felt boggy to the touch. Mr. Briggs made a few punctures with the lancet, without any good effect. The scrotum sloughed—erysipelas of the skin and cellular tissue extended to the pubes, the perineum, and the nates—the symptoms put on the typhoïd character —and the patient became comatose, and died.

The dartos, as well as the delicate cellular membrane beneath it, was gorged with lymph, which, in parts, had softened down, and the meshes of the tissue, as well as the skin, were in a state of complete sphacelation.

Case II.—This occurred about three weeks after the preceding The subject of it was a carpenter, 37 years of age, who had laboured, for upwards of a year, under what were *called* syphilitic secondary symptoms. He had ecthyma, rupia, creeping ulcers, sloughing throat, and all the foul array of the mercurial cachexia. He had rubbed in, taken every conceivable pill, and was using cinnabar fumigation for the throat, when a shivering and nausea ushered in fever, and that, on the second day, was followed by a swelling of the scrotum. Warned by the preceding case, I immediately made very free incisions, and found, although the affection had apparently but just commenced, that the dartos

was perfectly infiltrated with lymph. Prompt as this proceeding was, the tissue partly sloughed, but the skin was saved, and the patient finally recovered.

Case III.—A drunken shoe-maker became my out-patient at St. George's Hospital, with inflammatory gonorrhœa and phymosis. What I prescribed was of little avail, thanks to the gin and beer that he indulged in. On one of my visiting days, he presented himself, looking haggard and ill, complaining of headache and sickness, and stating that the swelling had spread from the prepuce to the scrotum. On examination, I found that the latter was the seat of erysipelatous inflammation of the dartos, which had evidently gone to a considerable extent. I directed him to be instantly removed to bed, and at once made incisions in the part. The dartos was in a gangrenous condition, and ultimately came away, with the loss of much, though not the whole of the integument. The testes, with their vaginal tunics, were laid bare. Granulations sprang up, and united with the portion of the skin that was preserved, to form a sort of second-hand scrotum.

Case IV.—The last case that I shall introduce is that of a gentleman, a very free liver, who was attacked with inflammatory gonorrhœa, in the month of June, 1846. He consulted a medical friend of mine, who, unfortunately, employed injections of the lunar caustic. These aggravated the complaint, and inflammation of

the absorbents and cellular membrane of the penis ensued. An abscess formed on its inferior surface, and was opened. The patient appeared to be doing very well, when a slight rigor, attributed to sitting in a draught, was succeeded by moderate feverishness. On the third day of this, the scrotum became swollen, red, and painful. In the course of two days more, the swelling had increased, redness and œdema had invaded the groins and pubes, as well as the perineum and contiguous thighs, and the constitutional disturbance was alarming. I was now called in, and immediately made free incisions in the scrotum, and slighter ones in the pubic and perineal regions. The dartos sloughed to some little extent, and the skin ulcerated in two spots of trifling magnitude. An abscess of some size formed in the perineum, and was opened. Another presented, at a later period, on the inside of the left thigh. The patient recovered, but his convalescence was slow, and it was long before he perfectly regained his previous health and strength.

I could mention other cases, but these are, I think, sufficient to illustrate the picture I have drawn of this affection. It was in 1833 that I first became acquainted with it, and I am not aware that, at that period, any distinct notice of it had been published. The late Mr. Liston drew attention to it, a short time before his death. The account which I have given is derived from my own notes and observations. If it tallies with those of others, the coincidence is additional

evidence of its accuracy; if it does not, I can only say that I report what I have personally witnessed, and can guarantee its fidelity.

V. Herpes and Eczema of the Prepuce.

Both these affections are occasional consequences of gonorrhœa, particularly of the chronic form of it. But they are more immediately connected with too long a prepuce, and deranged digestive organs. I shall say a few words, and but a few, on each.

1. *Herpes of the Prepuce.*

I think that too much consequence has been attached to it. The affection is, in itself, insignificant; and those who have talked of "herpetic" sores, mistaken or mistakeable for syphilitic ones, must have confounded affections utterly unlike.

The usual characters and course of herpes are the following:—An itching or a burning sensation attracts the attention of the patient to the prepuce—on the outside of this, or on the inside, occasionally, though rarely, upon both, he discovers a slight fulness and redness—a little later, on that day, or the next, two or three minute risings, clustered together, appear in the centre of the blush—on the third day, these have assumed the vesicular character, with transparent contents, and a bead-like look—on the fourth day, the lymph has become opaque, and in a few hours more it has grown puriform—on the fifth or sixth day, the fluid begins to

be absorbed, and it and the cuticle to form a crust—and, on the seventh or eighth day, this peels off, and the cutis below skins over. These dates are, of course, approximative—the slighter the attack, the quicker its course—and *vice versâ*.

The natural termination of herpes is a scab, and that scab is due to the desiccation of the lymph. The conditions that favour this exist upon the outer foreskin, but not in the same degree upon the inner. When the affection occurs in the latter situation, the heat and moisture that obtain there lead to the early separation of the cuticle, the exposure of the cutis, and the occurrence, in consequence, of a small sore, which is to heal like a blister. These are the ulcers which have been confounded with syphilis. I can only say, that the two are most dissimilar, and that not only the progress of the herpetic vesicle, but of the ulceration left by it, are easy of recognition. The venereal sore affects the substance of the cutis, runs a regular and tardy *ulcerative* course, has a hardened basis, and forms, more or less, an indurated scar. The herpetic vesication is on the surface of the cutis, goes through no positive ulcerative stages, has no hardened basis, and no marked cicatrix. I cannot conceive how the two can be confounded, although they unquestionably are so.

One circumstance, however, must not be forgotten. A person labouring under herpes of the prepuce may expose himself to infection. The part is not less prone to receive it than a sound one, but the contrary. If infected, the herpetic vesicle or sore may gradually

assume the syphilitic form,—so gradually as to deceive the surgeon who sees it before it changes, or *in transitu*. The same liability, and the same reasoning, apply to "excoriations," and will account, I imagine, for some of the mistakes committed by well-informed men.

If there is one thing that, more than another, creates a disposition to herpes, it is too long a prepuce. That happens, no doubt, to those who have no such incumbrance; but length of foreskin is the leading predisposing cause. The state of the digestive organs exerts a very great influence, there being some persons who constantly suffer from it, when those organs are deranged. I am sure I have observed, that the gouty form of dyspepsia is that which most frequently gives rise to it, and, when we reflect on the acidity which then characterises the secretions, we can understand their coincidence. Pyrexia, especially of the catarrhal kind, is another source of the affection, and I know more than one individual, who is as commonly visited by herpes of the prepuce as many are by labial herpes, after having suffered from a cold.

The only occasion on which I have seen herpes of the prepuce severe, was in connection with herpes zoster. A gentleman, over the middle age, who drank a free allowance of wine from which champagne was not excluded, met with a sprained ankle, which confined him to the sofa, and led to the reduction of his *carte*. On the fifth day, he was seized with violent pain in the right hypochondrium, and his usual medical

attendant imagined he had inflammation of the liver. He was leeched and cupped, and on the third day herpes zoster declared itself. On the second day of this, the gentleman complained of a stinging sensation in the prepuce, which was naturally elongated. I was requested to see him in consultation, and expressed my opinion that, probably, herpes of the prepuce was in embryo. So it turned out, for next day the vesicles appeared. But the patch was large, and others formed almost simultaneously near it—they became confluent —were attended with considerable inflammation—and constituted a well-marked specimen of herpes phlyctenodes, embracing a large portion of the penis. The constitutional disturbance was particularly severe, and a sharp burning pain remained for many weeks in the part, yielding gradually to time.

The management of herpes is the simplest in the world. The diluted lotio plumbi is far the best application. Frequently, dry lint succeeds as well as anything. The scab should not be disturbed. When it falls off spontaneously, the skin is almost always sound beneath—when meddled with, a sore may be produced.

For the "herpetic sores" on the inner prepuce, a light touch or two with the nitrate of silver, and the solution of chlorinated soda, answer extremely well.

The general treatment must be that of the exciting cause, if any such is apparent. The cold, or dyspepsia, or costiveness, or diarrhœa, as the case may be, that gives birth to the eruption, must be met with appro-

priate remedies. Not a few patients treat this form of herpes very lightly, and are none the worse for it.

2. *Eczema of the Prepuce.*

Herpes and eczema, though both vesicular eruptions, have this radical difference: the former runs a regular course to maturity and disappearance—the latter obeys no periodical law, but is uncertain in the violence and extent of its acute stage, and is strongly disposed to lapse into the chronic one.

Eczema of the prepuce is a counterpart, *in petto*, of eczema elsewhere. It would greatly exceed the limits of this work, to embark on the description of a disease so general and so complicated. All that I can do, is to make a few practical remarks upon it.

Præputial eczema is not nearly so common as herpes; in fact, as an independent affection, I have found it rare. When the eruption is extensively diffused over the body, the prepuce may be involved as well as other parts, and the scrotum is then almost always implicated.

Like herpes and balanitis, it chiefly attacks those whose foreskin covers the glans. It sometimes appears in the acute, more often in the chronic form of gonorrhœa, and is occasionally traceable to the use or abuse of cubebs or copaiba.

Herpes is a consequence and index of pyrexia, or of deranged digestive organs. Eczema is often the result of a deeper depravation of the system. All the forms of that disorder are evidence, *pro tanto*, of a vitiated

condition of the blood, as well as of a skin that performs its functions badly. If this statement be (as I believe) correct, eczema should be the graver affection of the two. And so it is.

The subject of eczema is mostly of the sanguineous, and not seldom of the bilious temperament. Sometimes he is disposed to perspire readily, but more frequently his skin is unnaturally dry. The urine is very apt to be turbid, for the condition both of the integument and of the blood affects the secretions of the kidneys.

If the complaint begins upon the prepuce, a sense of tingling, burning, or pain, accompanies or precedes a degree of redness, which varies from the slightest to the most intense. In twenty-four hours, or thereabouts, clusters of vesicles, more or less minute and numerous, present themselves. They soon become confluent, and form in succession, a transparent, an opaque, and a puriform elevation—a thin and a honey-combed crust—a scab. This may fall off, and all will then be over. Generally, other clusters of vesicles, vesications, and crusts, follow and imitate the first, and spread over contiguous, or extend to remote parts. A distressing feature of eczema is the itching and irritation that wait upon it—the patient does not merely scratch, he often lacerates the part, and the crusts and scabs are rudely torn away—the excitement of the cutis stimulates its vessels to the utmost—and a watery or ichorous discharge is poured forth in profusion.

If the action of the skin is still more increased by

neglect, by intemperance, or by irritating applications, the aqueous secretion is replaced by a more purulent one—the vesications rise into pustules—and the disorder assumes the very common form of eczema impetiginödes.

If it has lasted for any length of time, the cutis probably thickens—ulcerated fissures traverse it—scabs here, scales there, and patches that secrete a watery or a purulent discharge, give it that motley and composite character, which, while it defies nosological arrangement, proclaims duration and inveteracy.

An ordinary termination of eczema is in a form of psoriasis. This happens occasionally on the prepuce—very frequently upon the legs. Eczematous psoriasis, connected with varices of the saphena vein, is one of the most common complaints that are met with, amongst the out-patients of a hospital. But psoriasis, when it occurs under these circumstances, always betrays its origin. While the skin, in one part, is increased in density, and is covered with furfuraceous scales, which readily fall and are as readily renewed: in other parts, the crusts, the secreting surface, and the watery ichor, prove that eczema remains. Even when the transformation seems complete, the tendency of the eczematous vesicle to reappear is never totally lost. In the phenomenon of psoriasis supervening upon eczema, it is impossible not to recognise chronic inflammation of the dermis: and, in the disposition of two eruptions, of such opposite characters, to coexist and to supplant each other, we have the proof (at least

I fancy so) of the hollowness of many of the distinctions (upon paper) of these cutaneous diseases.

We hear, for example, of "eczema rubrum." I never could very clearly comprehend what red eczema meant, until I saw how the complaint is often treated. But, when tar ointment, and caustic, and all sorts of irritants, are applied to an eruption dependent on an excessive action of the skin, we cannot be astonished at any depth of tint, or intensity of inflammation, that may come upon it. The "eczema rubrum" is, in my opinion, as genuine a creation of mismanagement and accident as "porrigo larvalis," or "porrigo scutulata," or any other of the specimens of nosological jargon, bad treatment, or filth.*

The real and the practical distinction in eczema, is into the acute and chronic. Whether there is a little more crust or a little less, a disposition to the "psydracious" or "phlyzacious" pustule, matters, comparatively, nothing. The important points are the amount of local excitement, and the presence or absence of structural alteration of the skin. It is on these that the treatment will always hinge.

A marked feature of eczema is the disposition to relapse. It waits on all its stages, and on all its forms.

* A *philosophical* account of the disorders of the skin is yet to be composed. The attempt of Plumbe, though a failure, was a well-meaning one. In the works that we possess, the student is embarrassed by distinctions without differences, and differences without importance.

There are few complaints to which the Fabian maxim, "cunctando vincere," is more applicable.

If I am right in my conviction, that eczema is the consequence of a morbid state of the fluids, it follows that local must be subordinate to general treatment. The milder the attack, and the smaller its extent, the more efficient, of course, will be local measures, and the less will general ones be necessary; but there are few cases, however slight, in which these last can be dispensed with.

In acute eczema, if extensive or severe, it may be right to commence with venæsection. It is seldom requisite.

Pyrexia will require antimonial salines, in which the alkaline carbonates are in excess, and into which diuretics freely enter; the most suitable are the nitrate and acetate of potass, with small doses of the infusion of digitalis.

At the head of the list of remedies, I have no hesitation in placing purgatives. Mercurials, as a general rule, should be combined with them. If the patient is robust, calomel and James's powder may be given every other night, and a black draught, with colchicum, may succeed it in the morning. A less vigorous subject may take blue pill with ipecacuan, in lieu of calomel; and infusion of roses with the sulphate of magnesia, or infusion of senna with manna, may supersede the black draught. Should the constitution be a feeble one, the hydrargyrum cum cretâ may be given, its repetition and amount being contingent upon

circumstances. But I repeat that in eczema it is almost always useful, and often indispensable, to prescribe some form of mercurial, and, if he can be made in any way to bear it, the patient must be resolutely *purged*.

Diuretics are equally indispensable. Nor can we wonder at it. In eczema, the capillary circulation of the cutis is stimulated into excessive activity. The redness, the profuse serous exudation, the rapidity with which albuminous crusts are renewed, are all sufficient evidence of *that*. The physiological relations between the skin and the gastro-intestinal mucous membrane and the kidneys, are too well known to be insisted on. That sympathy is evinced in the antagonism of their secreting power—the more the skin perspires, the less, *cæteris paribus*, the action of the bowels and the kidneys—the fluids abstracted from *them*, are, *pro tanto*, derived from *it*, and in that manner relieve the pathological condition in which eczema consists. But copious alvine and renal secretions affect the disorder in another way: for, they purge the blood of those proximate principles, whether of carbon or of nitrogen, which, I do not doubt, are in excess. The alkaline diuretics are the most efficient, and the liquor potassæ is the best. It should not be given grudgingly; the dose, however, being adapted to the age and strength of the patient. At first exhibited in toast water, or barley water, or in infusion of taraxacum, it may afterwards be combined with sarsaparilla, which obviates its depressing influence upon

the system. Yet the pure alkali *may* be pushed too far; and, if pallor of complexion is attended with debility and mental depression, the surgeon should diminish the dose, or suspend it.

In obstinate and chronic cases, more particularly in those which have run into psoriasis, the arsenical solution of Donovan is valuable. Whoever uses it must watch it. Arsenical preparations of all kinds are apt to accumulate silently in the system, and display their bad effects both suddenly and seriously.

Warm baths are indispensable. Vapour is commonly preferable to water. The sulphur vapour bath, though useful, has been overrated, and is more applicable to the chronic than acuter stages.

The results of my experience have led me to one pretty positive conclusion :—that, the local treatment of eczema should generally consist of soothing applications. Stimulating ointments, and irritants of every kind, have almost invariably appeared to me to aggravate the disorder.

When the attack is recent and acute, fomentations of the decoction of poppies or of marsh mallow, followed by tepid Goulard poultices, afford relief to the itching and the smarting, and calm the inflammatory condition of the cutis. When that has somewhat subsided, I adopt the following plan :—night and morning the patient bathes the part with warm thin gruel, or bran tea. This serves two purposes : it acts as a fomentation, and it washes away the acrid secretions, as well as the scabs that are inclined to be detached. After

the ablution, some fine linen rag, on which is spread evenly, and rather thickly, an ointment composed of the unguentum zinci, or unguentum cretæ, with an equal quantity of fresh ceratum plumbi, is laid on; it should be renewed twice or thrice, or even oftener, in the course of the twenty-four hours. If the crusts are disposed to collect too pertinaciously, a Goulard poultice, from time to time, contributes greatly to remove them.

Simple as these measures may seem, they are remarkably successful. The relief they afford is usually immediate, and the benefit decisive. But eczema, as I have said, is very prone to relapse, and neither the surgeon nor the patient must lose heart.

When it has merged in psoriasis, the ointment of the diluted nitrate of mercury may be substituted for the one I have advised; and, if the psoriasitic state is indolent, the unguentum picis may be serviceable. If fissures form, they may be lightly touched with the nitrate of silver, or a lotion of it: but this is an application too frequently abused.

To sum up:—I believe that the best, the most rational, and the most successful treatment of eczema is to purge freely, give liquor potassæ fully, use vapour or warm baths regularly, and trust mainly in the local treatment to the preparations of lead. I know of few disorders which are managed, in general, on less scientific and less successful principles than this.

I would make only one other observation. If eczema is general, and has been of long duration in one advanced

in life, let the surgeon be cautious how he interferes with it. I have seen two marked examples of the danger of officious meddling in such circumstances.

One case was that of a nobleman, between 60 and 70 years of age, who had laboured under eczema of the prepuce, scrotum, and legs, for upwards of 17 years. Under such treatment as I have described, the disease gradually yielded, and in about three months the last vestige of it was receding. But, *pari passu* with its decline, the intellectual faculties began to fail, paralysis of the lower limbs succeeded, loss of power next invaded the upper ones, and, after the lapse of seventeen months, the patient sank. On examination after death, there was found arachnoïd and ventricular effusion, with general softening of the brain.

The second case was that of an elderly gentleman, who had had for many years chronic eczema of the penis, scrotum, and thighs. I recommended him to adopt only palliative measures, but a physician whom he consulted prescribed a strong wash of the nitrate of silver. He had used this a few times, when the eruption rather suddenly dried up, and he was attacked with drowsiness, loss of memory, and an indisposition to move. Hemiplegia of the right side supervened, coma followed, and the patient died. There was arachnoïd effusion, a congested state of the venous system of the brain, and softening of its left anterior lobe.

This completes the account of those affections which

result from the extension, along the integument, of gonorrhœal inflammation. I pass, therefore, to those which depend on its advance along the urethral mucous membrane. These are,—Inflammation of the Lacunæ —Inflammation of the Posterior Parts of the Urethra, the Prostate, the Bladder, the Kidneys—and Inflammation of the Apparatus of the Testis. I shall confine my observations to the first and last, deferring, as I have already stated, the account of vesical and renal inflammation to another opportunity.

VI. Inflammation of the Lacunæ.

The internal surface of the canal of the urethra presents, when examined by the naked eye, a number of orifices, mostly minute, but of variable size, leading to small cavities, or culs-de-sac. The depth of the cavities varies almost as much as the size of their apertures, but their course is always oblique, and the orifice directed forwards. I shall have occasion to refer more particularly to this point, in the account which I purpose to give of stricture. It is sufficient to observe at present, that these pouches will occasionally annoy a good surgeon, and often embarrass a bad one, in the management of that complaint.

Morgagni having been the first anatomist to give a good description of these cavities, they have been named, after him, "the sinuses of Morgagni." This, however, is rather the scholastic than the familiar

name, and, in this country, they are more usually termed "the lacunæ."

It is sometimes supposed, and that by well-informed surgeons, that these lacunæ are glandular bodies, analogous to those so frequent in the mucous membrane of the alimentary canal. Anatomy, however, lends no support to this idea, which is founded, not upon dissection, but on the peculiar nodular thickening displayed by the lacuna when diseased.

All stages of gonorrhœa are liable to be attended with inflamed lacunæ. The acute stage, however, is that in which they usually present themselves.

Accident, or an unusual degree of tenderness, directs the attention of the surgeon or the patient to the inferior surface of the penis, between the glans and the scrotum. A globular hardness is felt, seemingly imbedded in the corpus spongiosum, ranging in size from that of a pin's head to that of a pea. It is solid, tender, very distinct in some instances, only discoverable by a very careful examination in others. It may be single, or there may be several. It, or they, will generally be found nearer the scrotum than the glans, a not unfrequent site being just anterior to the former.

I have said that inflamed lacunæ most commonly shew themselves during the acute stage of the disease. But it is not an unusual circumstance to meet with them in a protracted case, and in its chronic form. Though not an every-day affection, it happens too often to be left out of the account, and the surgeon does

well in a case of acute, or of continued gonorrhœa, to satisfy himself, by examination of the spongy body, that the lacunæ are not implicated. Most of the mistakes that are made in diagnosis, both by surgeons and physicians, are not so much for the want of knowing better, as from not taking adequate pains.

Whenever, and however, the enlargement of the lacunæ may take place, both patient and surgeon may make up their minds for a troublesome piece of business. I cannot say, as an anatomist, why it should be so, but certainly so it is. Under the very best of circumstances, and the most decided treatment, the complaint is too commonly slow to subside, and very prone to recur. So long as the nodule can be felt, the discharge is almost sure to persist; the urethra is in an irritable state, and though there are not always absolute inflammatory symptoms, they are liable to be kindled with the greatest ease, and at a minute's notice. There are few things that occur in the course of gonorrhœa, that give more trouble, and are more tedious, than enlarged lacunæ.

The obviously inflammatory character of the affection would suggest the idea, that its causes must be sought in whatever stimulates or irritates the mucous membrane. Such, experience proves to be the case. In the majority of instances, the lacunæ enlarge after exercise or some exertion—when cubebs, copaiba, or injections are employed, during the inflammatory stage —or when the patient has drunk fermented liquors, or committed some other indiscretion. Of all these

causes, the use of stimulants, in inflammatory gonorrhœa, is, as far as I have seen, the most common one.

I am convinced that the scrofulous diathesis disposes to inflammation of the lacunæ, as well as materially aggravates it. If the lacunæ are not glandular bodies, there seems no especial reason, *à priori*, why this should be so. But the scrofulous habit is prone to unhealthy inflammation of almost all the tissues, and the frequency, in that habit, of inflammatory affections of the conjunctiva, the Schneiderian membrane, the throat, and even of the digestive tube, shews that the mucous membrane is extremely prone to suffer from it. I may mention one case, as a specimen of the obstinacy of lacunar enlargements under these circumstances.

Case.—A gentleman, when about the age of 20, consulted me for scrofulous disease of the cervical glands. They were enormously swollen, and formed a sort of collar, nearly encircling his neck. Some suppurated slowly, some gradually dispersed, and several remained enlarged for six or seven years.

Not long after the disease commenced, this gentleman was so unfortunate as to contract a gonorrhœa. Although early attended to, the inflammation was most troublesome, and, without any direct exciting cause, the lacunæ became affected to the number of five or six. Their inflammation and enlargement resisted, for months, all sorts of treatment, and only yielded at last to a sea-voyage.

On several occasions, this patient was subsequently affected with gonorrhœa, and, on almost all, the lacunæ suffered more or less again; they never failed to require an amount of treatment and of trouble, greatly exceeding what is usually necessary. It is worth observing, that the remedies that succeeded best, after sufficient blistering, were the liquor potassæ, in full doses, and sarsaparilla—medicines which are most valuable in scrofulous affections of the glands.

The *treatment* of enlarged lacunæ is such as would naturally be called for by an inflammatory affection. But it must be carried on with patience, as well as resolution. When the lacunæ first enlarge, especially if the other symptoms are inflammatory, it is well to apply leeches to the inferior surface of the penis, repeating them two or three times, if necessary. After the leeches, it is seldom that blistering can be dispensed with. One blister *may* suffice—most commonly several are requisite. It is on blistering that we must chiefly depend, and it ought, if possible, to be persisted in, until not only all tenderness is gone, but the greater part of the nodular enlargement also. It occasionally, but very rarely, happens that the latter remains, in a moderate degree, after every other symptom has vanished. When that is the case, it is not worth while to continue active treatment, although the presence of thickening of the lacuna should make a patient extremely careful, however well he may appear.

Some persons are so indisposed to blistering, or are so annoyed by it, that we are compelled to avoid, or greatly to economise it. The best substitute for it is leeching, until the tenderness has disappeared, and the application, afterwards, of mercurial ointment with belladonna. The addition of a small quantity of iodine renders the mercurial ointment stimulating, but it is apt to vesicate, and that would be replacing one mode of irritation by another. Some surgeons are very fond of the tincture of iodine, as an external application, and use it much for local complaints, especially of a glandular description. I have no great faith in it myself, believing that, if counter-irritation is required, a more decided mode of producing it is preferable; and that if the peculiar influence of iodine is wanted, friction with the ointment of the iodide of potassium is a more effectual method of obtaining it.

A good and manageable counter-irritant is the liquor lyttæ, prepared by Mr. Garden, of Oxford Street. My late father employed it to a great extent, and with much benefit, in pulmonary cases. It may be made to produce any desirable degree of irritation, from mere redness and desquamation of the integument, up to the severest vesication.

When slight thickening, and as slight discharge, alone remain, counter-irritation may give way to the use of mercurial ointment, or to that of the iodide of potassium, and these again may be succeeded by the application of the mercurial plaister, or of one of iodine, or belladonna. Whichever is selected, it ought to be

spread upon soft wash-leather, and allowed to remain on the part for some time.

Of the general treatment of this affection it is not requisite to speak; it merges in that of inflammatory gonorrhœa. But, even when all symptoms of general inflammatory action are past, if the enlargement of the lacunæ is still evident, let the surgeon beware how he prescribes stimulating remedies, and the patient how he takes the slightest liberties. The disposition to mischief is there, and the least exciting cause will set it up again. There is no case in which haste and speed are less synonymous, than in enlarged lacunæ; and a little delay, unnecessary though it may appear, in commencing those measures which arrest discharge, is seldom, in the long run, a loss of time. Again and again, I have seen the disease revived by precipitancy and impatience.

VII. Inflammation of the Vas Deferens, Epididymis, and Testis, with its Envelopes.

This consequence, or rather these consequences, of gonorrhœa, for the whole of the seminal apparatus may be implicated, have received some absurd, and some rather hard names, with which I willingly dispense.*

* "Hernia humoralis"—"orchitis"—"testitis"—"epididymitis." I wonder that we have not had "deferentitis," and "vaginalitis." It is a pity that nomenclators should stop in such a promising career. In this country, the affection is popularly

To trace the course, and comprehend the character of inflammation, as it extends from the urethra to the testis, it is necessary to sketch, however slightly, the anatomy of the secreting apparatus.

The testis is made up of a great number of seminiferous tubes, anastomosing with each other, and arranged in lobules. They are encased in a fibrous envelope, the tunica albuginea, which furnishes cellular septa to support them, and, at the upper and back part of the testis, splits into layers, and forms the "body of Highmore." Into this, the seminiferous tubes plunge, and constitute a plexus. From the upper and back part of the plexus, the tubes, from ten to thirty in number, issue, under the name of "efferent vessels," coil themselves into so many cones, and, joining a single inflected duct, the "epididymis," constitute its head, or globus major. The head of the epididymis is situated on the upper and back part of the testis; the continuation of the canal, made up of convolutions connected by cellular tissue, descends on its posterior border to its lower end, where, doubling on itself to give origin to the vas deferens, it forms the tail of the epididymis, or its globus minor. The vas deferens then mounts along the inside of the epididymis to the groin, traverses the inguinal canal, descends on the side of the bladder, and arrives at the inner edge of the seminal vesicle. At its anterior extremity,

known under the name of "swelled testicle." I prefer the plain and correct designations which I have affixed above.

it unites with the excretory duct of the vesicle, and their junction composes the ejaculatory canal. This traverses the prostate, and opens into that part of the urethra, on the crest of the verumontanum, along with its fellow of the opposite side, with which it has no communication.

The seminal vesicle, like the epididymis, is a single tortuous tube, doubled and coiled upon itself, and packed up in cellular and fibrous tissue.

The testis and epididymis are invested in common, but not uniformly, by the serous bag of the vaginal tunic. This adheres intimately to the proper, albugineous, case of the testis, except at the level of the epididymis, where, for some extent, the albugineous coat has no serous covering. The body only of the epididymis is completely invested by the vaginal tunic —the globus major and the globus minor have it only on their upper, and their outer surfaces.

The urethral mucous membrane, entering the ejaculatory ducts, lines the interior of the seminal vesicle: and, proceeding down the vas deferens to the epididymis, passes, through all its convolutions, to the testis, with the seminiferous tubes of which it is continuous. This mucous membrane is supported by an external fibrous tunic, in the seminal vesicles, vas deferens, and epididymis. In the vas deferens the outer coat is particularly thick, making the tube feel like whip-cord, and is probably of that contractile character which belongs to many excretory ducts.

A glance at this arrangement shows that there is a

continuous mucous membrane from the urethra to the interior of each testis – that this mucous tissue is externally supported by a fibrous one—that, in the epididymis, it is mixed up with cellular membrane—and, that the fibrous tissue of the epididymis and testis has attached to it a serous bag. Such are the elements on which inflammation acts, and I shall now examine the mode in which it deals with them.

It is obvious that, if, from any cause, it attains the neck of the bladder, it has but to enter the ejaculatory ducts, and the course is clear to the testis. It is most unlikely, *à priori*, that inflammation makes a jump from the urethra to that organ, without involving the intermediate parts. Nor do I believe it. The action is a progressive one, like inflammation of the absorbents, if not like erysipelas. Originating in the urethra, it usually diminishes, but rarely disappears there, as it advances into the vas deferens—it almost invariably affects that tube, in a very palpable degree—in the epididymis, it is so decided as to give a colour to the designation of "epididymitis," for the whole affection —the tunica vaginalis is not unfrequently engaged—but the testis itself is rarely so.

It may, at first sight, appear singular, that the epididymis should bear the brunt of the disease, and that the testis should be spared. I think that analogy explains the circumstance. When inflammation attacks an absorbent vessel, it extends along it to the nearest gland, and there it commonly stops. The

gland is but the vessel coiled upon itself, and packed in cellular tissue. That disposition appears to have the faculty of arresting, more or less, inflammatory action. The epididymis is to the vas deferens what the gland is to the absorbent, and, like the gland, it tends to attract and retain the force of the disease.

Not that the testis always and altogether escapes. That could not be expected. When inflammation is intense, or the habit of the patient such as to favour its erratic character, the morbid action extends by the efferent vessels to the seminiferous tubes, and affects the body of the gland.

It is natural that the vaginal coat should be disposed to suffer. It partially covers the extremities of the epididymis, and completely invests its body. A serous membrane, it is prone to take on inflammation, and obeys the law of all serous membranes, in receiving it directly from the organ it is connected with. Inflammation of the lung is certain to induce more or less of pleurisy—inflammation of the substance of the brain involves the ventricular membrane and arachnoïd—inflammation of the liver spreads to its peritoneal envelope. Even the synovial membranes are subject to the same influence. Such are the simple reasons, founded on analogy—that is, on general facts and laws—which explain why inflammation is disposed to proceed from the epididymis to the vaginal tunic, and not to the substance of the testis. I see no difficulty, nor anything extraordinary in the matter. The symptoms

that attend inflammation of the testis* are not, in general, obscure. During the course of gonorrhœa, most frequently when it has attained its acmé, or is just beginning to decline, the patient experiences an uneasy sensation in the groin, and, perhaps, aching, dragging, and a sense of weight in the testicle. This may be accompanied with slight nausea, and severe pain in the back. After the lapse of a few hours, there is tenderness felt in the inguinal canal, at the external ring, and about the epididymis. If the surgeon makes an examination, he will probably feel, distinctly enough, a thickened, painful, cord, in the course of the vas deferens, and some increase of substance and of sensitiveness in the epididymis. There is slight febrile disturbance.

A few hours, or a day, may materially aggravate these symptoms. The cord becomes more tumid—the vas deferens more tense, painful, and indurated—the globus minor, or the globus major of the epididymis, or both, feel like marbles, and are extremely tender—the testis appears swollen, and sometimes really is so—and the tunica vaginalis may present indications, more or less precise, of the presence of fluid in its cavity. This is seldom considerable, but frequently sufficient to be easy of recognition. The surgeon's *touch*, if he possesses any, will readily distinguish it. If he doubts, the candle will decide for him.

* I employ this term, though incorrect, for convenience; availing myself of the grammarian's license, which puts the part for the whole.

If the inflammation proceeds, all these features of it are exasperated. The epididymis, in particular, augments both in size and painfulness—the vaginal sac may be more distended, and less transparent—the testis is, perhaps, unequivocally implicated, being enlarged, and exquisitely sensitive—the scrotum may become œdematous and red—and uncertain or distressing pains in the loins, the hips, the thighs, are evidence of the morbid sensibility of the spermatic and the lumbar nerves.

The constitution must, of course, sympathise with such inflammatory excitement in so susceptible an organ. The general disturbance is more exhibited in the nervous than in the vascular system, and in some individuals is excessive. Nausea, vomiting, restlessness, a pasty tongue, a rapid pulse, and every expression of exaggerated suffering, betray the irritable temperament.

Occasionally severe pain is experienced deep in the hypogastrium, and this symptom may be accompanied with irritation at the neck of the bladder. It is probably due to the inflammatory action about the ejaculatory ducts, and, perhaps, the seminal vesicles.

The narrative of the appearances exhibited in the course of gonorrhœal inflammation of the seminal organs, would, of itself, suggest to the well-informed pathologist the structural changes that occur. They may be briefly told:—Interstitial albuminous deposit in the fibrous coat of the vas deferens—serous effusion, with lymph, in the cellular tissue interposed between

the coils of the epididymis—more or less vascularity and injection of the vaginal tunic, especially of its reflected layer—albuminous and fibrinous exudations in its cavity, general or partial, the fluid or the solid material preponderating, as the case may be—congestion, vascular injection, or lymph, in the glandular structure of the testis:—the ordinary exponents of inflammatory action in such an apparatus.

Such a case is rarely left to itself, and it is difficult to say what course it would naturally run. In some instances, no doubt, the inflammation would gradually subside—in more it would lapse in chronic disease—and, in others, it might lead to such severe consequences as, in fact, we occasionally see.

Of those consequences, the most frequent, though still a rare one, is suppuration in the sac of the vaginal tunic. Three examples of it have fallen under my notice. In all, inflammation of the testis had been neglected or mismanaged—in all, the formation of matter was slow—in one, the collection was large and solitary, amounting to an ounce and a half of pus—in the other two, matter formed in more than one situation, the cavity of the tunic being subdivided by adhesions—and, in one of these, the free or reflected layer was so thickened as to feel like a piece of pasteboard, and occasion some difficulty in the diagnosis. In this case, indeed, it was proposed to extirpate the testis, under the idea that the disease was scirrhus.

Another result of acute, is chronic inflammation of the organ. I cannot say that I have often seen it so.

The disease that has obtained that name is much more frequently of slow growth and of spontaneous origin.

Cases have been placed on record, where inflammation of the testis has led to wasting of the gland. Rare as such a result must be, there is no difficulty in comprehending it. Effusion of lymph may block up the seminiferous tubes, and their secreting power and functions may, in this manner, be destroyed. Atrophy would be the logical consequence of the cessation of their physiological office. But it would not be reasonable to anticipate the frequency of this, after gonorrhœal inflammation. The testis itself is too lightly affected to expose it to material risk.

A tendency to relapse, with or without apparent cause, is a marked characteristic of this disorder. However well the case be treated, this tendency exists. Not only is the testicle originally affected disposed to repetitions of inflammatory action, but the other testicle is occasionally implicated. I have, more than once, seen inflammation pass from the right testicle to the left, and from the left to the right again. The high vascular and nervous organization of the part —the common source of the disease in the urethra— the contiguity of the openings of the ejaculatory ducts —and, last not least, the constitution of the patient, afford the explanation of this circumstance.

It has been a question, whether the right or the left testicle is the most frequently attacked. Perhaps it may appear a "tweedledum and tweedledee" discus-

sion, as no great difference obtains either way, and it would not signify, so far as I know, were taht difference still greater. But I confess, that, in my own experience, the right testicle has been affected in the majority of instances. Out of 59 cases of which I have preserved memoranda, the right testicle suffered in 32 instances—the left in 27 ; in 5 of the former, the inflammation subsequently involved the left testicle —in 4 of the latter, it extended to the right. As these cases occurred at St. George's and the Lock Hospitals, and in private practice, I presume that they represent with sufficient accuracy what usually takes place.

Although gonorrhœa predisposes, *per se*, to inflammation of the testis, there is commonly some immediate and exciting cause, on which the blame may be laid.

I entertain no sort of doubt that the use of stimulants, during the inflammatory stage of that disorder, leads to affection of the testicle. Why should it not ? It gives intensity and diffusion to inflammation of the urethral mucous membrane—it unquestionably leads to affection of the bladder—and I see no theoretical reason why the seminal apparatus should escape. I know that the fact has been disputed. But the bad effects of stimulants during inflammation have been disputed too. Those who assert that cubebs, and copaiba, and injections, go for little or nothing in the production of swelled testicle, are mostly the advocates of their indiscriminate employment. I prefer the evidence of my senses to authority, however great ; and that evidence is enough

to satisfy me that such remedies, resorted to for inflammatory gonorrhœa, do frequently affect the testicle.

I believe that injections are more injurious, in this respect, than either cubebs or copaiba. Such is the popular idea. It is contested by some surgeons, but I suspect they "make the wish the father to the thought," and trust more to their opinions than their observation. Be that as it may, I state the results of my own.

It has been argued, that stimulants cannot have such bad effects as is imagined, because the testicle is usually involved towards the decline of gonorrhœa. The objection is more plausible than satisfactory. In the first place, I deny that the testicle *is* most apt to be affected, after the inflammatory stage has ceased. So far as I have seen, it is when inflammation is on the turn, that this liability displays itself. During the height of gonorrhœa, the anterior part of the urethra naturally bears the brunt of the disease—when that begins to yield, the inflammatory action is more disposed to be erratic. This is analogous to what we see elsewhere. In the second place, I grant that stimulants have a greater tendency to occasion other mischief than to produce swelled testicle. They undoubtedly act more directly and decisively, in fastening the inflammation on the spot already implicated, and on contiguous parts, than in driving it to other or remoter organs. They lead more frequently to enlarged lacunæ, inflammation of the spongy body, abscess of the penis, or inflamed absorbents, than to the affection I

am treating of. But granting this, which is sufficiently intelligible, I still maintain that they dispose to inflammation of the testicle. The greater tendency does not in logic, nor in fact, exclude the less.

In 49 of the 59 cases to which I have referred already, I find the following data :—in 12, the inflammatory symptoms were acute at the time when the testicle became affected—in 25, the inflammation had diminished, but was not entirely gone—and in 12, it had entirely disappeared. In the remaining 10 of the 59 cases, my notes are, on this point, silent.

To pursue the statistical examination of these cases :—in 9, the patient was taking copaiba : in 3, cubebs : and in 16, he was using injections, during the existence of more or less inflammatory action—in 3, the disease was apparently due to over exercise, in walking—in 2, it was attributable to a blow—in 1, to violent catarrh—in 6, no obvious cause was assignable —and in 19, the remainder of the 59, my notes again are dumb.

The bad effects of over exertion, in the production as well as in the aggravation of swelled testicle, are equally probable as a matter of reasoning, and indisputable as a matter of fact. Whoever rides, runs, and exerts himself or walks immoderately, while labouring under gonorrhœa, increases his chances of suffering from this affection.

The same observation may be made in regard to free living. Intemperance is both directly and indirectly a source of inflammation of the testis.

Undoubtedly, there is a large proportion of cases, in which no palpable immediate cause can be discovered. The disease extends to the seminal organ, and that is all that can be said of it. But I think it will be found in many, if not in most of these cases, that the idiosyncrasy of the patient is at fault. His is that temperament to which I have so frequently alluded, where vascular action waits on nervous irritation. Excitable, feeling all things in excess, prone to inflammation of that type which combines much apparent action with little real power, he is particularly liable to be attacked, supports depletion ill, and is just the subject for relapses. Such a patient rarely does credit to the surgeon.

It has been a source of some little discussion, whether the disease depends, or not, upon *metastasis*. In order to decide the question, we must agree upon the meaning of the term.

1. One class of diseases, originating in a given part, or tissue, exhibits a tendency to spread to contiguous parts, and particularly along a continuous tissue. Erysipelas and diffuse inflammation are familiar instances. Affections of this type usually diminish, or even disappear, in the spot they first attacked, as they invade the new : though to such a rule there are exceptions.

I once witnessed a case, which exhibited the progressive character of erysipelas, to a degree, and in a manner, which I think I should have been inclined to doubt, on any less conclusive evidence. A female patient of Mr. Keate's, in St. George's Hospital, was

seized with erysipelas of the head and face. It extended, as it often does, into the mouth, and affected the fauces and the pharynx. About the third or fourth day, it began to decline on the head, but the woman was attacked with vomiting, purging, increase of pyrexia and constitutional disturbance, and tenderness of the abdomen. These symptoms continued for two or three days, to her serious danger, when erysipelas made its appearance at the anus. It had quite subsided on the face, and had never spread upon the body. So soon as it developed itself at the anus, the diarrhœa and abdominal tenderness diminished, and speedily disappeared, while the redness extended over the nates and thighs. The patient finally recovered. No doubt was entertained by any of those who saw the case, that the erysipelas had traversed the gastro-intestinal mucous membrane, from one end to the other.

2. A second form of morbid action, in which remote parts become involved, is what is known as "secondary inflammation, after injuries or operations." It was formerly supposed, and I, for one, was of that opinion, to depend upon a shock inflicted on the nervous system, and on a species of metastasis. But, there can be no reasonable doubt, that secondary inflammations and purulent deposits in the serous cavities, in the lungs, or liver, in the cellular tissue, or the joints, are really due to absorption of pus, either by the veins or the absorbents. The blood becoming charged with it, it is either simply effused in other parts, or, what is probably

more correct, it operates upon them as an irritant, and excites a similar action in them.

3. A third form of vicarious inflammation is the arthritic. In gout or rheumatism, the disease appears to fly from spot to spot, quitting one and falling on the other, most capriciously and suddenly. But, in these complaints, there is everything to show a morbid condition of the blood, which is surcharged with the compounds of carbon and of nitrogen, and the local action is the expression and effect of constitutional deterioration.

4. Besides these leading types of metastatic inflammation, there are other partial and exceptional samples of it. An individual, for instance, is labouring under an eruption of the skin. From some cause or other it is suddenly repressed, and internal disease or disorder follows. Is this a mere change of *venue* of vascular action, the capillaries of one part becoming the substitutes for the capillaries of another? or, is there also alteration of the blood: and, the elimination of its morbid elements being checked in one direction, does it find vent in another? I suspect that neither is exclusively the case.

The translation of the inflammation of mumps to the testicle, presents, I conceive, as fair a specimen of metastasis as any. But even here it generally happens, that, though the testicle inflames, the mumps remain.

The *modus agendi* of many of our remedies would appear to be metastatic. A blister applied to the chest for pleurisy, operates, I presume, by determining

to the surface those capillary fluids, and that capillary action, which would, otherwise, be expended on the serous membrane.

Such are the principal examples of that physiological process loosely termed metastasis, which, at this moment, occur to me. In few of them is it correctly applicable, and, I fancy, that metastasis, strictly speaking, is of comparatively rare occurrence. Be that as it may, gonorrhœal inflammation of the testis is no decisive proof of it. The inflammation runs along a continuous tissue—it affects that tissue pretty uniformly as it goes—it does not make a jump from one end to the other—and, even when it has arrived at one, it rarely altogether quits the other. Some writers have stated that the epididymis is not unfrequently involved, without inflammation of the vas deferens. In no instance have I found it so, and, without impugning the correctness of their observations, I believe that such a circumstance is rare. As a general rule, the urethral inflammation and discharge diminish, when the testicle inflames. If that organ is attacked in the decline of gonorrhœa, when there is only discharge, this may vanish at once, or during the progress of the secondary inflammation. The more usual course is for it to decrease, so long as the testis is affected, and to return, though not to the same amount, when that organ is recovering. It is worth noticing, that the discharge, when it recurs, has frequently become more amenable to treatment.

On comparing the phenomena of gonorrhœal inflam-

mation of the testis with the examples of metastasis that I have cited, it appears to me that they have most affinity to those of erysipelas. Like it, they are an instance of erratic or progressive inflammation, spreading over a continuous tissue, and extending, under certain circumstances, to contiguous ones; and, like it, they most affect the irritable temperament, and the cachectic habit. In my opinion, it is more consistent with the facts to take this view of the disorder, than to look upon it as metastasis, in the more ordinary acceptation of the word.*

I have observed, that the irritable temperament is that most prone to this affection. The gouty one is subject to it also. Mercurial cachexia disposes to it. So does a long residence in hot climates,—old Indians, who are notoriously liable to hydrocele, being apt to suffer from swelled testicle. Scrofula is not without its influence in this respect; and I think it may be received as tolerably certain, that, whatever lowers or depraves the constitution, or heightens the irritability of the nervous system, increases the chances of affection of the testis in gonorrhœa.

The existence of stricture in the posterior part of the urethra, of a morbid state of the prostate gland, or of any disease about the neck of the bladder, increases those chances also.

It is difficult to say numerically what they are,—ac-

* Literally, erysipelas is a case of metastasis, which, so far as derivation goes, is merely change of place—*μετα στασις*.

cident, treatment, situation in life, affecting them. But I believe that, under proper management, the proportion of cases of swelled testicle to those of gonorrhœa is not above 2 or 3 per cent.; if, indeed, it is so much.

Treatment.

So unequivocal an inflammatory affection requires, of course, antiphlogistic measures, their activity being proportioned to the severity of the case, and the constitution of the patient.

1. And first of an acute attack.

I can conceive the possibility of such inflammatory symptoms, as to justify bleeding from the arm. But I have never met with a case that appeared to me to require, nor, indeed, to warrant it. The current of modern practice has set against venæsection, even for affections of vital organs. Its beneficial operation upon secondary ones is more than counterbalanced by its depressing influence upon the system. The habits of the present day, tending, as they do, to excitability of the nervous system, rather than to plethora of the sanguineous, forbid that general depletion which was formerly in fashion, and, perhaps, may then have been more appropriate.

Local bleeding is, however, indispensable, and, in spite of the objections, some real and some fanciful, that have been urged against them, I believe that leeches are the best mode of effecting it. It is said that they occasion erysipelas. I never witnessed an attack, of any moment, after their application: and,

if that were a bar to their employment, they ought to be discarded altogether, for, in any part of the body, they *may* lead to that affection. The loose structure of the dartos renders ecchymosis and œdema common after their use, but those are accidents of no sort of importance. Leeches, if applied at all, should be applied freely, and repeated, twice, or even oftener, if necessary. The best way of encouraging the flow of blood is by the patient sitting in warm water. After enough has been done in that way, the scrotum should be immersed in a warm poultice, and the leech-bites, in general, allowed to close of themselves. The bleeding, in some instances, requires artificial means to arrest it, but that seldom occurs.

It has been recommended to set the patient on his legs, and open one or more of the scrotal veins. They will often, but not always, bleed freely, and little or nothing is gained by this proceeding. In one case, I saw fatal phlebitis follow this operation.

Case.—W. Simkinson, aged 27, a debauched journeyman tailor, was admitted into the Lock Hospital, in June, 1833, under the care of Mr. Briggs. He had gonorrhœa, in its acute stage, and enlargement of one of the inguinal glands. Mr. B. prescribed a paste of cubebs. On the second day after commencing this, the urethral discharge materially diminished, although the scalding was unabated. That evening, inflammation was observed in the left vas deferens and epididymis, with effusion into the vaginal tunic. Next day,

Mr. Briggs punctured the scrotal veins with a lancet, and a moderate quantity of blood was lost. On the following day, the patient had a rigor, shortly succeeded by bilious vomiting. The scrotum had become tender, and the course of two of the veins that had been opened was marked by a red line, and pain. Other branches, in connection with these, took on the same appearance—the scrotum grew œdematous—the pain mounted to the groin—the bilious vomitings went on unchecked—other rigors were experienced—the symptoms lapsed into the typhoïd form—the skin assumed a jaundiced hue—hurried respiration and short cough were attended with crepitating rattle and obscure œgophony—rambling delirium was superseded by coma—and, on the 12th day from the first shivering, the patient died. His relatives would not permit an examination of the body, but there can be no doubt that the case was one of scrotal and iliac phlebitis, giving rise to consecutive pleuro-pneumonia.

On the whole, I am no great friend to puncturing the scrotal veins.

After leeching, and along with it, fomentations with the decoction of poppies, and poultices with belladonna, are, in most instances, agreeable and beneficial. The belladonna does certainly appear to exert a sedative influence on some persons, whilst it has none on others. However, as it may be useful, and cannot be injurious, it is well to have recourse to it. I cannot say, that, thus combined with poultices, I have seen it produce

that temporary blindness, from dilatation of the pupil, which occasionally follows its employment in a plaister.

There are cases, where, after blood has been abstracted, cold is of much more service than warmth, as a local application. It is so difficult, *à priori*, to determine which will answer best, that I really know of nothing, short of experience, to decide it. As a general rule, fomentations and poultices are of most utility in acute cases; but, if the swelling fails to subside, if the scrotum is inclined to be œdematous, if the tumefaction is rather lax than tense, and if there is a tendency to frequent slight relapses, that implies an amount of vascular fulness, and a looseness and dilatability of the blood vessels, which I have found, or fancied that I found, most amenable to cold. Certain it is, that the change from warmth to that, or from that to warm applications, is occasionally attended with benefit, equally marked and sudden.

The patient should, of course, be confined to the bed or sofa, and the scrotum must be supported by a pillow: or a folded napkin laid across the thighs: or by a silk handkerchief attached, on each side, to another encircling the waist, and passing beneath the scrotum so as to lift it up, without compressing the testicle against the groin or pubes.

Necessary as local measures are, the general treatment required for inflammatory action is also indispensable.

For a patient of average vigour, and in a case of any severity, there is nothing, in my opinion, which

exerts such influence over the disease as the combination of calomel, antimony, and opium. This may be given every night, or oftener; and, in general, it will not be unadvisable slightly to affect the gums. But the surgeon must be upon his guard: for when calomel is administered to an individual subjected to depletion, and confined to bed, salivation at times breaks out with a degree of suddenness and violence, which is neither desirable, nor always easy of control. It is scarcely necessary to observe, that mercury is not adapted for the cachectic habit, more particularly when that cachexia is of mercurial origin. It should then be religiously avoided.

Salines, with antimonials, and frequently with colchicum, are as serviceable in this as in other inflammatory maladies. It has been, and, indeed, it is, the fashion to prescribe antimony in large doses. Some years ago I pursued this practice, and gave it a liberal trial. It disappointed me. Distressing to the patient, it displayed no peculiar powers over the complaint, and those of a dyspeptic and irritable turn were sometimes seriously disordered by it. Calomel and opium are infinitely preferable.

Purgatives of an active character are requisite; and that pretended sympathy, between the testis and the rectum, which has been invoked against them, may be safely set down to timidity and imagination.

The diet must, of course, consist of slops, and anything like stimulants is out of the question. The patient, in fact, should be subjected to such starva-

tion as prudence dictates, and he is willing to submit to.

2. It is a very severe attack indeed which, in less than a week of this sort of treatment, has not lapsed into a milder form. The pain materially diminishes, the swelling of all the parts decreases, and the effusion into the tunic, if it has existed, is arrested, or partially absorbed. This reduction of inflammatory action demands a corresponding change of remedies.

The mercurial preparations may be given at longer intervals, in smaller doses, or abandoned—the salines may be curtailed of their antimony, or their colchicum —the purgatives turned into aperients, but not too hastily foregone. If the disease has yielded very rapidly, so that it now consists in induration, rather than in vascular turgescence, I have found advantage in substituting for salines the liquor potassæ, or the iodide of potassium, combined with sarsaparilla. A little later, they are invariably serviceable.

As the inflammation wanes, cold applications may, in the majority of instances, usefully supersede the fomentations and poultices. I have iced the lotions with decided benefit, in cases where there was much congestion, and a consequent disposition to relapses; in warm weather this is always advisable. The diacetate of lead may be used in greater quantity, than, I apprehend, is generally done, in their composition. The ordinary solution is of the strength of from one to two drachms of the liquor plumbi to the pint of distilled water. I prefer as much as from half an

ounce to an ounce of it, combined with an ounce to an ounce and a half of rectified spirits of wine, in the same quantity of liquid. This, artificially refrigerated, is a most efficient application.

When pain and tenderness have nearly disappeared, the swelling frequently subsides more rapidly under the application of mercurial ointment than of lotions. The extract of belladonna may be added to it.* The ointment, which ought to be renewed every night, should be thickly spread on flannel, and the whole scrotum enveloped in it—outside the flannel should be a still larger piece of oiled silk—and, outside all, a light silk net suspender. If the mercurial ointment irritates the skin, or affects the mouth, that of the iodide of potassium answers almost equally well. In cases where the use of washes is objected to, one or other of these applications may be used at a much earlier period—at the later one that I have indicated, or in a mild case, I have found them extremely serviceable. I should, however, observe, that some individuals have so susceptible a skin, that either of these ointments disagrees with it; and, in those who are particularly subject to relapses, the sympathy between the scrotum and the testis renders anything which *may* excite the former, open to grave objections. In such cases, the preference should usually be given to cold lotions.

* ℞ Unguenti Hydrargyri fortioris . . ʒvij.
Extracti Belladonnæ . . . . . ʒj.
M. Fiat unguentum.

The most critical period, in most of these complaints, is, undoubtedly, that of recovery. The restraints which necessity imposed are reluctantly submitted to, evaded, or contemned, when they merely depend on the injunctions of the surgeon, and the volition of the patient. No small proportion of relapses are due to premature exertion, or too hasty a resumption of better diet.

The ordinary consequence of this affection, is a thickening and hardness of the globus major, or globus minor, of the epididymis. It is commonly tedious in subsiding, and sometimes it never quite disappears. When the ointment of iodine or of mercury has been employed, it is generally but inconsiderable. To obviate it, as far as possible, I would recommend the patient to wear a mercurial plaister on the scrotum, for some time after he has begun to move about. The suspender should be long continued. Any material amount of induration renders the condition of the patient unsafe; a slight degree of it is, I conceive, of no importance. It might be imagined, that the lymph effused in the epididymis would interfere with the transit of the secretions of the testicle, and lead to some morbid state of that organ. I have never seen such a result. Nothing is more common than some induration of the epididymis, which has existed for years—yet the testis, in such instances, appears sound, and patients are not aware of imperfection in it.

It will be found, I believe, that the average duration of an acute attack, treated in the manner I have recommended, is between two and three weeks. When

relapses take place, they may protract it to a month, or six weeks, or longer; but the average is about what I have stated.

A milder case will not, of course, require such active measures. A few leeches may be applied at first, or, possibly, they may be altogether dispensed with. Cold lotions may be used from the commencement, and the ointment of mercury or iodine may be very early resorted to. A mercurial, or a belladonna plaister, and suspender, will enable the patient to return pretty early to moderate exercise, and his usual avocations. Small doses of blue pill, with ipecacuan and henbane, or the Plummer's pill with hemlock, may take the place of calomel and opium, and salines with moderate purgatives would naturally be added. But the surgeon should turn, as soon as possible, to the liquor potassæ, or iodide of potassium, combined with sarsaparilla,—remedies which suit so well the waning stages or the chronic forms of fibrous inflammation, acting, as they do, on the albuminous effusions, while they sustain rather than depress the powers of the constitution.

I have hitherto said nothing of one mode of treatment, which has been, in my opinion, extravagantly over-praised. I allude to compression of the testicle, by means of some kind of plaister. This was introduced to the notice of the profession by Dr. Fricke, of Hamburgh.

Not having read the original observations of that gentleman, I am not aware if he restrained the employment of compression to any particular stage of swelled

testicle, or extended it to all. Whatever its author may have done, its more zealous partizans applied it pretty indiscriminately; and I have seen individuals, labouring under the acute form of the disease, submitted to a sort of "question," worthy of the best days of the Holy Office. Indeed, I have sometimes been inclined to compare it to the ingenious, rather than considerate, process of the Buccaneers of the Spanish Main, who slung their prisoners to the yard-arm by the testicles, until they had confessed where their dollars were concealed.

The mode of applying compression, is, according to the account, as well as the plates, that are given of it, equally simple and neat. The first strap is placed circularly round the cord, immediately above the testis, as tight as the patient can bear it. The others follow in succession, disposed in a spiral, in a sort of figure of 8, or in circles cutting vertical straps at right angles, according to the geometrical taste of the surgeon. We are assured that the relief is almost marvellous; patients who had been suffering from excessive pain, instantaneously losing it, and those who had been confined to bed, forthwith getting up to walk.

It requires some degree of courage to oppose agreeable illusions. The world is apt to think that ill nature, inexperience, or ignorance, is at the bottom of the distrust, or the want of success, that such opposition evinces. Yet, whatever suspicions of this sort I may fall under, I shall state my own opinions.

In the first place, I never could clearly understand

on what analogy, or principle, this mode of treatment is founded. The inflammation is that of a fibro-mucous membrane, and we do not find that pressure is adapted to such inflammation elsewhere. Is an inflamed joint the better for being tightly bandaged? Such things have been done, and abscess in the articulation, and death, have been the consequences. Is inflammation under fasciæ (Nature's bandages) more tractable because of them? Were it so, surgeons should not be so eager to divide them. Would any one, in his senses, dream of tightly binding a recent sprain, still in its inflammatory state? I imagine not. The period, I take it, for the employment of pressure, is when inflammation has subsided, and when engorgements and effusions, the result of it, disintegrate, and mechanically debilitate the tissues. I perceive no analogy in this to the case of inflamed testis.

But, putting aside theory, and coming to the fact, my experience has not endorsed the flattering statements I have read. I have strapped the testis often, myself; and I have directed it to be strapped, by my dressers at the hospital, still oftener. In the acute stage of the complaint, the procedure is horribly painful, and a piece of downright barbarity;—on a par with the seething of a stump with boiling pitch, before the days of Ambrose Paré. In the milder condition or form of inflammation, the suffering is not so great, but, if the thing be *effectually* done, it is very far from trifling. Sometimes it subsides when the straps have been applied, but sometimes it does not. I have

been under the necessity of cutting them away, in consequence of the intolerable distress produced by them. In short, in most instances, the operation is a *very* painful one, and in the irritable subjects that one meets in private practice, it is often inadmissible on this account alone.

Whatever may be said, the proper application of the straps is not quite so easy as is represented. The retraction of the cremaster, and contraction of the dartos, tend incessantly to push the testis to the groin, which the circular strap, applied to the cord, with difficulty counteracts. None but those who have had practice in the matter, can conceive how much trouble this ascent of the gland occasions, nor what a degree of constriction is required to obviate it completely. In some instances, this is next to impossible; and it is almost ludicrous to observe the rapidity with which the testicle slips from its case, after all the surgeon's trouble, and all the patient's pain.

Were the bandage put on as it is commonly directed to be done, one of two things must ensue:—either the upper circular strap would cut the integument severely; or, if not sufficiently tight for that, it would allow the testis to escape. To prevent laceration, it is absolutely necessary to roll lint strictly round the cord, or even to envelope the scrotum in it. With all this precaution, abrasions are too frequently occasioned.*

* In one case, which occurred to a dresser of mine, at St. George's, these abrasions gave rise to erysipelas of the scrotum, which proved so severe as to put the patient's life in jeopardy.

Another objection to strapping, is a certain fallaciousness that waits upon it. After the patient has undergone the martyrdom of two or three adjustments of it, the inflammation is found to be as bad as ever, and the regular treatment is, after all, to be resorted to. The symptoms, in fact, are often kept at bay so long as the pressure is in force, and display or renew themselves when it is withdrawn.

It will be perceived, that my opinion of this much-lauded method of treatment is anything but favourable. If the inflammation is acute, it is a piece of ridiculous cruelty; if mild, it is disproportionately painful, troublesome to manage, apt to lacerate or excoriate the skin, and not a little treacherous.

I would not be understood to say that I should *never* recommend nor have recourse to it. Where concealment is a great object—where the patient is not of a nervous habit, and either is not sensitive to pain, or has the will to bear it—and where the inflammatory action is moderate, pressure may be fairly tried. Yet even here, with all things in its favour, I warn the young surgeon not to expect too much from it. I believe that, in most cases, it is better left alone, and I am mistaken if it is not declining in favour, and likely to decline still more. At all events, the conclusions I have arrived at and expressed, are founded on my own experience, and pretty numerous trials of it.

It is almost unnecessary to allude to the management of the unfrequent case of suppuration in the

vaginal tunic. If a tendency to the formation of matter is suspected, blistering is the most probable preventive—if it has occurred, poultices, and a sufficiently early opening, become matters of course.

That chronic inflammation of the vaginal membrane, which leads to partial effusions and adhesions, as well as to thickening of the reflected layer, is best met, in turns, with mercurials, sarsaparilla and iodine, leeches, blisters, the ointments of mercury and of the iodide of potassium, and mercurial plaisters. If serous effusion resists these measures, the grooved needle introduced to let it off, materially assists them; and, if inflammatory action has subsided, pressure, by means of adhesive straps, may be found not altogether useless.*

I have met with one instance (several have been recorded,) in which a testis that had only descended into the inguinal canal was inflamed from gonorrhœa. The case was sent to St. George's Hospital as one of strangulated hernia. No difficulty was experienced in distinguising its real character, the absence of the organ from the scrotum, and its own circumscribed outline, readily proclaiming it. If the gland has not quitted the abdomen, and becomes the seat of inflammation in that cavity, the nature of the case must be conjectural.

* I have, at different times, made experiments on the treatment of hydrocele, by puncturing the sac with the grooved needle, drawing off the fluid with that instrument, and then applying pressure. The whole proceeding is absolutely painless, and in a few instances has proved successful. I must confess, however, that it has too often failed.

Suspicion would be, of course, excited by the presence of only one testicle externally.

Whoever has had swelled testicle once, in consequence of gonorrhœa, is, unfortunately, not the less subject to it afterwards. He should use cold water liberally, and always wear a suspender.

II. Chronic Inflammation of the Testis.

I feel something like compunction, in placing this in the category of the consequences of gonorrhœa. It is so, in some instances, no doubt; but, in most, it arises from other causes,—syphilis, mercury, cachexia; or it starts up as a substantive and independent complaint.

Its occasional connection with the class of disorders I am treating of, renders it necessary to give *some* account of it: the rarity of that connection will make that account as brief and as general as possible.

At first, slight tenderness directs attention to some swelling and hardness, perhaps in the epididymis, perhaps in the body of the testis—in whichever it originates, both are apt to be involved,—the swelling is ovoïd, homogeneous, inelastic, and heavy—the pain is slight—the tenderness obscure—and the inconvenience chiefly due to the traction of the spermatic and the lumbar nerves. According to the source of the disease, the vas deferens is sound, or thickened—effusion may or may not exist in the tunica vaginalis, which is often

partially and sometimes quite adherent. One testicle is commonly affected, but both occasionally suffer, simultaneously or in succession.

The progress of the complaint is slow, its whole character sluggish. It may remain for a long time, for months or even years, under favourable circumstances, with very little change. If it advances, a spot in front of the scrotum inflames, projects, and ulcerates—a small quantity of pus escapes, and a yellowish fungus, a hernia of the testis, pushes out through the aperture—the protrusion exhibits trifling sensibility, and furnishes a slight discharge, occasionally mixed with semen—and, like the original disease, is indolent.

In bad habits, with bad treatment, or under unfavourable circumstances, suppuration occurs in the testis or the epididymis; and, the abscess or abscesses having discharged themselves, sinuses leading to cavities lined with adventitious membrane, or to unorganized masses of lymph, teaze the patient, and may destroy the gland. In other instances, a chronic abscess forms insidiously, does not make its way to the exterior, and, if not suspected, nor opened by the surgeon, indefinitely perpetuates the complaint.

This disease of the testis is found, on dissection, to consist essentially in the deposit of a yellowish inorganic matter in its substance. Soft at first, it becomes condensed afterwards—it may be limited to a single mass formed in the centre of the organ, or there may be several—with the progress of the disease they

coalesce, and supersede the normal structure. The epididymis may, but commonly does not, exhibit the same deposit.

There can be little doubt that this is lymph; and that its tendency to remain unorganized explains the dilatoriness of the disease.

There has been a sort of dispute, with respect to the precise situation in which this lymph is found. Some pathologists believe that it is effused in the cellular tissue *between* the tubuli—others, that it is contained *within* them. The weight of authority is with the latter party, but I confess that I am inclined to side with the former one. I think it improbable, that deposition in the tubuli themselves would so affect the form of nodular masses—that it would display so little proneness to extend into the epididymis—that it would so rarely follow gonorrhœal inflammation—and that it would be so feebly organized. On the other hand, the formation of lymph in the sub-mucous cellular membrane is a circumstance of every-day occurrence, in the pharynx, the larynx, the bronchi, the intestines, the urethra, the bladder, and the kidneys. The actual appearances, as well as analogy, seem to me to be in favour of the extra-tubular site of the deposit, in chronic disease of the testis.

But whilst I suspect that such is the case in the larger proportion of cases, I also believe that, in some, the yellow lymph is primarily contained within the tubuli. Sir Benjamin Brodie has published a case, in which he found it in the vas deferens, in the epididy-

mis, and in the substance of the testis. Mr. Curling has related another, in which the lymph was distinctly seen, in lines or processes, extending into the body of Highmore, obviously filling the tubuli, and occupying the epididymis also. Cruveilhier has delineated similar appearances, and believes that the disease commences in the epididymis.

It must strike the pathologist, that, in the cases where something like positive evidence of the presence of lymph within the tubili is offered, the epididymis is implicated. This is precisely what I should anticipate, and it is the absence of this in most cases which makes me doubt if, in them, the situation of the deposit is the same. The streaks or lines, filled with lymph, in the instance related by Mr. Curling, where the tubuli demonstrably contained it, constitute an appearance very dissimilar to the ordinary one of solid nodular masses, chopped like stones into the testis, and displacing its secreting structure. In short, as there are two sets of appearances, I presume there are two orders of facts; and attaching, as I am disposed to do, great weight to analogy, I am of opinion (which is certainly a heresy, and is perhaps an error) that extra tubular deposition is the rule, and intra tubular the exception.

If chronic inflammation of the testis falls, from neglect or from mismanagement, into a decidedly indolent state, the membranes may become adherent and thickened, the yellow deposit condensed, and the glandular structure partially or completely atrophied; a

result which, whilst it might naturally be anticipated, affords a sufficient reason for prompt and active treatment.

I have already stated, that gonorrhœa is not a frequent cause of this complaint. It originates, in fact, in very various ways. Sometimes it is due to stricture, or to other morbid states in the posterior part of the urethra—sometimes to venereal indulgences—to an injury—to a gouty or rheumatic habit—to secondary syphilis—to the mercurial cachexia. The latter I have found a comparatively common cause of it.

Treatment.

The management of this complaint at the present day contrasts very favourably with that of the last century. *Then*, the disease was confounded with scirrhus, and castration was constantly resorted to; *now*, it is very rarely employed, and, perhaps, still less required. Within my own recollection, the hernia of the testis was not unfrequently witnessed in our hospitals, whilst, during the last twelve years, I have not seen a single instance of it.

If there should be tenderness or pain, it is well to begin by applying a few leeches. After these, or independently of their employment, blistering is of the greatest service. The only objection to it is the pain that it occasions; and, I presume that it is in consequence of this, that blisters are too seldom used in several diseases of the testicle.

When the skin has recovered from the effects of vesication, if that has been induced, or at once, if it has

not, the mercurial ointment may be applied in the manner already recommended. If the surface is not irritable, camphor may be combined with the mercury, which it renders more stimulating; if there is tenderness of the gland itself, or the integument is disposed to inflame or vesicate, belladonna is preferable. Extreme susceptibility to the constitutional influence of mercurials, or excessive irritability of the scrotum, may forbid the use of the ointment altogether. When the former is the case, the iodide of potassium may be substituted; and, indeed, the ointment containing that substance is nearly as valuable as that with mercury, at all times. But a very tender state of skin will frequently preclude the use of either.

If blisters are refused, and objections exist to the application of mercury, painting the scrotum with the tincture of iodine, so as to keep up desquamation of the cuticle, may be not altogether useless. The objection to it, is the tendency it gives rise to, in the cutis, to form a sort of thick cuticular crust, which, occasionally, is very slow to separate, and interferes with other remedies.

A moderate quantity of effusion in the vaginal sac commonly disappears under the influence of treatment; but, if the amount should exceed what may reasonably be expected to become absorbed, a puncture should be made with the grooved needle, and the fluid thus let off.

When the swelling of the testis has diminished, and pain has disappeared, a moderate amount of pres-

sure may be made with strips of mercurial, or iodine, or belladonna plaister, spread on chamois leather. This is, however, far from indispensable, and if compression is irksome, or the skin is prone to be abraded by the straps, a single piece of plaister may be fitted to the part, or the ointment of iodine may be continued. I have found, indeed, the latter answer so well, that, in my opinion, pressure is of very little consequence. There are individuals who are immoderately annoyed by any greasy or adhesive applications. When that is the case, lint, or flannel, with oiled silk outside it, and a bag truss, stimulate the absorbents by maintaining heat and moisture, and answer tolerably well.

But the general treatment is the cardinal point. There can be no question, that a mild course of mercury cures the disease, in the great majority of instances. Of course, the earlier it is employed the better; and it is unnecessary to remark, that, to restore the healthy structure of the testis, it must be resorted to before the tubuli are atrophied. Under favourable circumstances, it may be looked upon as a specific. Five grains of blue pill, with a sixth, or a quarter of a grain of opium, may be given night and morning—or, half a drachm of mercurial ointment may be rubbed in every night—or the Plummer's pill, or the bichloride of mercury, may be selected where the constitution is infirm. Whatever preparation of mercury is used, sarsaparilla should be freely taken with it, and, in general, the iodide of potassium may be added. The sarsaparilla does not impair the beneficial action

of the mercury, whilst it builds up the constitution.

But, however valuable mercury may be, it is not to be given in all cases. Chronic inflammation of the testis occasionally goes along with rupia, ecthyma, ulcerating tubercle, or disease of the periosteum or the bones; those symytoms of cachexia so frequently the result of the abuse of mercury itself. That this drug *does* induce such symptoms, I am satisfied, and I leave to those who are content with it, the belief that they are only "syphilis badly cured." They are, in many instances, as logically traceable to mercury, as scrofula to imperfect and depraved nutrition, or sea-scurvy to salt food. Writers and surgeons do not sufficiently understand, or, at all events insist on, the distinction between syphilitic and cachectic symptoms, and confusion of doctrine begets confusion of practice. One continually reads and hears of venereal affections of the periosteum and bones, whilst I feel convinced that such scarcely ever occur. It would lead me too far to pursue this subject at present, and I merely repeat, that when chronic inflammation of the testicle forms one of the group of symptoms I have mentioned, mercury should be carefully avoided. The lymph that is deposited, under those circumstances, in the substance of the organ, is akin, no doubt, to that which forms the "subcutaneous tubercle," and, under the depressing influence of mercury, is more prone to slough than to become absorbed. In these cases, the iodide of potassium, combined with sarsaparilla, bark, or iron,

will prove of the greatest benefit. If given at the right time and in the right case, it will be found to remove the disease most satisfactorily. The liquor potassæ may not unfrequently be combined with the sarsaparilla and iodide of potassium, or it may be added to the mercury. Where the solid or liquid effusion is considerable, this appears most appropriate.

When mercury is used, it is neither requisite nor advisable to salivate. The days for that are gone, I hope, for ever. The case in which this extreme indication of the operation of the medicine is desirable, is the exception to the rule. Nor, unless there are inflammatory symptoms, should the patient be confined to the bed or sofa. With the testis well supported, he may quit the house, and venture on moderate exercise. More than that, he should not, of course, attempt; and exposure to wet or cold should be avoided.

The disease is usually found to be subdued in less than a couple of months. Perhaps some slight induration may remain, particularly in the epididymis, but not enough to demand a continuance of active treatment. Country air, and warm sea-baths, assist in restoring the health, and sarsaparilla, or the bitter tonics, or the mineral acids, should be given after mercury or iodine is discontinued.

If matter has formed, the abscess should receive a tolerably early opening; if an ulcerated aperture has given issue to a hernia of the testis, the latter is not difficult of management. It may be occasionally touched with the lunar caustic, or very lightly with the

potassa fusa, or sprinkled with the red precipitate of mercury, or covered with a small thin piece of lead, and moderate pressure applied by means of some adhesive straps, or even of calico spread with the lead or calamine cerate. Several other modes of carrying out the principle may be adopted, but they resolve themselves into this:—gently escharotic and stimulating applications to the fungus, combined with moderate compression of it. Whatever the particular plan, it will be found, if it complies with these requisites, to answer; and slices with the scalpel, or nooses of thread, are anachronisms unworthy of the present day.

Before the treatment of the disease was understood, the patient was too frequently submitted to castration. That, under certain circumstances, *may* be required now; but I apprehend that the necessity is rare indeed, and that the extirpation of a testis affected with chronic inflammation, must be regarded as presumptive evidence of ignorance or of impatience.

III. The series of immediate consequences of gonorrhœa to which I now proceed, is where the inflammation spreads to contiguous tissues:—Inflammation of the Corpus Spongiosum and of the Corpus Cavernosum—Inflammation of the Absorbents of the Penis—Bubo—Inflammation of the Cellular Tissue of the Perineum. The last I shall refer to in connection with stricture.

I. Inflammation of the Corpus Spongiosum of the Urethra.

Allusions have been made to this. It is a not unfrequent consequence of inflammatory gonorrhœa, especially if stimulating treatment is adopted. The characteristic symptom of it is *chordee:* painful erection, with incurvation *downwards,* of the penis. The distinction between that and mere painful erection has been already pointed out.

The pain of chordee is usually referred to some part of the urethra, between the glans and the scrotum. The state of the corpus spongiosum is readily distinguished by examination. Pinched up between the finger and thumb, it feels like a piece of tobacco-pipe, solid, hard, and tender. The extent of the spongy body involved, may vary, from a mere ring, to that of an inch or more.

But chordee, though an usual, is not a necessary symptom of this affection. Some persons are but little subject to erections, even during gonorrhœa. If the surgeon is not in the habit of ascertaining the state of the urethra by the touch, he may remain unacquainted with the existence of this morbid condition, although it is at the bottom of all the symptoms. In such a case, serious mischief may be done by copaiba, cubebs, or injections

If the inflammation of the spongy body is acute, or is maltreated, it may lead to suppuration in the cellular

membrane of the penis. I have already detailed cases in which that occurred. But it would appear that matter may form, under some circumstances, in the spongy body itself.

CASE.—*Incipient Gonorrhœa—Introduction of the Nitrate of Silver into the Urethra—Abscess in the Spongy Body—Fistula.*

A gentleman, finding the symptoms of gonorrhœa making their appearance, applied to a surgeon of eminence, who introduced a stick of caustic into the urethra, with the view of arresting the disease. Severe pain was the immediate, more severe inflammation the speedy consequence. I was sent for, and found the scalding intense, the discharge tinged with blood, and the whole penis swollen and tender. I ordered leeches and other antiphlogistic measures; but a circumscribed swelling presented itself in front of the scrotum, which fluctuated, was opened, and gave issue to two or three drachms of pus. When the general tumefaction had subsided, it was evident that the abscess was in the spongy body, that being thickened around it. In the course of a few days, the urine escaped from the opening, and this it did whenever the patient made water, although in very small quantity. The spongy body in the neighbourhood grew exceedingly irritable, and required frequent leeching to subdue its inflammatory tendency. On two or three, and those very slight, occasions, a fresh collection of matter took place in the original cavity, and the gonorrhœal symptoms were

most troublesome. It was fifteen months from the introduction of the caustic, before the urethra had lapsed into such a tranquil state as to admit of any serious attempt to close the fistulous orifice. Then, and not before, instruments of some size could be passed, in order to enlarge the diameter of the canal; while probes dipped in melted nitrate of silver, and heated wires, were introduced into the fistula. But the healing of it was a source of no little difficulty. The cutaneous end filled up with much greater ease and celerity than the urethral one; and it was requisite to apply the potassa fusa very often to the former. Upwards of six months had been consumed before the patient was cured.

An instance, this, of what stimulating treatment may lead to.

II. Inflammation of the Corpus Cavernosum.

Contained as the canal of the urethra is in the corpus spongiosum, the extension of inflammation from the mucous membrane to its structure is natural. But the corpus cavernosum, though topographically contiguous, is physiologically distinct, and we should not, *à priori*, expect it to be easily involved in gonorrhœa. I have witnessed only one instance of the sort, and that appears to me of sufficient interest to be related.

Case.—A barrister, of something more than middle

age, had led from early years a dissolute life, and had experienced more attacks of gonorrhœa than he could enumerate, or I remember. He managed the majority of these himself, and his principles of treatment were simple. He took capivi till he got well, however long he might be in doing so, and as he did not care to restrict himself in living, he came at last to think that gonorrhœa was almost his normal state, and that it little mattered whether he had it or not. But Nemesis, though lame, still catches her victim, and this gentleman found that the "gods" do really

"Make scourges of our pleasant vices."

Some six months before he consulted me, which was in the summer of 1845, he began to experience lancinating pains in the body of the penis, just anterior to the scrotum— the organ was tender on erection— and it gradually assumed a sort of spiral twist, which was neither comfortable nor prepossessing.

When I saw him, this sort of torsion was considerable, and gave an irresistibly ludicrous appearance to the part, which looked somewhat like the appendix vermiformis, or a pig's curly tail. On examination, it was obvious that the cause resided in the corpus cavernosum, the fibrous wall of which was irregularly indurated, while thickening and consolidation invaded the erectile tissue within. The character of the affection more nearly resembled that of the chronic inflammation of the palmar fascia in watermen, than anything with which I can compare it. Erection had become as

insupportable as imperfect, and the suffering was positively great.

I prescribed leeches,—blisters,—mercurials,—tartar emetic, and iodine ointments,—fomentations,—poultices,—cold lotions,—even ice,—with calomel and opium,—salines,—iodide of potassium and sarsaparilla,—the liquor potassæ;—all the remedies, in short, which would naturally occur to me in the management of such a case. Their good effects were limited to the removal (and that extremely tardy) of the tenderness and pain. Beyond that, they had no influence. The induration remained, the contraction rather increased, and erection, if no longer actually painful, was a source of profound discomfort. In the early part of 1846, he consulted, I believe, several other hospital surgeons, and one (he was no anatomist) recommended division of the cavernous body. It *could* do no good, and it was *not* attempted. I have not seen the patient since 1847, and I understand that he remains in nearly the same state as when he quitted me.

Treatment.

Inflammation of the corpus spongiosum is the result of mismanagement or of neglect. I do not think that it should, or that it would occur, when the case is, from the first, in the hands of a well-informed surgeon, and the patient does justice to him and to himself.

When, however, it has taken place, there is but one sort of treatment adapted to it,—resolute counter-irritation. If recent, leeches ought to be applied, and

repeated till the more acute pain has subsided. When that is the case, and the affection has assumed the chronic character, blistering is the remedy on which most reliance must be placed. The blisters should be repeated until the induration has in a great measure subsided, when the mercurial ointment with belladonna and with camphor may be rubbed in gently every night and morning, while some spread on lint is retained upon the part. Of course, any other form of counter-irritation, answering, as it does, in principle, to blisters, may, at the option of the surgeon or desire of the patient, be substituted for them. But, I believe, it will be found that blistering is as convenient and as effectual a means as any; and, for my part, I rarely resort to any other.* After a little while, belladonna plaister spread on soft wash leather may be substituted for the mercurial ointment; and, under it, the remains, if any, of the induration, may be allowed to disperse. Some may prefer the ointment of the iodide of potassium to the mercurial, and iodine or some other plaister to the belladonna; or they may have a fancy for painting the integument with the tincture of iodine. The

* In applying blisters to the penis one precaution is requisite. When the vesication produced by it has been broken or cut, the serum is apt to be impregnated with the cantharidin, and running down the scrotum, to blister *it*. This is a gratuitous piece of suffering, doing no service to the spongy body, and creating a vast deal of annoyance. Prior to the application of the blister, some lint should be wrapped round the scrotum, and the latter supported in a bag-truss. This commonly prevents the unpleasant accident alluded to.

details signify little; the principle of the treatment is the main consideration. What I here recommend is what I have found answer the best; and I would again observe, that whatever description of counter-irritation is selected, it must be resolutely persevered with.

The general treatment is necessarily antiphlogistic, and amongst the remedies of that class, calomel and opium, in combination, are most serviceable. The inflammatory tension is more relieved by them than by any others. If necessary, colchicum or antimony may be added to them.

If suppuration forms on or in the spongy body, an early opening should be made. Delay is highly prejudicial, for it endangers the extension of the cavity towards the urethra, and a subsequent urinary fistula.

Before I quit the subject, I would caution the surgeon against precipitancy in the employment of stimulants. Both he and the patient are apt to get tired, and to seize the first opportunity of resorting or reverting to capivi and injections. But the spongy body once inflamed is irritable, and prone to be again affected.

III. Inflammation of the Absorbent Vessels of the Penis.

It may be well to observe,—for the lessons of anatomy slip strangely from the memories of those who have left the schools,—*that* the internal pudic artery terminates, in the male, in the dorsal artery of the penis, and in the artery of the corpus cavernosum—*that* the

dorsal artery of the penis, subcutaneous after having traversed the suspensory ligament, is distributed to the prepuce and the glans,—*that* the veins correspond, in a great measure, to the arteries, being, *like* them, superficial and deep, but *unlike* them, the two sets communicating freely,—*that* the superficial veins are chiefly dorsal ones, but that others are placed on the sides and lower surface of the penis,—*that* these penetrate the suspensory ligament, beneath the pubic arch, and, with the deep veins, empty themselves into the prostatic plexus.

The lymphatics only partially follow this arrangement. Of the deep ones, so little is accurately known that I may at once dismiss them. The development of the venous system of the cavernous and the spongy bodies must tend to make the office of their lymphatics a sinecure.

The superficial absorbent vessels are divisible into those of the scrotum and the penis. The absorbents of the former usually mount along the sides of the latter, and pass to the internal inguinal glands. The lymphatics of the penis itself arise in its integument, and in the mucous membrane of the glans. The latter set constitute dorsal trunks, which take the same course as the dorsal veins, quitting them, however, at the pubes, and, after communicating with the superficial lymphatics of the walls of the abdomen, proceeding to the innermost and uppermost absorbent glands of the groin.

This arrangement will account for the liability to

inflammation of the absorbents of the penis, in gonorrhœa. We should naturally expect, and we actually find, it most frequently in the acute form and in the inflammatory stage. It is often conjoined with partial or complete phymosis, and is not a very rare concomitant of balanitis.

Inflammation of the absorbents of the scrotum and penis sometimes accompanies inflammation of the testicle.

The most usual cause is walking, or other over exertion; that leads to inflammatory œdema of the prepuce, and then the absorbents are involved. But, as these take their rise in the mucous membrane of the glans, the mere intensity of the gonorrhœal inflammation is sufficient, of itself, to implicate them. Another not uncommon source of this affection is the use of stimulants, whilst such inflammation exists.

Whatever the immediate cause, the affection itself displays some such characters as these:—the patient is feverish, and has experienced, perhaps, a trifling rigor —the dorsal surface of the penis feels stiff, and is the seat of some pain on erection—the prepuce is a little swollen, œdematous, perhaps, and red—one or two, or more, slightly rosy lines extend from it to the pubes—from these lines a blush, without defined margin, may diffuse itself over the penis—beneath the lines, a hardened cord or cords may be felt, tender when pressed, and still more tender in erection—a lymphatic gland in either groin, or in both, may be enlarged and painful—and, finally, I have seen, in several instances,

distinct glandular enlargement at the lower margin of the pubes, where none is described in anatomical works, or shewn in anatomical plates.

If neglected or mismanaged, the inflammation of the absorbents of the penis may end, like inflammation of the absorbents elsewhere, in circumscribed abscesses along their course, or in erysipelas, or in inflamed and suppurating bubo. I have seen each and all these consequences.

But with proper treatment, and that is simple, no such results need occur. The case is purely inflammatory. Mercurial purgatives, salines, evaporating lotions, perhaps leeches, low diet, and rest, are remedies alike obvious and effectual. Under their influence, the inflammation subsides in from three days to a week, and the induration of the walls of the absorbent gradually disappears after it.

When we reflect on the inflammatory character of gonorrhœa—on the developed venous system of the mucous membrane—on the tendency to inflammation of the erectile tissue, itself venous, of the corpus spongiosum and the glans—on the not unfrequent implication of the absorbent vessels and of the cellular membrane of the prepuce and the penis,—it must excite surprise that the veins should not be more frequently involved. I cannot account for this immunity on satisfactory anatomical grounds, for it certainly does seem that phlebitis ought to be as natural a result of gonorrhœa, as inflammation of the absorbents. Yet I have never witnessed a distinct instance of it, and it

must unquestionably be very rare. The only case of which I have any recollection, is one that was published in the French journals, many years ago. A patient labouring under stricture of the urethra had a bougie introduced. This was followed by rigors, profuse sweats, and the other symptoms of purulent absorption. Death ensued, and secondary deposits were found, either in the lungs or liver,—I do not remember which. Such a case has only a remote and doubtful bearing on the point that has been mooted. But it is *probable* that the veins of the mucous membrane, or of the corpus spongiosum, had sustained some injury from the bougie, and that inflammation or absorption had conveyed the pus into the system. At all events, if such an occurrence *could* happen, gonorrhœal phlebitis is *possible*.

IV. Inflammation and Abscess of the Cellular Membrane of the Penis.

When the cellular membrane of the penis is affected, it is owing to extension of the inflammation from the mucous membrane of the urethra. It may occur, as it commonly does, in connection with phymosis, or with balanitis, or it may be consequent on inflammation of the corpus spongiosum. It rarely happens without some obvious exciting cause—much exercise—free living—connexion while gonorrhœa exists—or, what is far more common than all, the improper use of stimulating remedies.

If the cellular membrane is generally inflamed, the absorbents will probably be implicated with it, and more or less of phymosis, or of paraphymosis, will be present.

1. Suppuration may occur in the neighbourhood and course of the absorbents. If such is the case the abscess is small, and is found on the dorsum of the penis. There may even be two or three, little, if at all, larger than horse-beans, in connection with the dorsal lymphatic vessels. In these instances, the abscess is the consequence of inflamed absorbents.

2. Matter sometimes forms just behind the corona glandis, and a not unfrequent situation is immediately contiguous to the frænum. Such abscesses are small, often not much larger than a pea, rarely equal in size to a marble. It may be fairly presumed that they are often connected with the sebaceous glands. When opened, either by nature or the lancet, the aperture is prone to continue fistulous — it becomes extremely small, and would seem to have little tendency to close spontaneously. A fine heated wire, introduced once or twice, effects a cure without difficulty. The following case is a good example of this form of suppuration.

CASE.—*Circumscribed Abscess behind the Corona—a Seton required.**

A servant was admitted into the Lock Hospital, on

* Medico-Chirurgical Review for October, 1833.

the 11th of August, 1833, with excessive induration on the dorsum of the penis, behind the angle of reflection of the prepuce; it was of a globular and circumscribed character, accompanied with a feeling of tension, as though fluid were shut up in a firm cyst. There was a bubo, disposed to suppurate, in either groin, and the patient looked pale and out of health.

It appeared that he had had gonorrhœa two months previously. It was stopped in a week by copaiba. Buboes immediately succeeded, and his health became impaired. The induration had not attracted his attention until about a fortnight before admission.

The patient was treated with purgatives, poultices, &c.—the swelling increased in size and tenderness—fluctuation grew distinct—and, an opening being made through the inner prepuce, about two drachms of pus were let out. The bubo in the right groin suppurated.

At the expiration of a month, the abscess still discharging, and the cavity not contracting, I passed a silk-thread seton through it. In the course of a fortnight the cavity had become a mere channel for the seton, which being withdrawn, it closed.

3. The ordinary situation of an abscess of the penis, of any magnitude, is on its inferior surface. Sometimes it is, sometimes it is not, connected with the corpus spongiosum. The following cases will, better than description, convey an idea of the affection.*

* These cases, like the preceding one, are extracted from a paper published by me, in the Medico-Chirurgical Review, when House-Surgeon of the Lock Hospital, in 1833.

CASE I.—*Gonorrhœa neglected—Abscess of the Penis —Chronic Induration of the Corpus Spongiosum.*

A gentleman contracted a gonorrhœa, notwithstanding which he mixed in society and drank wine, as usual. When I saw him, the whole penis was red, and much swollen, from infiltration of the cellular tissue, with some paraphymosis. In addition to the general swelling, I detected fluctuation connected with the inferior surface of the corpus spongiosum, an inch, or thereabouts, behind the glans. There was thick purulent discharge from the urethra—the pain in micturition was great—the nocturnal erections were distressing. The patient had, for a few days, been treated pretty actively with mercurial purgatives and colchicum.

I opened the abscess, and two or three drachms of pus were discharged. Leeches and fomentations were employed, with calomel, antimony, and opium at night, and salines with colchicum, and sulphate of magnesia, in the day.

The swelling gradually diminished, but was long ere it quite subsided. As soon as the decline of the subcutaneous effusion allowed a more accurate examination, it was found that the abscess was connected with the corpus spongiosum, or with its investing membrane, though its essential seat was in the cellular tissue. The corpus spongiosum was generally indurated, from effusion of lymph.

As soon as the patient could leave his bed, which

was in three or four days, he was compelled to engage in occupations not calculated to hasten his recovery. The induration of the corpus spongiosum yielded very slowly, and the abscess twice reappeared. The treatment consisted in slight affection of the gums by calomel and opium — salines with colchicum — alkaline aperients—mucilaginous drinks—and repeated blisters to the penis. Active as these measures were, some months elapsed before the chronic inflammation of the corpus spongiosum was subdued; so long as it remained in a state of induration, a hard cord could be felt in the site of the abscess, connecting the puckered skin with it, and composed of the contracted cellular cyst. So soon as pain and irritation were gone, and the thickness of the corpus spongiosum was trifling, I prescribed copaiba cautiously. It gave rise to no mischief, and, under the operation of it and of injections, the gentleman was cured.

CASE II.—*Abscess in the Cellular Tissue of the Penis —affection of the Corpus Spongiosum.*

John Smith, aged 20, became an out-patient, at the Lock Hospital, under my care, on the 19th of February, 1833. The penis was much swollen, the integument red, the prepuce disposed to be phymosed. Fluctuation was felt on the inferior surface of the penis, where there was much tenderness on pressure. There was also purulent discharge from the urethra, with considerable scalding, and painful erections. The complaint had

existed for three weeks, during which he had been treated with copaiba.

I opened the abscess, and let out half an ounce of pus, which had extended between the integument and corpus spongiosum; it was dubious, at that time, if the latter was involved or not.

Under the influence of calomel, salines with the sulphate of magnesia and colchicum, poultices, and fomentations, the cavity of the abscess rapidly contracted, the discharge became glairy, and in about ten days had ceased. The acute symptoms of gonorrhœa having disappeared, I prescribed the tinctura lyttæ. When the dose had been raised to thirty minims four times daily, the abscess returned, and the urethral irritation with it. It was opened, the patient was again put on aperients and diluents, again the abscess closed, the inflammatory symptoms ceased, and the discharge grew thin. I prescribed copaiba, which had almost arrested the discharge once more, when it gave rise to an exanthematous eruption, pains in the limbs, and pyrexia. Under aperients, the eruption passed away, but the discharge had become as bad as ever. Thinking it might be kept up by slight inflammation of the corpus spongiosum, which felt rather hard in the site of the abscess, I ordered the following ointment to be applied to the inferior surface of the penis :—

℞ Unguenti Hydrargyri fortis . . . ℥j.
Antimonii Tartarizati . . . . ʒij.
Iodinii . . . . . gr. x.

Misce. Applicetur omni nocte maneque.

This ointment produced, as it usually does, severe counter-irritation, of a character intermediate between pustule and vesicle. The urethral discharge soon diminished. I then prescribed copaiba and catechu—the discharge ceased—and, on the 10th of April, he was dismissed cured.

After the narration of the preceding cases, it appears unnecessary to discuss the treatment of circumscribed abscess of the penis. So far as itself goes, it should be managed on the same principles as other subcutaneous abscesses. It is obvious too, that, being an inflammatory symptom, and usually the consequence of abuse of stimulants of some sort, it constitutes, while it exists, an additional bar to their employment.

4. Diffuse suppuration of the cellular membrane of the penis may occur as a result of effusion of urine, of phlegmonous erysipelas, or of inflammation of the dartos. But I never, save in a single instance, observed it as a direct result of gonorrhœa. That instance I shall now relate.

CASE.—*Inflammatory Gonorrhœa—Injection of a Solution of Nitrate of Silver—Diffuse Cellular Inflammation.*

A gentleman, of middle age, and of debauched habits, became affected with gonorrhœa, to which he had frequently been subject, and which had, on more than one occasion, proved particularly tedious. He applied to a young practitioner, who used, and directed the

patient to use, a weak solution of the nitrate of silver. Before three days had elapsed, a great increase of inflammation was witnessed. Phymosis had appeared, the pain in making water and painful erections were severe, and, on the third day, the patient was seized with a rigor. The injection was now discontinued, and salines with purgatives were given. But considerable constitutional disturbance took place, the penis became more swollen, and the phymosis was so great that the urine flowed through the narrow orifice with difficulty. On the sixth day, the 13th of June last, I was requested to meet the medical attendant. I found the penis considerably enlarged, of dusky hue, feeling boggy when pressed, completely phymosed, and giving exit, through the nearly closed præputial aperture, to dirty sanguinolent matter. The lurid blush mounted on the pubes and into the groins, with a margin here undefined and there distinct—the subcutaneous cellular membrane of those parts was œdematous, so was the dartoïd tissue of the scrotum—and the inguinal glands on both sides were enlarged. It was clear we had to do with a serious case of diffuse cellular inflammation. Another day, and the scrotum, the perineum, and the abdominal parietes, would be involved. I instantly made free incisions in the penis, and smaller ones, with punctures, on the scrotum and the pubes. The cellular tissue of the former was so infiltrated with solid lymph, that it sloughed throughout its greater portion, but that of the scrotum and the pubic regions was preserved. The integument was saved, except in one

inconsiderable spot, and the patient, after a protracted illness, was cured. It was only, however, in the month of September that this result was accomplished, the urethral inflammation and discharge proving particularly troublesome. One disagreeable consequence ensued, for which I was more prepared than the patient. The loss of the cellular membrane naturally led to adhesions of the integument to the walls of the cavernous and the spongy bodies. The accommodation of the skin to erection was impeded, and the act was rendered painful, and the organ twisted. I presume that, with time, this will be partially remedied. New cellular membrane will be formed from the adhesions, and its intrinsic elasticity will admit of gradual and considerable elongation. Whether the restoration of the cutaneous functions will be perfect, I shall not undertake to say.

V. Bubo.*

Inflammation of the absorbents of the penis occasionally leads to inflammation and enlargement of one or more of the absorbent glands in the groin. But, in cases of gonorrhœa, especially when combined with phymosis, or with balanitis, the inguinal glands will, at times, become affected, independently of any perceptible inflammation of the absorbent vessels. Bubo,

* The substance of these remarks is taken from an article written by me in the Cyclopædia of Practical Surgery.

then, though far from an ordinary consequence of gonorrhœa, is one of sufficiently frequent occurrence to require consideration.

I am the more induced to devote some little space to it, from the conviction that there are few disorders of the same rank, the management of which is conducted by many members of the profession on such loose and indefinite principles. Hot applications and cold, leeches and friction, iodine and pressure, early openings and late ones or no openings at all, mercury and caustic, are employed, too frequently, at random, without a clear perception, on the surgeon's part, of what is best to be done, or how he is to do it. My object is, therefore, to point out, as far as lies in my power, the distinct conditions or varieties of bubo, which require distinct modifications of treatment, and the principles, if they exist, on which such treatment should be founded.

Buboes have been commonly divided into *specific* and *sympathetic*.

The "specific" bubo has been admitted to occur in plague, and syphilis, and sometimes, perhaps, in gonorrhœa. It may appear, too, as a consequence of malignant disease in the lower extremity, the scrotum, or the penis. The sympathetic bubo has been looked on as the ordinary form in gonorrhœa, an occasional one syphilis, and a casual result of such general disturbance, or local irritation, as might act on the lymphatics which pass to the inguinal glands, or directly on those glands themselves. My present business is with "sympathetic" bubo only. To attempt either the description

of the "specific" bubo, or its discrimination from the "sympathetic," would be to open up the history of syphilis, which would be wholly out of place.

It is necessary to premise, that the lymphatic glands of the groin are disposed in two planes, the one superficial to the fascia lata, the other immediately beneath it. The former are termed the "superficial inguinal glands," the latter are known as the "deep."

The *superficial glands* are immersed in the mass of subcutaneous cellular tissue and adeps, which is called, and not always with strict propriety, the superficial fascia. They are disposed below the ligament of Poupart, and around the saphena vein, where it is about to traverse the crural ring, and to join the femoral. They vary in number and development in different individuals; and hence, perhaps, one reason for the greater tendency to bubo on the part of some persons than of others.

The *superficial inguinal glands* receive the lymphatic vessels of the dorsum and inner side of the foot, of the front, inner side, and back of the leg, and the lymphatics of the surface of the thigh; these usually enter the inferior and the central glands. The more internal glands receive the lymphatics of the scrotum, of the prepuce, and glans penis in the male, of the labia, nymphæ, and clitoris in the female, and of the perineum in both sexes. It occasionally, however, happens, as M. Cruveilhier has remarked, and as practical surgeons must have noticed, that the lymphatics of the penis and the scrotum avoid the glands which are most con-

tiguous, and proceed to the lower ones in the neighbourhood of the saphena vein: a circumstance worth remembering, as it impugns the truth of the current belief, that irritation of the external organs of generation affects only the higher and more internal of the glands of the groin. That rule, though generally correct, has its exceptions. The glands in the middle and on the outer side of the plexus are supplied by the superficial lymphatics of the hypogastric and the lumbar regions. The most external glands receive the lymphatics of the nates.

The *deep inguinal glands* present more varieties in number and development than the superficial; indeed, they are frequently absent. They are placed, when they exist, below the fascia lata, and beneath the saphenous opening of the crural canal. The deep lymphatics of the foot, the leg, the ham, the anterior, internal, and external parts of the thigh, join the deeper inguinal glands, or, in case of their deficiency, the superficial ones.

These details are necessary, to explain the liability of particular glands to sympathise with particular parts. We may expect, for instance, that if the surface of the foot, or leg, or thigh, is irritated, the lowermost of the superficial inguinal glands will be affected. And this we often observe in cases of suppuration beneath a corn or bunion, in disease of the toe-nail or its matrix, in wounds, in erysipelas, in diffuse inflammation of the subcutaneous cellular tissue, after blisters, and from ulcers of various sorts. Indeed, if a patient complains

of bubo, and the glands in question are enlarged, the surgeon may presume that the cause is in the lower portion of the limb, and not in the parts of generation.

I have already remarked, that the glands in connection with the external genital organs of both sexes are the more internal of the superficial plexus. It is they which enlarge from gonorrhœa—from phymosis—from excoriations, or from ulcers of the inner or the outer prepuce—from warts—from mucous tubercle on the scrotum or the perineum—from encysted abscess in the female labium—from hæmorrhoids*—from fissures of the anus—from abscess in the ischio-rectal fossa—and from fistula—in short, from almost any description of temporary or permanent irritation in these quarters.

As the external glands receive the lymphatics of the nates, we cannot be surprised at boils in that direction giving rise, at times, to enlargement of them. I have also seen this from a caustic issue in the loins.

In persons who have been subject to femoral hernia, some enlargement of the inguinal glands is not uncommon. The fact is worth remembering, as inattention to it has led to much embarrassment in the operation.

The inguinal glands enlarge at times, independently

* I have twice, after tying internal piles, seen smart inflammation of the inguinal glands. In one case, the glands alone were affected; in the other, that of a lady of a highly nervous temperament, the sub-peritoneal cellular tissue appeared to be extensively inflamed, and the irritation seemed to travel by *that* route to the glands in the crural canal.

of any appreciable irritation, in the course of the lymphatics leading to them. In some instances, this would seem to depend on some injury inflicted on them. A gentleman mounted a restive horse, and had great difficulty in keeping his seat. Tenderness in one groin immediately succeeded, and suppurating bubo was the consequence. Another was pulling up a very heavy weight, suspended by a rope and pulley from a tree. He felt something snap in the groin, and he too had suppurating bubo. We must suppose that, in such cases as these, the inferent or the efferent vessels, or, perhaps, the gland itself, are strained, or torn, or damaged in some fashion. It occasionally happens that a patient has connection, and without the occurrence of excoriation, or of gonorrhœa, or of any kind of sore, there comes a bubo. No doubt, the greater number of what the French call *bubons d'emblée*, and of what has been described as "primary syphilitic bubo," are no more than simple inflammatory enlargement of a lymphatic gland, produced by the mere exertion and excitement of coition.

Varieties of Bubo.

Constitutional states exert an important influence on the production and the course of bubo. There are two conditions, the scrofulous and the cachectic, which are more particularly prone to it. It is in these states, and especially the former, that the inguinal glands are apt to enlarge, without local irritation in the course of their inferent vessels.

For practical purposes, it is not amiss to look at bubo from three points of view:—as it occurs in a healthy habit; or in a scrofulous; or in a cachectic. It may fairly be admitted that it is not always easy to distinguish the two latter constitutional conditions, or their local effects, cachexia being little else than a low state of the bodily powers, to which the scrofulous diathesis may materially contribute. Yet, making every reasonable allowance for this, the difficulty that it gives rise to is rather critical and doctrinal than real, and occasions no embarrassment in actual practice. I shall, therefore, take the liberty of acting on this arrangement, however faulty it may be, and of sketching, in as brief a manner as possible, the form that is assumed by bubo, and the course it runs, under these several circumstances.

Bubo as it occurs in a Healthy Habit.

As a consequence of any of the several local causes I have mentioned, there appears a swelling in one or more of the inguinal glands. It generally begins in one, and is often confined to it; occasionally it extends to several. The swelling feels, to the finger of the surgeon, single or multiple, as one or several glands are implicated—moveable or not, as it is above or below the fascia—tender when pressed—and more or less painful on or after exercise, or even without it. The skin, at first, is not discoloured, unless an inflamed absorbent leads directly to the bubo, when the redness in

its track may invade the integument over the gland itself.

Such a bubo may end in *resolution*, or in *induration*, or in *suppuration*. Under proper management, the former termination is the most common, and the latter is the least so. Sloughing of the integument, or of the gland, or of both, is a still more rare termination.

Resolution.—When this takes place, the tenderness and pain subside with more or less rapidity, and the swelling gradually disappears. In most instances, however, an inguinal gland, when once enlarged to any size, regains with difficulty its exact natural dimensions.

Induration.—This is a not unfrequent occurrence. The tenderness passes away, the swelling diminishes a little, it then becomes stationary, and may so remain for an uncertain period, for weeks or even for months. In the majority of instances, it yields at last—perhaps to medicine, perhaps to time. But, in other cases, fresh inflammation comes upon the gland, it may be with, it may be without any obvious reason, and either resolution or suppuration ensues. This tendency makes induration of a gland anything but desirable.

Suppuration.—If the inflammation runs high, or, as is not uncommonly the case, the patient does not restrain himself in exercise or diet, the tenderness continues or augments—the swelling enlarges, partly from increase of the gland itself, principally from implication of the neighbouring cellular tissue—

a blush of redness appears upon the skin—the latter becomes adherent to the gland beneath—slight œdema, from serous effusion into the cellular membrane, precedes "bogginess" from sero-purulent infiltration into it and the gland—and fluctuation, from concentration of the fluid in one chamber, follows.

In the stage of "bogginess," it is often hard to say whether there is matter or not. A careless or an inexperienced surgeon will often hastily decide that there is, and plunge his lancet into the swelling. The exit of only blood, and a trifling quantity of sero-purulent, or merely serous fluid, surprises, probably annoys, him.

Even when fluctuation is perceptible, it does not follow that the fluid is purulent. I have often seen it more allied to serum than to pus, and we sometimes find sero-purulent fluid in the cellular membrane and superficies of the gland, while a little pus is found in its interior. I mention these circumstances, partly because they tend to moderate precipitancy, and partly because they explain many of the reputed instances of absorption of buboes in a state of suppuration. In the majority of such instances, it will probably appear, on a careful investigation of the facts, that the fluid has been serous, or sero-purulent.

To pursue the description of the process of suppuration. The fluctuation, at first indistinct, becomes hourly more unequivocal—the œdema and the redness stretch far beyond the limits of the bubo—towards the centre of the swelling, the integument grows prominent, is glossy, and thin—*there* the abscess is pointing,

there it will burst. For, the thinning or absorbent process advances—a small ulcerated aperture is visible—the matter oozes out—the aperture extends, usually in a linear direction, and in that of the fold of the groin—or several apertures may form, and two or more may coalesce—the matter is then discharged more freely, but seldom freely enough—and, according to circumstances, the abscess may fill up, or ulcerated openings in the integument may continue, or sinuses may form, or the gland or the cellular tissue may undergo some morbid modification of structure. But, in persons of a healthy habit, these cannot be looked upon as common sequelæ of a bubo.

I would observe, in reference to them, that obstinate ulcerations and sinuses are more liable to happen, if the patient persists in an injudicious amount of exercise, or in venereal or dietetic excesses. And this is just what he often *will* do. I have learnt from experience, that troublesome and difficult as it sometimes is, to treat the *case*, it is often much more troublesome and much more difficult to treat the *patient*. In too many instances, he will neither refrain from exercise nor restrain his appetites, and when he has to pay the penalty of his impatience, recklessness, or obstinacy, he accuses fortune, nature, his surgeon, everything but the real culprit—himself. I could fill a chapter with cases of this sort, and so, I dare say, could most other surgeons. The gland seldom remains in a morbid state, so as to keep up irritation and ulceration in the parts about it, unless the patient is guilty of great negligence

or impropriety. When this is the case, it may lie at the bottom of the sinus or beneath the ulcer, surrounded, perhaps, with diseased cellular membrane, itself partially disorganized, and acting like a foreign body. Under such circumstances, fresh attacks of inflammation, and fresh abscesses, may be looked for.

Sloughing.—The inflammation must be very violent, or, what is more likely, the patient or the surgeon much to blame, when either the integument or the gland sloughs. Some degree of sloughing of the skin is not uncommon in patients of the lower class, who are often, from inadvertence, or necessity, negligent of their disorders. I once saw the gland slough out completely.

Case.—A young gentleman, of a full habit, had a simple bubo from excoriation of the inner prepuce. He ate and drank as usual, and suppuration threatened. In spite of my remonstrances, he went out for a hard day's hunt. The inflammation became excessive, and matter collected rapidly. I opened the abscess early, but the gland and a good deal of cellular membrane came away as a slough.

Such is the history of bubo as we meet with it in persons of a healthy constitution. I may add, that such extreme consequences as those which I have touched on, are but rarely seen.

Bubo in a Scrofulous Habit.

It would be tiresome to go, seriatim, through the phases of bubo in a strumous subject. The *differential* characters are the only ones that I need glance at. Of course, I would not be understood to imply, that, in every scrofulous person, bubo will assume particular features. No such constancy is observed in nature. In many an individual, who displays the lineaments of scrofula, a bubo will appear and disappear, as it does in the seemingly healthy. But the scrofulous, and, *à fortiori,* those who exhibit that diathesis most strongly, are more prone to the modifications I am about to mention, than they are in whom no such diathesis is evident. No better proof can be offered for much that is generally admitted in pathology. Perhaps, the following conclusions will not be found extremely wide of the truth :—

1. Persons of a scrofulous habit are particularly liable to bubo, and the tendency is to affection of several glands, together, or in succession.

2. Bubo, when it occurs, goes through its stages with characteristic dilatoriness.

3. Resolution is less frequent than in the healthy. Induration is very common. Suppuration is common too.

4. When suppuration has occurred, the following condition of the parts is apt to supervene. A considerable swelling occupies the groin, sometimes pretty uniform, more frequently irregular upon its surface;

the integument is of a blueish and variegated, or, rather, of a brick-dust red; on pressure, the swelling feels remarkably boggy, elasticity, however, predominating in one part, œdematous pitting in another. Amidst the "bogginess" and tumefaction, hard lumps may be distinguished, evidently indurated glands. The tenderness is usually inconsiderable, and the seeming amount of disease contrasts strongly with the general absence of pain. If the suppuration has been recent, there are ulcerated apertures, of greater or less size, leading, perhaps, to an exposed gland; if the case is more ancient, those apertures may have closed completely, or, what is more common, they may have ended in sinuses, generally leading to a gland altered in its structure.* The discharge, when there is any, is thin, and may be curdy. There is a striking disposition to repeated and partial attacks of suppuration. The duration of this morbid state is always prolonged, and sometimes to a great extent. In the case of a gentleman whom I saw, it had existed for a year and a

* From the observations I have made on the structure of scrofulous lymphatic glands, after death, I should say that the following are the changes that take place in them. Increased vascularity—more or less complete deposition of scrofulous lymph—softening, mostly commencing in the centre—suppuration, sometimes partial, sometimes beginning in insulated points, which coalesce—granulation, occurring irregularly and imperfectly—tardy and incomplete restoration of the structure of the gland. In those cases of glandular tumor where part of a gland appears to suppurate, or slough, and part to remain more or less healthy, it is usually a plurality of glands that are affected.

half. Nor can we feel surprise at this, when we reflect upon the tediousness of a similar affection of the cervical glands, more favourably circumstanced, as, in many respects, they are. At last, however, under proper treatment, or propitious changes in the system, the swelling subsides, the sinuses close, and the enlargement of the glands diminishes or disappears.

Bubo in a Cachectic Habit.

The circumstances under which we see cachexia most frequently, at all events in the middle and the upper classes, are those which result from the injudicious administration of mercury. It is not always the mere quantity of mercury that is injurious, for an amount that appears to agree with one person will exert its deleterious action on another. The time, and the mode in which it is given, the patient's habits of life and idiosyncrasy, are elements which materially affect the results. It is generally believed, that the scrofulous diathesis is peculiarly prone to suffer from mercury; and, no doubt, this old opinion is correct. But inadequate or improper nutriment exerts a paramount influence, and intemperance plays a prominent part. Hence it is, that cachexia is most frequently observed in the lower orders.

The cachectic bubo is characterised by the predominance of the suppurative and the ulcerative processes, and by a marked tendency to phagedæna or to sloughing.

Suppuration, when it occurs, as it almost always does, is usually extensive—the skin is blue, and disposed

to be widely thinned and undermined—the cellular membrane is involved to the same or a greater degree, the absence of the limitations to abscess which occur in a healthy person being marked. The pain is frequently severe, although it is occasionally inconsiderable.

Unless an opening be made early, and, not unfrequently, in spite of every precaution, the skin ulcerates or sloughs extensively—a large cavity with sloughy-looking walls, and with diseased glands, more or less exposed, is now laid open—granulations arise feebly and irregularly, ulcerating or sloughing, perhaps, after they are formed—the edges of the aperture may continue to ulcerate, and look picked and jagged ; or they may ulcerate in one direction, and granulate in another —the surrounding cellular membrane still suppurates irregularly, or sloughs, so that sinuses open into the old cavity, or fresh ulcerations form in the skin.

A patient in this state is exposed to phagedæna or to gangrene. Anything which tends to impair his powers may induce the one or the other, and mercury, especially, will do so. But sometimes an irritating application has the same effect. The vitality of the parts appears to be too low, to be capable of any great and sudden increase of action—if stimulated to that, the phagedænic or the sloughing process is the consequence. I once saw a striking instance of this.

Case.—A young man, in the Lock Hospital, had a cachectic bubo, ulcerated, and in a chronic state. The surgeon pared the edges of the ulcer with a scalpel.

Phagedæna immediately ensued—it extended widely, deeply, and fast—the femoral artery was laid bare, and seen pulsating fearfully at the bottom of the spreading sore. I was house-surgeon at the time, and, apprehensive of what would occur, I set a nurse and an assistant to watch this patient exclusively. I had paid my morning visit, and was quitting the ward, when a shout recalled me. The artery had given way. I shall never forget the scene. The nurse had her hands in the wound, from which the blood was issuing in gushes, every one of which seemed death. With a *presse-artère*, which was ready, I instantly arrested the circulation through the vessel, on the pubic bone, and then stuffed the wound with lint. Pressure, in both places, was kept up by relays of assistants, for three or four days and nights. The patient, at the same time, was plied with brandy, wine, and opium. He was saved. A clot formed, the phagedæna was arrested, granulations sprang up, and the wound cicatrized. I have met him more than once since, and he has continued strong and hearty. The flow of blood appears to be uninterrupted through the femoral trunk. In all my professional life, I have never seen another such escape from imminent destruction. Whoever witnessed it, would pause before he meddled much with a cachectic bubo.

The usual course is to lapse into a chronic state. The cavity granulates to a certain extent, its size being proportionably diminished; but the granulations are

unhealthy, dark, imperfectly organized, disappearing or even sloughing readily; the gland is probably, often palpably, diseased; the discharge is thin, copious, and irritating; the edges of the sore are callous, or they ulcerate fretfully; the surrounding skin is blueish; and the cellular membrane thickened, or traversed by sinuses, or morbid in some other fashion.

Such a state may be well termed chronic, for, even with the most sedulous and well directed attention, it may persist for weeks, or even months; and, without such care, its duration may be long indeed. A man was received into the Lock Hospital, with an ulcerated bubo, of this description, in each groin. The sores had been nearly in the same state for a year and a quarter before his admission, and after the lapse of five months' residence within the Hospital, we could not congratulate ourselves on any great improvement. He was, I believe, (for I lost sight of him) an in-patient for nearly a year before he could be cured. I remember another case nearly as tedious. It was that of a young man, who was a patient of Sir Benjamin Brodie's, in St. George's Hospital. A cachectic bubo in the right groin assumed the chronic phagedænic type—the ulceration spread down the perineum, and in spite of all that was done for it, persisted for the greater part of a twelvemonth. I am willing to suppose that these were extreme instances, and as the management of phagedæna is better understood at the present day, I trust that such results will be seldom witnessed in the hands of well-informed surgeons.

In fact, these cases, if properly treated, are curable in a reasonable time. The granulations put on a healthy aspect; the diseased structure of the gland is quietly absorbed, or removed by instalments of ulceration, or of sloughing, or the gland sloughs away bodily; the diseased cellular membrane is similarly disposed of; the sinuses close, or are laid open; and, at last, cicatrization is complete.

I think it will be admitted, that these forms of bubo, the simple, the scrofulous, and the cachectic, do present leading features, sufficiently distinctive to justify their classification. It may readily be conceded, without derogating from the general utility of their separation, that, in the endless modifications which we witness of constitution and disease, these morbid types are occasionally blended and confused.

I have hitherto said nothing of the general symptoms, for they require little notice. In the simple bubo, they will be more or less inflammatory, and such as wait upon active local excitement; in the scrofulous and the cachectic buboes, they represent, of course, the states those names imply.

Treatment of Bubo.

If the multiplicity of remedies be the test of successful treatment, that of bubo must be most successful. I fear, however, that curability and the number of the modes of cure are often in an inverse ratio to each other. There have been thousands of specifics advertised for *hydrophobia*—we are content with *one* for itch.

In the instance of bubo, the fault, in my opinion, lies less with the disease than it does with the patient or the surgeon. It is always difficult, and sometimes impossible, to fix upon the former the requisite restraint—and the latter too often dodges from one plan to another, without any clear idea of the varieties of the affection, or any fixed principles of treatment.

That treatment is, of course, divisible into general and local.

1. *General Treatment.*

This must necessarily vary, as the bubo occurs in a healthy, a scrofulous, or a cachectic habit.

When the bubo is of a healthy character, the general treatment is simple enough. In the inflammatory stage, rest, low living, aperients, and salines, are the only measures that are usually required. General bleeding has been recommended, but the cases that call for it must undoubtedly be rare. If an abscess forms, and is opened, a more generous diet, regulation of the secretions, the cessation of antiphlogistic discipline, tonics, and in some cases change of air and passive exercise, are the indications to be followed.

I think that the necessity for rest can scarcely be too much insisted on. It is necessary before suppuration, to prevent or limit it—it is necessary after suppuration, to obviate sinuses, and to close the cavity. Here is our main difficulty. Some patients cannot lie up—and more will not. What is the consequence? The ligament of Poupart is the common point of union of

the abdominal and crural fasciæ, the centre of the motions of the trunk and limb. The inguinal glands are grouped about this ligament, and attached to it by the superficial fascia. When inflamed and enlarged, every movement disturbs, compresses, or drags upon them—when they have suppurated, the same movement tells on them still more, and disposes them to fresh inflammation and to sinuses. The patient should be told this, and the responsibility is his if he neglects the warning. I lately had a case under my care, which exhibited in so marked a manner not only the bad effects of exercise, but the utter want of definite principles which obtains in the treatment of this affection, that I am induced to give the heads of it.

Case.—A young Lieutenant in the army, of fair complexion, and rather scrofulous habit, but in the enjoyment of good health, contracted a slight sore upon the penis, which healed in a few days, but was succeeded by a bubo in each groin. The surgeon of another regiment, who saw him, ordered him to take mercury, and applied ice to the buboes. The mercury was speedily abandoned, and, the buboes advancing, poultices were substituted for the ice. The abscesses were opened, and the ice *immediately reapplied*. Fresh inflammation and suppuration was the consequence, when, the surgeon of a large provincial town being consulted, condemned the former practice, and applied compression. At the same time, he recommended the patient to walk about. The result was what might be

anticipated:—the inflammation was aggravated, more glands suppurated, and sinuses formed in several directions. The gentleman now went to his paternal residence, and placed himself under the care of the family surgeon. He poulticed the groins, opened a fresh abscess or two, and, when matters got a little better, directed him to take his gun, and quietly walk after the pheasants and partridges. This was more easily said than done, and when done made the officer none the better. Another batch of sinuses was all the sport he could boast of. Five months, or so, had now elapsed, and disgusted with his actual state and his apparent prospects, he got into an express train, and came to London to me. At the time of his departure, his surgeon assured him that he was all but well, and that he might take any moderate exercise with benefit. His own sensations were far from corroborating this agreeable intelligence, which, for my part, I found myself quite unable to ratify.

In point of fact, there was, in the left groin, a sinus, seemingly almost closed, which led to two diseased glands, and an irregular cavity passing deeply in towards the crural ring. The cellular membrane there was involved. In the right groin matters were much worse. Four or five sinuses, running in various directions, passed to diseased glands, matted together, imbedded in morbid cellular membrane, and partly seated deeply in the loose tissue that plunges through the crural ring, to be continuous with the fascia transversalis.

It was clear to me that I had to deal with a troublesome, possibly a serious case. The inguinal glands, in a scrofulous habit, through the combined influence of cold, exercise, and pressure, were deeply and extensively involved. So I told the patient, and I added that if he was well in three months, it was more than I should like to promise him. He placed himself under my care, and confined himself absolutely to the bed and sofa. I laid open sinus after sinus—took care to prevent cicatrization of the surface before all was sound below—supported the system with generous diet, sarsaparilla, the mineral acids, and tonics—and, in about the time I had mentioned, with an infinity of trouble on my part and of endurance on his, we both had the satisfaction of seeing the last aperture soundly closed. Brighton, sea-bathing, and the summer, restored his health, which had been a little shaken, and he is now going, or gone, along with his regiment to India.

Before I quit the subject of rest, in the management of bubo, I think it right to mention that, on two or three occasions, I have seen sinuses heal under exercise, which refused to do so with repose. These are rare exceptions to the general rule, and, in ninety-nine cases out of the hundred, it would be most unwise to act upon them.

The general treatment of the scrofulous and the cachectic bubo is the same as that of other scrofulous and cachectic symptoms. It would lead me beyond the limits of this work to enter upon it in detail. I

shall content myself with some leading observations. Regulation of the secretions is, of course, requisite in all cases, purging in few or none. In the scrofulous bubo, I have found full doses of the liquor potassæ, combined with sarsaparilla, with some bitter tonic, or with steel, most serviceable, either when the glands have been merely indurated, or when the suppuration has been very limited. The liquor potassæ, which, judiciously administered, is in my opinion one of the most valuable medicines in the Pharmacopœia, is apt to depress persons of lax fibre, pale complexion, and weak habit. It is best suited to the ruddy and the stout—better adapted to the corpulent and phlegmatic, than to the nervous and the spare. As a medicine, it will not do to push it, without watching its effects. The case for it is unquestionably a mass of indurated glands, in a patient of strong constitution.

The iodide of potassium, with sarsaparilla, or with the ammonio-citrate of iron, is applicable to nearly the same state of things as the liquor potassæ. But I have found it of greater service in the stage of chronic suppuration, and of ulceration. It exerts a more decided influence on cachectic than on scrofulous affections of the glands, though its value in the latter is considerable. Like the liquor potassæ, it is a lowering remedy, if not combined with tonics. I am no partisan of large doses, which occasion gastrodynia and depression of the system; nor am I one of those who have run into the extreme of very little ones. Five grains twice daily are enough under ordinary circumstances, and I have

never seen that quantity productive of any bad effects. The only inconvenience likely to accrue from the use of iodide of potassium, is the production of acné, in persons predisposed to it.

Chalybeates, in their various forms, are particularly advantageous in the strumous bubo, and indeed in the cachectic one. The preparations I prefer, are the ammonio-citrate of iron, the tinctura ferri sesquichloridi, and the syrupus ferri c. quinâ. In young persons, the steel wine, quickened with a little of the tinctura ferri, is most serviceable.

I need scarcely insist on the good effects of quina, the bitter infusions, the mineral acids, ammonia, and the rest of the pharmaceutical stimulants and tonics, which are in common use. The circumstances of the case must determine their selection—its duration and obstinacy their rotation. When the patient flags under one, another, and another must be tried. But I think the surgeon discovers, as he goes on, that the medicines he is in the habit of employing decrease in number in the ratio of his experience, and, discarding a host of dubious auxiliaries, he confines himself to a few effective ones. At the risk of being tedious, I would again observe, that if he has a clear idea of the *principle* of treatment, the *means* are sufficiently simple.

The regimen, when inflammation is subdued and suppuration chronic, must necessarily be such as would sustain the system :—good diet—malt liquor or wine—pure air. In some instances, the latter is indispensable,

and the patient must quit the bad atmosphere of the town, for that of the sea-side, or the country.

2. *Local Treatment.*

This will vary materially, as the bubo is in its first, or formative stage; in that of induration; of suppuration; or of ulceration. And the *kind*, whether simple, scrofulous, or cachectic, will also modify it.

Local Treatment of the First Stage of Bubo. If the tenderness is considerable, leeches should be applied, to the number of ten, or twelve, or more, and the bleeding from the bites should be encouraged. I have thought that the leeches were of more service when placed around, than on, the inflamed glands. The leeches may be repeated, if the inflammation continues, or augments, and if they seem to be of service; for, sometimes they aggravate the tenderness and swelling, and obviously disagree. It has been recommended to employ what is called "permanent leeching," that is, relays of leeches: a fresh set being applied so soon as the bleeding from the previous set begins to flag. In this way, they are kept at work for twelve hours or more. I cannot say that I have either experience or faith in this method of leeching, which is both inconvenient and objectionable.

So soon as the bleeding from the leeches ceases, or, in slighter cases, when leeches are not called for, evaporating lotions are, generally, the best applications. The most eligible form is one composed of the liquor

plumbi, some spirit, and water.* When the weather is warm, or the inflammatory heat of the parts considerable, the lotion may be advantageously iced. Ice itself, in a bladder, may be used, but its utility has been overrated. Still, if cold or cold lotions are employed at all, they should be employed effectually.

In some cases, and with some persons, cold applications disagree. It is so, more particularly, with those who have a feeble circulation, whether cachectic or scrofulous. I know of no certain means of distinguishing such a case beforehand—the observation of the surgeon must determine it. But it not unfrequently happens, that a bubo which appears advancing steadily towards suppuration, under evaporating lotions, is absorbed under hot fomentations and poultices. When the latter feel most grateful to the patient, it may be considered as a sort of hint that they will suit him.

These means prove successful in the majority of instances; but they occasionally fail, and suppuration seems impending. Under these circumstances, other measures are requisite. They essentially consist in such as excite irritation on the surface. The nitrate of silver was used for this purpose, by the late Dr. Wallace, of Dublin; and the sulphate of copper, the chloride of zinc, the tincture of iodine, the bichloride of mercury, &c., have had their respective advocates. For my own

* I prefer employing this lotion of much greater strength than that usually prescribed. Half an ounce of the liquor plumbi to the pint of water is a good proportion.

part, I have little faith in any of them, and I believe that, if counter-irritation is advisable, the best mode of effecting it is by a blister. I entertain the highest opinion of blistering. The chance of obtaining "resolution" should never be abandoned without a trial of it. I have again and again seen a bubo, in which suppuration appeared to be inevitable, subside under the influence of blisters. Nay, I am confident that, even when suppuration has commenced, and matter is already formed in the interior of the gland, it will, in some instances, be absorbed under the operation of this remedy. Some surgeons are, I know, opposed to this opinion, but analogy and fact are opposed to theirs. For analogy, we have only to refer to chronic abscesses. They are notoriously absorbed, at times, and the pus carried elsewhere, through the medium of the blood. The following is a remarkable instance of this kind.

Case.—A scrofulous lad, about 14 years of age, was operated on, in St. George's Hospital, for necrosis of the tibia, by Mr. Keate. I was at that time house-surgeon. Inflammation of the bone ensued, and the usual train of symptoms ushered in secondary purulent deposits in the subcutaneous cellular tissue. One after the other was opened, and large quantities of pus were discharged; but the boy seemed sinking fast, and the almost invariably fatal character of the affection left us no hope of his recovery. A very large collection had formed in the opposite thigh,—half a pint of matter at the least. I had resolved to puncture it, but,

for some reason, postponed the operation till the morrow. That night, the boy was seized with a sort of diuresis, and voided large quantities of urine, *mixed with pus*. The chamber-pot contained from half a pint to a pint of it. In the meantime, the swelling in the thigh had disappeared! It never returned, no more deposits of any moment occurred, and the lad finally recovered.

Some very striking instances of this sort were published in the Transactions of the Medical and Surgical Society of Calcutta. They occurred in the Hospital of that city. I could, if it were necessary, cite them. I fancy I have said enough to justify my assertion, that analogy is with me.

And so, I am sure, is the fact. When assistant-surgeon to St. George's Hospital, I have, on several occasions, selected buboes in which suppuration was commencing, punctured the gland with a grooved needle, exhibited to the students purulent matter in the groove, and then ordered blisters to be used. Of course, I often failed in preventing decided suppuration; but I sometimes succeeded—frequently enough, at all events, to prove my case.

I presume I need hardly say, that I do not recommend the blistering to be deferred until matter has formed. The object is to obviate that. But I do say, that, even though there should be some, its presence is no bar to blisters. The following consideration, too, is an important one. If blistering fails to prevent the

formation of matter, or to stop it, it facilitates and accelerates the process. No mean advantage. In short, I think that, under ordinary circumstances, when the usual means of obtaining resolution of a bubo have been ineffectual, the patient should always be offered the chances that a blister gives.

Compression has been recommended in this stage, even though some little inflammation is present. M. Ricord, I believe, is its principal patron. He founds the practice on the reputed fact, that bubo seldom happens on the side on which a truss is worn. The fact itself is apocryphal; but granting that it is one, it does not follow, that, because compression may prevent the occurrence of inflammatory swelling, it will remove it when it has occurred. The reasoning seems to me rather whimsical. I question if it will bear the test of analogy. A person, for example, is rendered less liable to catarrhal and pulmonary affections by cold bathing;—*ergo*, cold bathing is a remedy for pulmonary inflammation. If this argument is objected to, look at the phenomena of inflammation under fasciæ. These latter perform the same sort of office as M. Ricord's bandages—they bind down the inflamed part, and confine the inflammatory action. The result is not particularly satisfactory. Unable to come to the surface, the effused fluids, whether pus or serum, are forced deeply and laterally, wherever they can penetrate. The fatal consequences are too well known to be insisted on; and one of the great improvements of modern surgery is the practice of making incisions in

those very fasciæ, which, if M. Ricord's view was correct, should be a source of safety and a means of cure.

But it is not only analogy that pronounces against compression, in the first stage of bubo. Much as sound reasoning appears to me to be opposed to it, experience is, I think, still more so. I believe it to be an objectionable and hazardous proceeding. I could mention many cases in which I have observed bad effects from it, but the two that I shall introduce, extreme ones though they be, are characteristic of the dangers that attend it.

Case I.—A young gentleman contracted a gonorrhœa, which, whilst in its inflammatory stage, was attended with bubo in the left groin. His ordinary medical attendant applied compresses and a bandage to the swelling, and endeavoured to disperse it in this manner. The inflammation, however, extended from the glands, not only to contiguous ones, but to the surrounding cellular tissue: diffused swelling formed in the inguinal region—suppuration ensued—and much constitutional irritation was the consequence. One or two openings had been made, for the purpose of discharging matter, when the patient was transferred to my care. I found I had a serious case to deal with. The tumefaction stretched from the inguinal into the iliac region—sinuses led into the iliac fossa—the depth and the direction from which the matter issued, shewed that suppuration had been conveyed, by the loose tissue of the fascia transversalis, into the interior of the pelvis

— and the general symptoms, as well as the scrofulous habit of the patient, afforded too legitimate grounds for apprehension. By free openings for the discharge of pus, repose, sarsaparilla, and other tonics, he improved to such a degree as to inspire hopes of his recovery, when his own imprudence, in the way of exercise, set up fresh inflammation. This was attended with excessive pain in and around the rectum, into which an abscess, evidently communicating with the inguinal one, discharged itself. Ulceration of the walls of the gut laid it open to the suppuration in the pelvis, and thus an extensive chain of disease stretched from the groin to the anus. The sufferings of the patient were dreadful; and the assistance of the late Mr. Key, and others, was as ineffectual as my own. For two years, or more, this young gentleman struggled with collections of matter, sinuses, ulceration of the bowel, contraction of it, torture in the passage of the evacuations, hectic, and intense nervous excitement. Worn out at last, he died in a state of raving delirium, and deplorable bodily attenuation and exhaustion.

Case II.— A girl, about 17 years of age, the daughter of a lodge-keeper at Roehampton, found the inguinal glands in the left groin enlarge, after more than usual exertion. She was delicate in constitution, and of strumous habit. At first neglecting the accident, she soon experienced so much pain and inflammation that she consulted a medical practitioner. This gentleman, after employing, as I understood, fomentations, poul-

tices, and lotions, applied pressure by means of bandages and compresses. Under them, and in spite of them, suppuration occurred, extended, and gave rise to severe constitutional disturbance. A small opening was made, or was allowed to form spontaneously; but the girl grew worse, the friends became alarmed, and I was requested to attend. I found her in bed, with a large diffused swelling in the left inguinal and iliac regions—the circumference of the swelling œdematous, the centre boggy or fluctuating, the whole the seat of considerable pain and of much tenderness on pressure —opposite the ligament of Poupart a small ulcerated opening, giving rise to a copious but thin discharge, and permitting a probe to pass extensively in several directions—some difficulty in making water, and pain in the passage of the fæces through the lower portion of the rectum. The patient was wasted, and laboured under the usual symptoms of hectic. I had little doubt of what had taken place. Under the operation of pressure, the suppurative process, barred from advancing towards the surface, had spread into the iliac fossa, and, passing into the pelvis, probably encompassed the neck of the bladder and the rectum.*

* The route which inflammation and matter take, in cases of this description, is not difficult of comprehension, though incapable of surgical pursuit. The superficial inguinal glands below the ligament of Poupart, communicate with the deep ones of the pelvis, through the internal opening of the crural ring,—the channel of femoral hernia. The cellular tissue of the groin is continuous, in this same passage, with that of the iliac fossa, that of the pelvis, and

Of course, I made the freeest possible openings, and procured, as far as circumstances would permit, a dependent channel for the matter. But I had the misfortune to perceive that my suspicions were but too correct, and that it extended beyond my reach into the pelvic cavity. Tonics, ammonia, wine, mild purgatives, and lavements, were exhibited, and for a few days there was a marked but false amendment. Rigors, sweats, and sickness, vague pains about the hypogastrium and along the course of the lumbar nerves, excessive suffering when the rectum was in action, indicated unmistakeably profound purulent formations. Convinced that such existed by the side of the gut, in the ischio-rectal fossa, I cut into it boldly, and arrived at matter at a considerable depth. The operation gave great relief, but it was temporary. The discharge from the groin and from the side of the bowel was profuse, yet the cavity from which it came appeared imperfectly evacuated. The powers of life still sank, and, in about a month from my first visit to her, this poor young woman died. The seat of suppuration was most extensive, stretching from the groin, where it had originated, beneath the skin towards the hip and on the walls of the abdomen; through the crural canal, to the subperitoneal cellular tissue, to that of the iliac fossa, and

that subjacent generally to the transversalis fascia. Do they sufficiently think of this, who apply pressure to an inflammatory bubo? The retrograde course of the inflammation is easy—its consequences may be seen above.

to the circumference of the rectum, which, upon the sacrum, was absolutely insulated in a lake of pus.

If cases such as these do not make the majority of surgeons pause, before they apply compression to buboes, particularly while inflamed, I can only say, that they and I must be very differently affected by the evidence of facts.

Supposing resolution not accomplished, the bubo may pass into the indurated state, or it may decidedly suppurate. And first let me speak of the

Local treatment of the stage of induration.—A bubo may almost commence with this, the inflammation having been so slight as scarcely to deserve attention. Leeches and cold lotions are generally useless, sometimes actually injurious. Warm applications are occasionally beneficial, and an indurated bubo will now and then subside under incessant poulticing, which has resisted much more active measures. Perhaps, what are called "discutient" plaisters, act rather by maintaining warmth and moisture than by any more recondite virtues; but, however that may be, the emplastrum hydrargyri, the emplastrum iodinii, the emplastrum ammoniaci cum hydrargyro, have all had their patrons, and their use. Stimulating liniments and ointments, such as that of the iodide of potassium, of mercury, of the tartar emetic, may be had recourse to; and more decided irritation, by the tincture of iodine, by the nitrate of silver, and most of all by blisters, is frequently

desirable, and may be indispensable. The compound, to which I have already alluded, of the strong mercurial ointment with tartar emetic and iodine, will be found a very good one; but, so far as my observation has gone, the best method of treatment has consisted in *decided* blistering, succeeded by the iodide or mercurial ointment, and that by the application of some stimulating plaister spread upon soft chamois leather.

The indurated bubo has been treated, like the inflamed one, by compression. I have tried the plan, and I have seen it tried. It is not so hazardous as in other cases, and is, therefore, less objectionable. But it is not very easy to apply compression *well*. It is apt to be laid on too much, or too little. If the former, the patient does not relish the restraint—if the latter, it is useless trouble. On the whole, I have seen no great advantage from it, and I am confident it has been extravagantly over estimated.

In spite of all that we can do, indurated bubo will occasionally remain for a considerable length of time, and, from some fresh source of irritation, inflame again, and suppurate. In such a case, indeed, the formation of matter is any thing but undesirable, and the surgeon may do his best to favour it. Blisters will sometimes flog up the indolent action, and excite the suppurative process.

Local Treatment of Suppurating Bubo.—When resolution is clearly unattainable, the best plan is to promote the formation of matter. The blister, which, perhaps, has been applied with the view of dispersing the

enlargement, will generally, if it fails in that, accelerate and limit suppuration. We must now resort to fomentations, and to poultices of linseed meal, the hotter and the oftener applied the better. Suppuration advances at a quicker pace in the strong and the cachectic, at a slower in the scrofulous.

It is a question which has long been mooted, and is far from settled, how the abscess shall be opened. The following are the points which demand consideration :—1. Is it better to make an artificial, or to wait for a natural opening? 2. Is an opening by a cutting instrument, or one by caustic, preferable? 3. Shall we practise a small or a free opening, an early or a late one? To these questions, I would make the following reply.

1. As a general rule, surgeons are now agreed on the impropriety of allowing the abscess to give way spontaneously. It is therefore unnecessary to dilate on the disadvantages of that. But there are cases, in which, I believe, the rule may be broken through with benefit. In the scrofulous bubo, where small foci of suppuration are often forming, and the cellular membrane is a good deal involved, the case sometimes does better without the lancet than with it. Frequent incisions worry a weakly and a nervous patient, and seem to irritate the parts. I would not be understood to lay it down as at all approaching to a rule, that, in the scrofulous bubo, the abscesses should generally be allowed to burst. My opinion is directly the reverse of that. But, when *small* collections go on forming

for a length of time, they *may* be advantageously let alone; and this will, now and then, be found the most expedient course, not only in the scrofulous bubo, but in the cachectic one.

2. I think that there are few cases in which an opening by caustic is advisable, or even justifiable. If the skin is not extensively thinned, no reasonable pretext can be urged for such a measure; and if it is, the surgeon must be ill acquainted with the resources of either nature or art, who pronounces it irrecoverable. If a judicious opening relieves all tension, and properly evacuates the matter, the thin blue skin, even of the cachectic bubo (for few, I presume, would dream of employing caustic in the simple or the scrofulous) will revive marvellously under generous diet, and stimulants, and tonics, accompanied with appropriate local management.

It would, perhaps, be going too far to say, that the opening of a bubo by caustic is *never* right, but, in my opinion, it is very seldom so. Painful in its use, it destroys skin, which, probably, might by other means have been preserved. Nor can it be looked on as absolutely safe; for, in states of system predisposed to phagedæna, which the cachectic are, the irritation excited by the potassa fusa, or by any other strong escharotic, might give birth, as, in one instance, I have shewn it did, to that formidable affection.

3. Early openings and late ones, small and large ones, have, each in their turn, had their advocates.

I confess that my predilections are for early openings.

Even in the stage which precedes what is called "pointing," and the concentration of the pus into a restricted cavity, a moderately free aperture has frequently appeared to me to check the progress of the bubo, and materially limit its extent. And several considerations seem to be in favour of this opinion; for, if only a single gland is affected, it is difficult to understand what objection can lie against an early incision,—which merely anticipates what *must* come a little later; and, on the other hand, if several glands are involved, to delay operating is to offer a premium on a large abscess, thinned and ulcerating skin, a troublesome sore, and a protracted cure, when two or three small incisions might economise both integument and time. Of course, there is a medium in this, as in all things, hard to hit upon paper, and determined only by that practical experience, for which no rules can be given, and which no directions can create. But if, in enlargement of a single gland, there is a part, of fair dimensions, with evident fluctuation; or if, in enlargement of several glands, there should be more than one such, too widely separated to become easily confluent, I would advise, and have seen no reason to regret, an opening.

In the scrofulous bubo, we need not be in any hurry to operate. The amount of suppuration is seldom so large as it appears, and a great degree of redness and swelling often ends in a very small abscess indeed. I have already observed, that nature may frequently, in this form of the affection, be left very much to herself.

The dispute on the superiority of a large opening or a small one, is virtually settled by the settlement of that on an early opening or a late one. If we make an early opening, we cannot well, or, at all events, we need not, make a large one; and, if we make a late opening, it would be absurd to make a small one. On this point, therefore, I may be excused from dilating. But the *mode* of making the incision deserves consideration. It has appeared to me, that not a little has been gained by attending to the following circumstances :— *first*, to make the puncture in as dependent a part as possible, of the general or particular cavity laid open ; *secondly*, so to direct the incision, that the movements of the limb may not pull the edges asunder. If the abscess is small, a vertical incision answers best : if larger, it should be oblique, forming an angle of forty degrees, with the ligament of Poupart.

It not unfrequently happens, that a cavity of some size presents, as it were, two chambers, connected by a more constricted portion. The skin is thin, and an opening is necessary in two places, separated by a greater or less interval from one another. The intermediate part of the cavity does not fill up with readiness, and it may be requisite, at a later period, to lay the incisions into one. But I have often gained time and saved integument, by passing, in the first instance, a seton of calico, lint, or oiled silk, from one opening to the other. This plan commonly answers very well, and, if it fails, we can easily prolong the incisions at the last.

I have also applied the seton to the treatment of a large cavity, with satisfactory results. A small vertical incision may be made at the inferior and pubic confine, and another on the opposite side. The seton should be passed from one to the other. Granulations fill the chasm, and the skin between the punctures is preserved. This method is preferable when the patient is desirous of avoiding a large scar, or when, from the considerable dimensions of the cavity, we are unwilling by a sufficiently free opening to sacrifice integument. The seton tape, of course, is not to be tied so tightly as to cut it through.

In the cachectic bubo, the incisions must often be more free than in the other forms; the abscess being larger and the skin more undermined. For the same reason, the surgeon should not wait too long before he resorts to the knife.

After the opening, the great point is to maintain the patency of the aperture, until the cavity is obliterated, or fills up. This, which is requisite for the simplest abscess, is doubly so where that depends upon a morbid structure. The vascular integument granulates and draws in at the edges of the cut, with greater rapidity than the healthy tissue of the gland can be restored, and the suppurating cavity, of which it makes a part, can be occupied with granulations. However free the original incision, the time soon arrives, in almost every instance, when it ceases to be free enough; for, if not so capacious as to suffer the matter to escape as it is formed, that evil has occurred. Many plans

have been put in practice to prevent it. The most usual one is to introduce a piece of lint into the wound, to ensure the separation of its edges. This answers neither in fact nor in theory, and, indeed, it seems a somewhat paradoxical proceeding to insure an opening by plugging it up. So long as the lint is in, it *is* a plug, and irritates and disposes to fresh inflammatory action; and when out, the wound contracts as fast as ever.

The method that I pursue is a simple one. After the opening has been made, dependent and free as I have directed, I apply a thumb on either side of it, and alternately separate and approximate the edges, by a little pressure and traction. This the patient is directed to repeat several times daily. It gives no pain, obviates the agglutination of the sides of the cut, and retards its drawing in by the granulating process. It is a trivial expedient, but one I always practise, and strongly recommend.

Fomentations and poultices should still be employed, until the granulations have sufficiently sprung up. It is not the fashion to praise poultices now-a-days, or, rather, it is the fashion to abuse them. Surgeons are all for water-dressing. But I confess that I have seen, or thought that I have seen, poultices agree as well as other applications, if not better; and, perhaps, I am not sufficiently ashamed of the partiality with which I continue to regard them. If the cavity is shallow and secretes little—in fact, if it is scarcely more than an ulcer—then apply a liquid dressing by all means. For such

applications under such circumstances, there is no more decided partizan than myself, and I have published several clinical reports on their advantages.* But, when the cavity is deeper, the substance, the softness, the temperature, and the moisture of the poultice appear to me to be preferable, encouraging the granulations, and sopping up the discharge. The poultice itself should be light, composed of bread and a solution of the acetate of lead, or chlorinated soda, or sulphate of zinc, and inclosed in a muslin bag, which can be bound gently, or hung against the aperture. If the part is not irritable, or the action feeble, slightly stimulating injections may be had recourse to. I am not partial to them, for they frequently excite more mischief than they remedy.

I once was of opinion, that compression might be sometimes usefully applied to the scrofulous bubo, in the stage of suppuration.† Even then, however, I looked upon it as "a two-edged sword," and conceived that it did harm as frequently as good. Subsequent experience has not increased my prepossessions in its favour, and I believe that the cases are few indeed in which it can be used with benefit. Take what precautions we may, pressure cannot be so nicely adjusted as to evacuate the cavity of the abscess, and not block up its openings. The real desideratum, in every case,

* "Clinical Reports" from St. George's Hospital, communicated by me to the *Lancet*.

† Cyclopædia of Practical Surgery.

is to keep the latter free—the former will then take care of itself.*

The cachectic bubo, when the opening in the skin is large, the cavity much exposed, and the surface irritable, is best treated by the carrot poultice, or by that of bread and the aqueous solution of opium. If the parts are simply languid, stimulating applications, such as the compound tincture of benzoin, the balsams, the melted compound elemi ointment, the solution of creosote, &c., may be poured in, while poultices are still kept on; but if the parts are irritable, stimulants are apt to disagree, and the aqueous solution of opium or of belladonna answers best.

When the occupation of the abscess by granulations, partial or complete, or the wide destruction of integument, has converted the case into one of ulceration

* The best and most convenient method of wearing a poultice on the groin, especially if the patient is obliged to move about, is to cut a piece of linen or calico, twice folded, into a quadrangular form, of about five inches by four. On the inner side of this should be stitched some oiled silk. To each of the four corners is attached a tape. The poultice, inclosed in a muslin bag, is pinned to the upper edge of the compress, from which it consequently hangs, between the oiled silk and the groin. The two upper tapes crossing round the loins, meet in front of the abdomen, and are tied there—the two lower, crossing behind the thigh, are also tied in front of it. In this way, the poultice is suspended lightly against the bubo, and the compress, while it keeps it in its place, prevents, by the oiled silk with which it is lined, wetting and soiling of the clothes. A bandage may be applied over the compress, if required.

rather than of suppuration, it must be treated on those principles, and with those applications, which regulate the management of ulcers generally, in the various forms that they affect.

Local Treatment of Sinuses.—If these are immediately beneath the skin, and of reasonable amount, the shortest and the simplest way is to divide them. If they are very long, a seton is to be preferred; or, they may be incised to the requisite extent, and a seton passed through the remainder. If a sinus runs down, as it often does, in the commissure of the thigh and perineum, the surgeon should hesitate before he lays it open. I have, more than once, seen a troublesome line of ulceration from its division. Nor is it necessary. An opening at the bottom of the sinus, and a seton, are enough.

Should the sinus pass deep into the inguinal fossa, as it occasionally will, it can neither be pursued safely, nor laid open properly. In such a case, the aperture must be kept free by the knife and an occasional touch of the potassa fusa, while the sinus itself is stimulated in some convenient manner. Injections of a *very* strong solution of the argenti nitras, or a probe coated with a thin film of it, or a heated wire, or a bougie besmeared with the nitrate of silver ointment, have all been in turns selected and successful. Yet, I think it right to enjoin caution in the use of means of this sort. A sinus continues for several reasons:—the aperture is insufficient—or a diseased gland is at the bottom of it—or there is too much motion to permit its healing—

or the health is unable to accomplish it. It must be obvious, that no stimulating application can be equally appropriate or equally safe under all these different circumstances. Their determination rests with the sagacity of the surgeon, the right remedy with his discretion.

When the sinus leads to a diseased gland, or to altered cellular tissue, it is generally useless to attempt to heal it, and it would be worse than useless if we could do so. The "materia morbi" would still exist, and fresh suppuration must ensue. When the gland or the cellular membrane is removed, or their integrity restored, the sinus will do well enough.

Local Treatment of Diseased Gland.—It is in the scrofulous and cachectic buboes, that a portion of a gland, which is common, or the whole, which is rare, will fall into an unsound state, and will be hardly able, if at all, to regain its natural organization. Such glands may be seen in the shape of pale-coloured projections at the bottom of suppurating cavities, or the cavity may be partly shaped at their expense; or, lastly, such a gland may form the termination of a sinus. Sometimes, in the deepest recesses of the cavity, an entire gland lurks in so disorganized a state, that it sloughs, or may be pulled away; but, more frequently, it is firmly fixed, and either bits only are separated, or, what is quite as common, it gradually regains its normal structure.

Formerly, these glands got very rough usage indeed.

They were rubbed with potassa fusa, or cut out, or had troches thrust into them*—most objectionable measures, evincing either disregard or ignorance of the natural resources of the system, and a convincing proof of unsuccessful general treatment. Under the employment of tonics, and of poultices, or liquid dressings, with moderately stimulating applications, these glands recover themselves in a shorter time and with less risk than if so officiously meddled with. If one lies loose, it may be well to remove it—if a piece of it forms an obvious slough, that may be properly abstracted—if it is exposed in a disorganized condition, and probably or palpably incapable of granulating, while it still adheres firmly to its cellular nidus, then a moderate application of potassa fusa may be perfectly advisable—if the cellular tissue is decidedly diseased, an incision should be made into it, and the slough, if there be any, extracted. All these are recommendations consistent with the practices of modern surgery, and such as would occur to the mind of every scientific surgeon. But, I repeat, that non-interference is the rule; and that any operation which goes beyond free evacuation of the abscess, the maintenance of an efficient aperture, and the encouragement of those granulations from the bottom

* I remember, as a student, these troches, made with arsenic, thrust into a bubo, to the number of two or three at a time. The groin presented the appearance of a piece of *larded* meat. The object of all this clumsy barbarity was to force the gland, or glands, to slough bodily out.

which are to obliterate the cavity, should be to that rule only rare exceptions. This, at least, is my view of the matter.

IV. Immediate Affections of Remote Parts.

I now arrive at a class of consequences of gonorrhœa very different from any that have been considered. They affect neither contiguous nor continuous tissues, but organs or parts physiologically as distinct as topographically they are distant. They are:—Gonorrhœal Ophthalmia, and Gonorrhœal Rheumatism.

As the primary complaint is not one which, like syphilis, is absorbed into the system and affects the blood, it is difficult to account satisfactorily for these affections. Even if it were allowed, which, I think, it cannot be, that gonorrhœal ophthalmia is merely the result of the application of gonorrhœal matter to the eye, that explanation would break down, of course, in the case of gonorrhœal rheumatism. In this instance, more particularly, we are driven to embark on a sea of conjectures, where the course is not clear, and the port is undiscovered. Is there really absorption of a morbid poison, and is the affection of the joint analogous to the secondary eruption of syphilis? Is there simply a febrile state induced, which, like that of common rheumatic fever, sets up the articular disease? Or, lastly, is the occurrence a mere coincidence one of those accidents that happens in the strange cycle of "chances," in the midst of which we exist? My own

suspicion is, that each of these notions is both right and wrong, that each is applicable to individual cases, and none universally true. If this impartial view excites a smile, I cannot help it; for, ridiculous as it may appear, it has seemed to me most consistent with the facts. I am sure that every exclusive theory is contradicted in turn by them. In the notice I shall offer of the separate affections, my opinions on the point will be explained more fully.

I. Gonorrhœal Ophthalmia.

The writings and the cases published in connection with this disease, during the last quarter of a century, have painted it in a far more frightful form than, I think, is justified by the reality. The mention of gonorrhœal ophthalmia conjures up at once, in the mind of most surgeons, a furious inflammation of the conjunctiva, burying the cornea in chemosis, destroying it rapidly by sloughing, discharging the humours, and fatal to vision: an inflammation running its deadly course, not in days but hours, demanding almost fabulous depletion, and subjected to the most desperate treatment, only to defy it. Such is the popular idea of this affection; and I do believe that, in most instances, it is a bugbear.

I have seen, in the course of my experience, a fair number of cases of gonorrhœa—the subjects of it have not been limited to one class, and have comprised a large proportion of the careless and the filthy—I have

seen, too, from time to time, ophthalmia associated with the gonorrhœa—but I must say that I have *not* seen much that corresponds with the terrible descriptions upon record.

I entertain no doubt that this complaint appears in two distinct forms, distinct in degree, and perhaps in kind. One closely resembles the Egyptian or contagious purulent ophthalmia—the other is more akin to the ordinary catarrhal inflammation of the conjunctiva.

1. *Acute, or Virulent Gonorrhœal Ophthalmia.*

This is the disease which has passed as the type of gonorrhœal inflammation of the eye. Were it so really, the affection would be as formidable as fear has made it. Fortunately, this form is the exception, not the rule.

It is generally believed to originate in the application of gonorrhœal matter to the organ. In some few instances, that application has been traced; and, as there is nothing improbable in the occurrence, I see no reason for doubting the correctness of the facts brought forward to authenticate it. An individual labouring under gonorrhœa would be most unwise to expose the eye to contamination with the urethral discharge, although a young assistant-surgeon in the Army is said to have failed in the experiment of inoculating his conjunctiva in that manner. Practically, the risk is not considerable, for, if it were, so common a disorder should very frequently give rise to this ophthalmia,—which it certainly does not.

The symptoms are but too decisive. A patient who has gonorrhœa at the time, or a surgeon, perhaps, who is treating the disorder in another, is aware that the urethral matter is applied in some way to the eye. Soon afterwards, uneasiness is experienced in the organ, and that may be succeeded by positive pain in it or in the brow. Itching and fulness of the lids usher in decided vascularity of the mucous membrane, and a puriform discharge. The eye now feels as if filled with sand, the tears are abundantly secreted, and are mixed, perhaps, with blood, and there is more or less intolerance of light. The palpebral conjunctiva swells, from injection of its vessels and papillæ, as well as from serous effusion beneath it—the conjunctiva of the eyeball is next involved—its chemosis advances and impends over the cornea, which may be even buried in it—the discharge is profuse and acrid—the lids are nearly closed by inflammatory œdema.

If the case is destined to have a favourable issue, the discharge, after continuing for a week or more, gradually diminishes in thickness and in quantity—the chemosis, the vascularity, and the tumefaction of the conjunctiva, subside into a gorged or a granular condition of that membrane—and the latter, if it continues, will probably entail chronic inflammation of the cornea.

But another, and a less fortunate, termination may occur. When the decrease of the swollen lid permits the eye to be examined, the cornea may be found opaque, or superficially or deeply ulcerated, and the iris, perhaps, may be entangled in the apertures or may

protrude through them—or violent paroxysms of pain in the eye may herald rupture of the cornea, staphyloma, and blindness—or matter may be deposited between the corneal lamellæ, and ulceration of them may ensue.

When the cornea has burst, the mischief may be consummated. It is not always so. The capsule of the lens may give way next; the lens escapes, the vitreous humour follows, and, over the collapsed eye, sunk deeply in the socket, the in-drawn lids continue permanently closed.

This is a slight and hasty sketch of what *may* occur as a consequence of gonorrhœa. I cannot doubt that it has done so, for writers of repute assure us of it. But it has never been my good fortune, or my bad, to witness such calamitous results.*

2. *The Milder Forms of Gonorrhœal Ophthalmia.*

In nature, the shades of morbid action merge insensibly in one another—in description, the writer, to avoid confusion and tautology, is compelled to select the prominent types of the disease, and present them in *tableaux* to the reader. This must be the case in the present instance. From that inoculated inflammation of the eye which destroys it in a few hours, to the simplest forms of ophthalmia tarsi, there may be every

* I must refer those who desire an elaborate account of gonorrhœal ophthalmia, to the various professed works on diseases of the eye.

intermediate degree of conjunctivitis, combined with gonorrhœa. The attempt to particularize them would be absurd. Having presented a slight notice of the violent affection, I shall content myself with referring, in a similar manner, to the more ordinary and the slighter one.

As far as I have seen, this closely resembles common "catarrhal ophthalmia." Its principal seat is the conjunctiva and Meibomian follicles.

A patient labouring under gonorrhœa, and generally, but not always, in the inflammatory stage of it, expe-riences, perhaps after exposure to cold, a sensation of sand in one or both eyes. The light is more or less unpleasant to him—the lacrymal secretion is increased —the lids are prone to be agglutinated—and the conjunctiva lining them, as well as that covering the eyeball, exhibits a network of red vessels.

In slight cases, and the majority are, I think, disposed to be so, the symptoms do not proceed much farther, although they are more obstinate than catarrhal ophthalmia under ordinary circumstances.

If the complaint advances, the discharge becomes more purulent and more considerable—the conjunctiva is chemosed—extravasation of blood may take place beneath it—the cornea participates in the inflammatory action, and may ulcerate or slough—and deposition of matter between the lamellæ, or hypopion, or protrusion of the iris, staphyloma, and loss of vision, may ensue.

In the cases which have fallen under my observation, the milder series of symptoms has prevailed; and,

rarely, the bad consequences just alluded to have shewn themselves. I would fain believe that, under ordinary circumstances and with judicious treatment, they seldom *will* do so.

I am inclined to think that, as a general rule, the individual who is prone to suffer from ophthalmia while labouring under gonorrhœa, is liable also to inflammation of the joints. I shall have occasion to refer to this coincidence again.

It is a matter of curiosity, if not importance, to determine the immediate cause or causes of gonorrhœal ophthalmia.

1. The first that suggests itself is, naturally, the direct application to the eye of gonorrhœal matter. Though this would appear capable of inducing the most violent form of inflammation, there is certainly no evidence of its operating in the great majority of cases, and probabilities, as well as the absence of proof, are adverse to it. We may safely dismiss it as an ordinary cause. It is the exception to the rule.

2. I have considered the nature of "metastasis" at some length, when treating of inflammation of the testicle. It is unnecessary to dilate on it again. Writers and surgeons have combined to look upon on it as a source of this affection. It may be so, for, if metastasis ever has existence, this is as likely a case for it as any. I cannot say that I have seen an instance of it, but some have been recorded, and more have been taken upon trust. The ideas which prevail on the subject of metastasis are in general so vague, and

the disposition to accept a ready-made explanation, in preference to instituting a sifting and a troublesome inquiry, is so natural, that one cannot be surprised at the facility with which metastasis and contagion have been received as causes of this complaint. My experience induces me to extend a considerable degree of incredulity to the ordinary agency of either.

3. The only remaining source of the affection is what, for want of a more intelligible term, must be called "sympathy." I am not one of those who would erect words into things, and shelter an unintelligible theory under an equally unintelligible formula*. I admit at once, that "sympathy" means nothing, explains nothing, and implies nothing, save the mere fact that such and such conditions often co-exist. When I say, then, that gonorrhœal ophthalmia frequently originates in sympathy, I would be understood to state that the ophthalmia does not apparently arise from either contagion or metastasis, nor indeed in any other obvious manner. Sympathy, in this sense, signifies only the disposition on the part of inflammation of the conjunctiva to develop itself in connection with gonorrhœa. Of the fact I am confident, whatever may be the potential cause of it. Some may attribute it to the influence of

* When Hunter explained physiological phenomena by saying they were the result of the "stimulus of necessity," I presume that he imagined those words to represent *some* definite idea. I am not aware if his disciples and admirers have determined in what the idea consists. However that may be, I question if the school which reasons in that fashion is yet totally extinct.

the nervous system. In that there is no improbability, seeing the part which it plays in the development of "sympathy" in general. But it is not so certain that the vascular system exerts no influence. Gonorrhœa is an inflammatory complaint; it is too often aggravated by stimulating drugs; and, under some circumstances, a febrile condition may be established, which would dispose to inflammation of other mucous membranes besides that of the urethra.

I am satisfied that there exists, in some individuals, a constitutional tendency to the affection. I have, on more than one occasion, seen it evince a remarkable disposition to attack different members of one family. A gentleman, of my acquaintance, many years ago contracted gonorrhœa. It assumed a decidedly inflammatory type. He was seized with articular inflammation, principally in the knees. At the same time, the eyes became the seat of acute catarrhal ophthalmia, requiring local depletion, and proving rather troublesome. He recovered. He has subsequently had three or four attacks of gonorrhœa, and, on every occasion, the same circumstances have presented themselves, although in a milder form. This gentleman has two brothers, younger than himself. Precisely the same thing has happened with them. Along with gonorrhœa, they are always affected with inflammation of the eyes and joints, which invariably proves both severe and obstinate. I could cite, if it were necessary, two or three instances of a similar description; but I may content myself with the observation, that, from what I

have witnessed, I have no sort of doubt that, in some families, the tendency to be affected with ophthalmia, in connection with gonorrhœa, is so marked as to constitute a positive predisposition. I am mistaken, if this will not be mostly found in those whose parents have been gouty.

4. In many cases, we may presume that the ophthalmia is an accidental coincidence, the result of cold, or of some irregularity. In the calculation of chances, this is likely, and not the less so when we consider how careless and imprudent those labouring under gonorrhœa often are.

If the foregoing considerations are correct, inoculation, metastasis, sympathy, and accident, are the causes of what passes under the denomination of gonorrhœal ophthalmia.

It could hardly be supposed, that an affection originating in such various ways would fail to display, not only very different degrees of intensity, but also of duration and of obstinacy. The direct result of contagion is, in every respect, the most violent, most rapid, and most destructive form—that occasioned by metastasis would, perhaps, be capricious and uncertain—the sympathetic, or constitutional form would exhibit the average characters of the affection—and the catarrhal inflammation, accidentally mixed up with gonorrhœa, would, of course, be the mildest of the whole. Taking one case with the other, gonorrhœal ophthalmia, however caused, must be looked on as a troublesome, if not a dangerous complaint, and will be found, under

all circumstances, more tedious in its course than the ordinary cases of inflammation of the eye.

Treatment.

This must vary with the nature and severity of the attack.

As the characters of the acute and milder forms of this ophthalmia exhibit such important differences, the treatment must necessarily present corresponding ones. But, in either case, there are two important points on which all treatment must be based:—the fact, that we have to deal with an inflammatory affection—and the equal fact, that that inflammation is modified by the peculiar structures it attacks. Its essential seat is a mucous membrane, with a loose, delicate, cellular tissue, separating it from the sclerotica, readily permitting serous or sanguineous infiltration, and, when infiltrated, constituting the chemosis which surrounds and buries the cornea, and plays an important part in the disorganization of that structure. The vascular connections and intimate sympathies between the superficies and interior of the eye, lend, of course, additional consequence to the conjunctivitis, and demand all the promptness and vigour of repression, which can alone confine the mischief within its primary and harmless limits.

It may almost seem impertinent to insist on circumstances of such an obvious character. Yet I think they have not been duly weighed by *every* surgical writer. One has had an exclusive eye upon the inflammatory

action, and none for the peculiarities of the mucous and submucous tissue. He has applied to this little organ the extravagant practices of the Sangrado school, and bled to an amount that would appear fabulous, and would probably be destructive, for the most severe abdominal or pulmonary inflammation. And what are the results of this furious depletion? Mr. Lawrence, its Coryphæus, has given us the history of 14 cases, treated in the most vigorous style. Out of those 14, vision was utterly lost in seven, from suppuration, sloughing, and opacity of the cornea—one eye was destroyed and one was saved in *two*—and sight was preserved in *five*, but with the little drawbacks of partial corneal opacity, or anterior adhesions of the iris. That the advocate of a plan should recommend it on such grounds, is not so unnatural as it may appear, for love, we know, is blind; but those who are induced, on the same grounds, to accept it, must have a facility, and a faculty of faith, in which, I confess, I am deficient.

In science, as in politics, one extreme sect has usually its opposite. From exsanguinating bloodletting, to stimulation under all circumstances, the jump appears extraordinary. Yet the nitrate of silver, in its strongest shapes, has been introduced into the organ, in every stage and in every degree of inflammation of the conjunctiva, with reckless uniformity.

Without being one of those whose philosophy is always to hold the balance between contrary opinions, and arrive at the truth, as factors quote the monthly price of corn, by arithmetical averages, I still think

that, in this particular, the mean of the two methods is the best. I believe that it is incorrect in theory, and facts themselves shew how unfortunate it is in practice, to carry depletion to excess—while I cannot reconcile it with physiology, or experience, to stimulate indiscriminately. Blood-letting, general or local, must have its limits, and those limits, I apprehend, are, the early stage of the disease, the intense action, and the acute form of the inflammation. To exceed those limits is to increase the tendency to serous infiltration of the sub-conjunctival tissue,—to lower the general powers of the system, which augments its irritability, and with it, the aptness, on the part of mucous membranes, to inflammatory congestion—and, finally (no trivial consideration) to break down a constitution, previously, perhaps, impaired by irregularities, and to offer a premium on the development of any organic disease, to which there may exist some latent disposition. The period for stimulants is after judicious and moderate loss of blood, when intense redness is superseded by venous fulness, or *serous* chemosis is established. Then, if I mistake not, the continuance of depletion aggravates those conditions of the vessels of the part, and astringents or stimulants give tone and a right direction to the local action.

Treatment of the Acute form.—If the patient is robust, and if the symptoms are severe, bleeding from the arm may be required. I have already stated that I have seen no case to call for it, and I have also stated, that, under any circumstances, I question the propriety

of carrying it far. Local depletion is another matter. Cupping on the temples: leeches there, on the cheek, and behind the ears, are indispensably requisite: the amount of blood abstracted, and the repetition of the bleeding, being determinable only by the judgment of the surgeon, the powers of the subject, and the features of the case. In most instances of ophthalmia, which require the abstraction of blood at all, my own experience, such as it is, has induced me to prefer the reiterated employment of small bleedings to the less frequent use of large ones. They do not debilitate so much, and their effect on the disease is more continuous.*

Calomel and antimony, combined, perhaps, with opium, and followed by active purgatives, may be associated with salines containing the emetic tartar and colchicum. Such medicines should be accompanied with the usual resources of the antiphlogistic method of treatment; and darkness, quiet, coolness, and starvation, will be enjoined, of course.

I think that, at first, warm fomentations of the poppy decoction will be most soothing and serviceable; but if the inflammatory turgescence should increase, and particularly if chemosis comes on, warmth is no longer to be thought of. The undiluted or slightly diluted liquor plumbi has been highly praised by some,

* In applying leeches below the eye, they should not be permitted to bite too near it. When they do so, the loose cellular tissue of the lid becomes unpleasantly infiltrated, and liable to erysipelas.

and as unequivocally condemned by others. I confess that when the chemosis is of a serous character, my own eyes must have deceived me very strangely, if it has not been of signal service. In fact, I have a high opinion of the liquor plumbi, more or less diluted, in most conjunctival inflammations.

If these means fail to check the progress of the mischief, I think we are warranted in applying the nitrate of silver in solution, and that of tolerable strength. The ointment may be preferred by some, and it is occasionally useful. As a general rule, I like the solution best.

Scarifications of the conjunctiva may go along with these measures. When the vascularity is excessive, the gorged vessels are unloaded—when the serum is effused, it is discharged.

Blisters on the nape of the neck are of service as the disorder wanes. Earlier, they are on many grounds objectionable.

Treatment of the Milder Form.—It is to be hoped that, under some such measures as the foregoing, the severity of the disease has yielded, or, which is more likely, that such severity has not existed. The milder case will require proportionably milder remedies. I have always found the following successful, in the gonorrhœal ophthalmiæ which have fallen under my notice:—Cupping on the temples—leeches in small numbers frequently repeated—blisters behind the ears or neck—calomel with purgatives—salines with colchicum and antimonials—lead lotions—general antiphlogistic regimen.

It has not only been imagined that the ophthalmia depended on some occult metastasis of gonorrhœal inflammation, but it has been proposed to pass bougies into the urethra, in order to entice it back again! Nay, Swediaur tells us that latterly he never saw a certain chronic inflammation of the eyes without inquiring if the patient had not previously had gonorrhœa, and if it had not been treated improperly. The reader may suppose that the answer was not seldom an affirmative —a circumstance very probable, considering the frequency of the complaint and the manner in which it is managed. Swediaur, however, was so satisfied with the discovery, that he generally recommended the use of bougies for a couple of hours a day, and he assures us that it often cured the inflammation of the eyes, without any other remedy! I think we may safely say, that, if it was continued *long enough*, it would. It is difficult to be serious with so palpable a fallacy.

When the inflammation of the conjunctiva has invaded the cornea, or the deeper tunics, and has produced, or is producing, serious mischief, it must be treated on those principles and with those appliances now so generally understood, and for which I must refer to the works upon ophthalmic surgery.

But I cannot quit the subject without one other observation. Is it possible that the cases that we read of, where gonorrhœal inflammation of the eye wears such a frightful aspect, can be explained on the supposition that their virulence is due to the erroneous treatment of the primary disorder? We may imagine,

without difficulty, that if a patient, suffering from acute gonorrhœa, is taking large quantities of cubebs or capivi, any secondary affection might assume a violent type. And if such treatment were continued, as I suspect that it has occasionally been, after that affection has commenced, we cannot be surprised at any bad consequences. I throw this out as a conjecture. True or false, I am happy to repeat, once more, that I have never witnessed the formidable disorder that has been described.

Gonorrhœal Iritis.

Occasionally, in connection with synovial inflammation, the sclerotica and iris become involved, and, as these affections are found to accompany or follow gonorrhœa, an affinity between them is presumed. Of course, there is no good reason to the contrary, for, if the conjunctiva can take on morbid action independently of contagion or inoculation, other tissues of the eye may do the same.

It is *said* that gonorrhœal iritis presents peculiar features. I confess that I have my doubts upon the subject, and I suspect that if the gonorrhœa were not present to afford a clue, there is little in the appearance of the iris to distinguish it.

Like many of the consequences of the primary disorder, it is disposed to attend its later, rather than its earlier stages. It frequently commences with some degree of inflammation of the conjunctiva, sclerotica, and lining membrane of the cornea—the surface of the

iris and membranes of the aqueous humor are involved —lymph is deposited in the anterior chamber—the pupil contracts—vision is obscured—and copious lachrymal secretion is accompanied with intolerance of light, and pain in the globe and orbit.

One eye only may be affected, and that repeatedly—or the inflammation may pass from eye to eye—both rarely suffer at once.

The attack is severe, but generally yields to prompt and active treatment. It is prone to relapse, like the affection of the joints with which it is commonly associated.

The subjects of it are said to be the scrofulous and the intemperate; more frequently, in my opinion, the rheumatic and the gouty. It certainly is not so common as conjunctival inflammation; and I am deceived if this, like many other of the bad consequences of gonorrhœa, has not been mainly caused, and most materially aggravated, by the stimulating treatment hitherto applied to that complaint. In proportion as the abuse of cubebs and copaiba in inflammatory gonorrhœa shall decline, I confidently expect to find these ophthalmiæ and affections of the joints diminish in frequency and in severity.

Treatment.

The treatment of gonorrhœal iritis should be that which is adopted for iritis generally. Perhaps venæsection—certainly, cupping or leeches—calomel and opium—salines with colchicum and antimony—purga-

tives—counter-irritation—fomentations and belladonna, make up the list.

II. Gonorrhœal Inflammation of the Synovial Membranes.

This, which is commonly known under the designation of gonorrhœal rheumatism, has attracted, of late years, some degree of attention, not only from the intrinsic singularity of the occurrence, but from its reputed violence and inveteracy.

Sir Benjamin Brodie was, I believe, the first to publish any cases of the kind, and they were certainly of a description to impress the reader with a sense of the virulence of the disorder.

In all, there was urethral discharge, but this did not in every instance precede the affection of the joints—in all, there was inflammation of the conjunctiva; in some, of the iris and sclerotic also—in all, there was inflammation of the synovial membranes of the joints, and, more particularly, effusion in the knee—in one, the bursæ mucosæ were implicated—in all, there was a more or less decided disposition to relapses. In the first case that is related, the disease extended, off and on, from 1817 to 1822; in the second, it was spread over nine years; in the third, there were three attacks in seven years. In one case, it appeared to have as much connection with stricture as with gonorrhœa, with the urethral discharge produced by a bougie as with that of a specific character.

Sir Benjamin Brodie contents himself with the narration of the cases, and gives no opinion on the subject.

From the facts he has communicated, from some which I have met with during the course of my reading, and from those which I have witnessed, I should be induced to offer the following observations :—

1. The subjects of this affection of the synovial membranes are, for the most part, simultaneously attacked with some form of ophthalmia. Usually of the catarrhal character, this may lapse into inflammation of the sclerotica, or iris, or the deeper tunics. The ophthalmia may precede, accompany, or follow (it most frequently accompanies) the articular disease, or there may be exhibited a disposition to their alternation.

2. All stages of gonorrhœa may present this complication. In the family to which I have alluded, when discussing gonorrhœal ophthalmia, the synovial affection was synchronous with the urethral discharge. In those who display a peculiar proneness to it, whenever gonorrhœa attacks them, the early stage of that disorder is not uncommonly the period for it. But the one, perhaps, in which it generally shews itself, is when the urethral inflammation is yielding, but has not yet disappeared. It is seldom, so far as my experience goes, that synovial inflammation is grafted upon gleet.

3. The effect on the gonorrhœal discharge is not usually of a very marked description. It would seem to be hinted by some writers, that, when the synovial inflammation breaks out, the urethral discharge dimi-

nishes or disappears. I apprehend that, in such a statement, "the wish is made the father to the thought," and that the coincidence is rather what should occur, in theory, than what actually takes place, in fact. In ordinary cases, no material change in the discharge is noticed; not unfrequently it declines a little; it very rarely is suspended.

4. The immediate cause of this affection is buried in more obscurity than I can penetrate. I have already glanced at the possible hypotheses upon the subject. It would be waste of time to recur to them. But, whatever the subtle agency which sets up the disorder, there are circumstances which promote its operation, and are less unintelligible in their character.

Of these, constitutional predisposition is, perhaps, the most constant and the most efficient. We cannot reasonably doubt this, when we see several members of the same family suffer in the same way, and when the same individual exhibits the same tendency, at various times and under various circumstances. Is it possible to ascertain with more precision in what this predisposition consists? It may not be so to the full extent, but I believe that a most important element is *the gouty habit*. I have almost always found this to be the case, in the instances which have fallen under my observation. Either the individuals themselves had been the subjects of common or "rheumatic" gout, or a taint of that sort was hereditary. If this be so to the extent that I suspect, it will go far towards stripping gonorrhœal synovial inflammation of the mystery which now

surrounds it. For, if there be a tendency to such inflammation, the febrile excitement lit up in the system by the urethral disorder would be likely to call it into play.

I am disposed to imagine that there is not quite so much of the peculiar and specific about gonorrhœal rheumatism, as is commonly believed. It has all the features of what is popularly called "rheumatic gout," and I have seen no case which, the gonorrhœal discharge away, could readily be distinguished from it. Rheumatic gout is an inflammatory affection of the synovial membranes, erratic in its habit, rather giving rise to rapid effusion than to violent inflammatory action, chiefly affecting the articulation of the knee, sudden in attack, tedious in course, and treacherous in recurrence. What are these but the characters of gonorrhœal synovitis? I know of none in that complaint specifically different; and, heretical as, no doubt, it is, I rather lean to the opinion, that, in many instances, if not in most, gonorrhœa does little more than play the part of an exciting cause to gouty rheumatic inflammation.

The principal reasons that admit of being urged against this supposition are:—1. The comparative frequency of the combination—2. The not uncommon association of ophthalmia with the articular affection—3. Its severity and obstinacy.

Admitting the occasional coincidence of gonorrhœa, synovial inflammation, and ophthalmia, and making every fair allowance for it, there remains so preponderating a number of cases in which the primary disorder

is unattended with such consequences, that the co-operation of some other cause appears to be requisite for their production. This seems to me a strictly logical inference. What is that cause, if not constitutional predisposition? And what is that constitutional predisposition, if not the gouty habit? I do not wish to beg the question, nor to build a fact upon a syllogism. Observation must decide it; but I entertain a more than suspicion that it will not be altogether unfavourable to this opinion.

I am confident that obstinacy and proneness to relapse are not peculiar to gonorrhœal rheumatism. Any surgeon of experience must frequently meet with cases of "rheumatic gout," in which these characters are but too indisputable, without the slightest help from gonorrhœa. Buxton, Wiesbaden, Aix-la-Chapelle, can furnish, every season, a goodly array of cripples and of facts to prove it. I have at this moment two cases under my care, which might pass muster with any of those related in the work of Sir Benjamin Brodie, or elsewhere. I will briefly state the particulars of one, as a specimen of both.

Case.—A lady, now 51 years of age, travelled hastily from Tours to London, in the winter of 1843. She was not aware, at the time, of catching cold, but a great domestic sorrow awaited her on her arrival, and the shock was succeeded by extreme depression. In the course of ten days or a fortnight, she was attacked with acute inflammatory effusion in the right knee-

joint, and in three or four days after this, the left one was similarly implicated. What is singular is, that the left eye became the seat of acute catarrhal ophthalmia. It was nearly three months before the articular effusion had subsided, when the knees were left very weak and stiff, with some thickening about the synovial membrane. Shortly afterwards, the left wrist and ankle were attacked precisely as the knees had been, and there were fugitive pains in the loins, shoulders, and side. In a month or five weeks, the joints last involved were in a great degree relieved, when the left knee suddenly swelled again. It would be tedious, if not impossible, to particularise the attacks which occurred in succession during the period of a year and a half, for the whole of which time the patient was never quite free from them. In the autumn of 1845, she went to Aix-la-Chapelle, and there appeared to recover.

In the spring of 1846, the knees again became inflamed, and the complaint pursued its former shifting and dogged course, till the summer of 1847. A visit to Wiesbaden then removed it, like the previous one to Aix-la-Chapelle. In 1848, there was a recurrence of the symptoms—the knees still bearing the brunt of the disease. The greater part of that year and of 1849 was chequered with almost unceasing relapses, and the lady was sadly reduced in strength and constitution. Towards the end of 1850, she rallied, and not only threw off the articular inflammation, but regained a great degree of health and vigour. At the present time, she is again labouring under effusion into the left knee, attended

with inflammation and swelling of the sheaths of the extensor tendons on the right wrist. The attack appears to be a slight one.

This lady's grandfather had suffered to the last degree from gout. Her father was the subject of gouty dyspepsia, under which she has herself laboured. An elder brother has thickening in and about the synovial membranes of the knees, wrists, and fingers—another brother has had regular gout in the feet—and a sister has had rheumatic fever. Were this patient of the other sex, and affected with discharge from the urethra, I apprehend that the case would be looked upon as a very respectable example of gonorrhœal rheumatism.

If I were not averse to extending the limits (already exceeding my original intentions) of the present work, I could mention other cases of a similar description. Without taxing so severely the endurance of my readers, I shall content myself with reiterating that, in those who belong to a gouty or rheumatic family, affections which possess all the characters (*minus* urethral discharge) attributed to gonorrhœal synovitis, are very far from uncommon.

But there is another form of articular inflammation, which I have observed in those who are broken down by mercury, and which closely resembles that which waits on gonorrhœa.

Its subjects are either naturally delicate, or reduced to that cachectic state which excess of mercury occa-

sions. The knee is the joint which principally suffers, but none of the superficial articulations escape, and the synovial sheaths of the extensor tendons, on the wrist and instep, are not unfrequently affected. The inflammation is rarely of a violent description, for the pain is not acute, and the febrile disturbance does not run high. The characteristic features of the disorder are the suddenness and extent of the effusion into the synovial bag, the slowness with which it is removed, the frequency with which it reappears, and the pertinacity with which it continues to torment the individual. It is no uncommon thing to see him suffer from these attacks for several years successively—one knee or the other being filled with fluid, and the effusion only yielding with the greatest reluctance, to return with the most provoking rapidity.

The subjects of this form of synovial affection are also disposed to ophthalmia. This, however, does not assume the form of conjunctival inflammation so much as of rheumatic sclerotitis, or iritis, or congestion of the chorioïd or retina.

The conclusions I would draw from the preceding facts and considerations are these :—

1. However obstinate and prone to relapse gonorrhœal rheumatism may be, that character is common to other forms of synovial inflammation.

2. The states of system in which such inveteracy is most apparent, is where there is a hereditary gouty taint, or where the mercurial cachexia obtains.

3. As a very small proportion of gonorrhœal cases

is attended with synovial inflammation, and as this has no specific nor distinctive symptoms, it is reasonable to infer that some other agency must be combined with gonorrhœa, to give rise to it.

4. This additional agency would seem to be constitutional predisposition.

5. And this constitutional predisposition is probably connected with the gouty habit.

Whatever opinions may be entertained on the nature and the cause of gonorrhœal rheumatism, there can be no doubt upon its leading features. They essentially consist in inflammation of the synovial tissue, whether it be found in the articulations or in the sheaths of the tendons—in a marked disposition to effusion—in a decided erratic and recurrent tendency—and, in a disposition to reappear on slight occasions, after apparent recovery, indicating a morbid constitutional state.

Treatment.

There are two points to consider in the management of this disorder—the local, and the constitutional affection. The former is the direct result of inflammation —the latter is a peculiar morbid state, of less intelligible character. The former must be treated on those familiar principles applicable to inflammatory action—the latter has been subjected, and, probably, will continue to be subjected, to more empirical proceedings. In the observations that I am about to make, I shall avoid details, for they would lead to the consideration

of arthritic inflammation generally—a subject of no small extent.

And first of local treatment. Fomentations, poultices, warm saturnine and spirit lotions, for the slighter cases—leeches, cupping, blisters, for the more severe ones, are applicable to the earlier and more inflammatory stages. When effusion remains, no remedy is so efficient as blistering, and that, not timidly nor sparingly. At a later period, when the fluid is in part removed, or there is thickening about the joint, "Scott's bandage," with the ointments of iodine or mercury, is always beneficial. Still later, local or general vapour, friction, the warm douche, or the natural baths of Aix-la-Chapelle, or Buxton, may be of the greatest service. In particular cases, splints of gutta percha may be worn, more particularly on the knee. I have used the moxa with some advantage, when the joints have been very rigid; but it is not, and never will be, popular. Blisters do, perhaps, as much, or more, and are infinitely less repugnant to the patient.

The treatment of the constitutional state, of which the local symptoms are only the consequence and the expression, though rational to a certain extent, too soon, I am afraid, becomes empirical.

If febrile disturbance should run high, and the case assume the form of acute rheumatism, it *may* be right to extract blood from the arm. I confess that I have met with no such necessity. The ordinary amount of pyrexia may be perfectly controlled by salines, with diuretics, with diaphoretics, and with colchicum. Pur-

gatives are requisite, of course, and they should, in general, be sharp ones.

As the inflammatory excitement wanes, the activity of the antiphlogistic regimen will naturally be diminished; and, when the articular affection has assumed the passive forms of effusion and of thickening, the alteratives which we are in the habit of employing, and the milder tonics, such as sarsaparilla with iodine, will be found of considerable benefit. But the principal advantage must be looked for in change of air and climate, and more particularly from the influence of the baths and waters of Bath or Buxton, Aix-la-Chapelle or Wiesbaden.

All this is consistent with the principles of treatment founded on our established physiological views. But there are remedies and plans of a more empirical description. I shall cursorily touch upon the leading ones.

1. The guaiacum mixture is, at times, of signal service in ordinary rheumatic fever. My friend, Dr. Seymour, prescribed it, at St. George's Hospital, to some extent; and, when I had the pleasure of officiating as his clinical clerk, I had many opportunities of watching its administration. Its effect is to produce profuse perspirations, and, no doubt, it acts, in this way, as an evacuant. It appears to be most applicable to cases of average severity, and to such as are free from inflammatory congestion of the pleura or the pericardium. I have employed it in the treatment of gonorrhœal rheumatism, and, although I must admit that it has

not been so efficacious as I could have wished, it has been, in some instances, of benefit.

2. Calomel, combined with opium, given to the extent of moderate affection of the mouth, is well known to be a valuable remedy in some acute forms of inflammation of the joints. Nay, I have found it of considerable use in certain cases of chronic disease, where slow inflammatory action extends from the synovial membrane to the cartilage. I believe it may, at times, be prescribed with advantage in gonorrhœal cases; and I imagine, from what I have observed, that those best adapted for it are where the inflammation is disposed to be acute, and the habit of the patient is robust.

3. Not to speak of colchicum, would be, indeed, enacting Hamlet without the part of the Prince of Denmark. It is prescribed, and, what is worse, it is taken, quite as a matter of course. However difficult it may be to explain its physiological action, its power over gouty pains and the slighter gouty inflammations is too popularly proved to be disputed. It is difficult to say, whether more of it is swallowed in the shape of orthodox formulæ, or in that of quack preparations.

The mischief occasioned by this medicine is enormous. Gouty complaints are no more than the evidence of something wrong in the system. That something is, in most instances, an excess in the blood of its nitrogenous and carbonaceous elements. The deranged functions of the liver, the amount of lithates in the urine, fully demonstrate this. The local pains, the dyspepsia, the exaggerated sensibility both of the

nervous tissue and the muscular, are probably occasioned by the too acrid fluid which is feeding and exciting them. Carried still farther, the depravation of the blood ends in a febrile paroxysm, and the phenomena of gout, or of rheumatic gout, are exhibited.

How can colchicum, taken alone, as it often is, be a substantive remedy for this? It may, in some occult manner, deaden the sensibility of the nerve, the excitability of the muscle; but, that it should rid the blood of those poisonous constituents which are in excess, is beyond what my chemistry or physiology can comprehend, or my experience confirm. When colchicum *purges*, then, indeed, it may exert depurative powers, commensurate with those purgative effects; but, as it is not unfrequently given, in combination with opium, and, as it is far too often taken, in specific nostrums, it has slight evacuating properties, and does little more than hush the *expression* of morbid action, leaving the *thing* untouched. No cautions can, in my opinion, be too strong against this mode of exhibiting or resorting to so powerful a drug. Its continuance would naturally lead, and does, to organic alterations or deposits, to tophi, to pericardiac or endocardiac accretions, to fatty heart, to spasm of the stomach,*—those various accidents and fatal changes which await the gouty in their latter years, and which are logically due to a state

* What is called "gout in the stomach," is clonic spasm of its muscles,—limited to them in the slighter cases, involving the diaphragm in the severer and the fatal ones.

of blood surcharged with the products of nitrogen and carbon.

I would not be understood to denounce the use of colchicum. I have a high opinion of it. Let us apply it as physiologists and not as quacks, availing ourselves of its empirical powers in arthritic pain and inflammation, but directing its operation, and regulating those powers, by the remedies with which we associate it. Combining it with mercurials and with taraxacum, we promote the action of the liver, and the excretion of those proximate principles which are made up of carburetted and sulphuretted hydrogen—with alkalies, and with the neutral and diuretic salts, we antagonise the acids of nitrogenous origin, and dismiss them by the kidneys and the skin—and, ensuring the action of those organs and the bowels, we lessen the amount of the contents of the blood-vessels, and quicken the agency of the absorbents. Judicious regimen should submit to them only what is suited to reintegrate better blood, free from excess of those primary elements of which the morbid products were composed. The gravamen of the mischief in the cases of those who fly habitually to colchicum, is the false confidence it breeds, and the injurious habits it sustains. Believing that the remedy is always at their hand, they eat, drink, and corrupt the functions of nature, whose warnings they are fools enough to silence.

4. Opium is another of those medicines which have been empirically exhibited. It has been given in large doses, and highly praised, in the treatment of rheumatic

fever. I am inclined to apply to it the same line of argument which I have used towards colchicum. I can fully understand the value of a drug which deadens pain and lulls organic sensibility, in a complaint attended by so much of both; but I confess that I cannot so well understand its removing that condition of the fluids, on which, as I take it, the disease most commonly depends. Add opium, by all means, to mercurials, antimonials, colchicum—avail yourself of its powers over suffering, of its sedative influence on the heart and brain—but do not forget at the same time to evacuate; do not lock up, in the vessels and the organs, those vitiated humours, which are, in fact, the malady. When opium is prescribed in ample doses, it should be backed by purgatives of an active kind, into which aloetics enter.

5. The iodide of potassium exerts, in some instances, a remarkable power over the synovial and periosteal inflammations which attend the mercurial cachexia. Its influence is, however, not limited to them, but is often very beneficially exercised in the ordinary forms of rheumatism. In the gonorrhœal I have seen it of signal service, and I think it will be found a valuable addition to most of our prescriptions for it. I would particularly recommend the combination of iodide of potassium with colchicum and opium: along with active purgatives, this is one of the best formulæ I know.

6. I imagine that it is scarcely necessary to reckon cubebs or copaiba among the possible remedies for

this complaint. When Swediaur very gravely assures us, that he succeeded in curing gonorrhœal ophthalmia by keeping bougies in the urethra, we are more disposed to smile at his credulity than to question his good faith. It was an innocent piece of imagination on that worthy surgeon's part. But, if we did not know that cubebs and copaiba have really been prescribed for gonorrhœal inflammation of the synovial membranes, we should scarcely credit such ignorance of first principles. It were a waste of words to confute what is now, I trust, a tradition.

Manage gonorrhœal rheumatism as we may, we shall too often find it, like the other forms of gouty rheumatic inflammation, sadly tedious and troublesome. But, I believe that, if the primary disorder is not injudiciously stimulated, and if the rheumatism is treated on correct principles, the surgeon will rarely meet with such cases as many which have been recorded, and he will enjoy the satisfaction of perceiving that little or no organic injury accrues to the system or the part.

GONORRHŒA IN THE FEMALE.

If, in the male, there was no certain criterion by which the discharge resulting from infection could be distinguished from that produced by other causes, an equal impossibility will be met with in the attempt to distinguish gonorrhœal from other discharges in the female. The vaginal secretions are particularly prone to assume, under various circumstances, a puriform appearance, and a mere examination of them can never lead, with certainty, to the determination of their character. Had we even the power, which, of course, we have not, of testing the infectious properties of the discharge, this would be still inconclusive evidence, as the uterine secretions of some females, wholly free from gonorrhœal taint, give rise to urethral inflammation in the male.

In order to appreciate the source and nature of these vaginal discharges, it may not be out of place to take a cursory glance at the disposition of the mucous membrane, and of the glands which are connected with it. However elementary and however trite such

an investigation may appear, I am far from sure that it has always received the amount of consideration it deserves.

The mucous membrane, commencing on the internal surface of the labia, is continuous at their edge with the integument. Beneath it is a sort of dartoïd tissue, elastic, and very easily permeated by inflammatory or dropsical effusions. This accounts for the great tumefaction of the labia which occurs in inflammatory gonorrhœa, as well as in some cases of venereal sore. Another circumstance to be observed is the number of sebaceous glands disseminated over both sides of the labia, and more especially the mucous one,—glands which resemble in structure and in properties the glandulæ odoriferæ of the inner prepuce of the male.

The mucous membrane of the nymphæ is remarkable for the size of its mucous and sebaceous follicles, the depressions of which are so numerous and so distinct, as to give it some resemblance to that which invests the tonsils. These lacunæ not only supply a free sebaceous secretion, but, in cases of leucorrhœa, they will be found to contribute, in no insignificant degree, to the discharge.

The vagina, contracted where it joins the vulva below, is expanded, and sometimes to a considerable extent, towards its uterine extremity. Its parietes, in the intervening portion, are in stricter apposition, and this arrangement gives rise to a circumstance which is not of unfrequent occurrence. In making an examination of the parts, there may appear to be little or no

discharge, when suddenly a gush of it descends. This has been lodging in the reservoir, at the upper part of the canal, and is forced by the contraction of the abdominal muscles through the constricted portion. In the employment of the speculum, it may be frequently perceived collected in some quantity in this vaginal pouch.

The transverse rugæ which exist on the anterior and posterior walls of the vagina, more particularly on the former, are developed occasionally to a remarkable degree. I remember an instance in which they were so prominent and so rigid, that a physician had mistaken them for cancerous induration. The case was that of a maiden lady, 55 years of age, who was subject to rather profuse discharge, of a dark and offensive description. The event has shewn that there was nothing more than hypertrophy of these transverse bands. I may observe that the vaginal mucus is apt to lodge in their interstices, and it is possible that an ulcer lurking in them might elude the investigation of the surgeon.

The vagina presents a very distinct epithelium, which ends, by a sort of serrated edge, within the uterine orifice. This is worth recollecting, for, on more than one occasion, I have seen the abrupt cessation of the cuticle give rise to the opinion that there was ulceration of the os uteri; in fact, I am convinced that this mistake is a common one. Everybody undertakes an examination, quite as a matter of course, but everybody is, unfortunately, not a profound ana-

tomist. I am sorry to say, that one's experience is rich in too many instances of ignorance and of imposture, and that uterine complaints are the El Dorado of quackery.

In cases of prolapsus of the womb, where the vagina becomes inverted and exposed to the external air, the epithelium is sometimes so greatly thickened as to resemble ordinary cuticle. Should the orifice of the uterus be freely disclosed, the abrupt cessation of this investment is rendered very distinct.

The whole vagina is studded with papillæ and with mucous follicles, but both, the former more especially, are most abundant below. It is on this account that the entrance of the canal is distinguished both for its amount of sensibility, and for its secreting powers.

The structure of the vagina consists of an erectile tissue, interposed between two fibrous laminæ, and resembles the spongy body of the male urethra. Externally is a sort of cellular layer, analogous to the dartos, and, like it, possessed of vermicular contractility. The vaginal veins are associated with the uterine, are numerous, disposed in plexuses, and pass into the hypogastric. The lymphatics proceed to the pelvic glands.

It must be evident that the vagina, from its anatomical composition and functions, from its great extent of secreting surface, from its nnmerous follicles, the sebaceous glands at its orifice, its vascular erectile tissue, and its plexuses of veins, must of necessity be highly prone to congestion, and to those increased and

morbid secretions to which congestion would give rise. The frequency and the obstinacy of leucorrhœal discharges is easily understood.

The female urethra, not above an inch in length—dilatable to the last degree—presenting at its vaginal end the salient meatus, at its vesical a mere aperture, without anything to represent a prostate gland—formed of a thin lamina of erectile tissue, and encircled by muscular fibres, is a counterpart to the membranous portion of the male urethra, and, in the simplicity of its type, and in its limited dimensions, offers nothing for disease to seize upon. In gonorrhœa, it often escapes altogether, and, in this happy arrangement of her organization, the female finds an exemption from some of the most distressing maladies of the other sex. But, in the harsh equity of nature, a physical advantage too frequently contains the germs of an infirmity. If the short and extensible urethra of woman renders stone a trivial ailment, stricture rather a theoretical than actual one, and prostatic disease an impossibility, it opens an easy route to the bladder for erysipelatous inflammation of the surface, and it leads to that incontinence of urine which proves so distressing in advanced life.

The urethra is impacted in the walls of the vagina, while the bladder, naturally or artificially larger than that organ in the male, and of greater transverse diameter, is attached firmly to the same wall, but less closely to the uterus. The possible applications and the pathological consequences of these facts must be fami-

liar :—examination and puncture of the bladder, or lithotomy, through the wall of the vagina—the too great frequency, after parturition, of vesico-vaginal fistula—the extension of cancer of the womb to the bladder, especially if the vagina is involved—the difficulty of micturition and catheterism, when the vagina is inverted, in cases of prolapsus of the uterus.

The os uteri is not so constant in its form as, perhaps, is frequently supposed. Independently of the variations of the virgin and maternal, the youthful and the aged organ, great differences exist in the projection of the lips, in their size, in their fulness, in the dimension, direction, and contour of the orifice. These differences are more marked in the womb that has borne children than in that which has not; but some little experience and some little tact are necessary, at times, to discriminate between a sound, though unusual condition, and a morbid one.

The mucous membrane prolonged from the vagina, but denuded at the os uteri of epithelium, is closely united to the proper fibrous tissue of the organ—is exceedingly attenuated—not remarkable for its papillæ—studded with follicles (the glands of Naboth) which look like vesicles, and are most numerous in the cervix and just within the os tincæ—is freely and constantly coated with mucus, which is not uncommonly of a very inspissated character—and is highly vascular in the body of the womb, but much less so in the neck. The proper tissue is made up of fibres, the contractile properties of which are indisputable, whatever may be

thought of its muscularity. For my own part, I conceive that no reasonable doubt can be entertained upon the latter point. The vascular system of the uterus is much developed, its veins are capacious, its absorbents numerous. The peritoneal investment, which is found only on the upper three-fourths of its front surface, covers the whole of its back, as well as a small portion of the posterior wall of the vagina. This, perhaps, is not taken enough into the account by those who resort to rough measures.

The mucous membrane entering the Fallopian tubes, forms or seems to form longitudinal folds on their interior, and is continuous with the peritoneum at their fimbriated ends— the only instance, as the student is aware, in which a mucous and a serous membrane exhibit such a disposition.

The follicular apparatus of the uterus explains the freedom and the character of its secretions—its vascularity, and especially the capacity of its veins, sufficiently account for its disposition to congestion and to inflammation—the intimate union of the mucous and the fibrous coats, an union which gives it a remote resemblance to the fibro-mucous membrane of the nasal fossæ, explains the tendency to polypoid growths—the continuity of the mucous and the serous membranes, at the Fallopian fimbriæ, and the peritoneal investment of the uterus itself, would teach us, *à priori*, to dread the possibility of peritonitis, as a result of uterine injury—and, finally, the disposition both of the veins and the absor-

bents proclaims the liability to uterine phlebitis and to secondary inflammations.

Gonorrhœa in the female, as well as in the male, is essentially inflammation of a mucous membrane. The result, in such a tissue, is to augment and modify its natural secretions. But the extent of surface, the number, the variety and the disposition of the glands, and the excitability inherent in the part, are constantly in operation to produce the same effect, and to occasion those discharges from which few women are exempt. Is there any thing distinctive in that of gonorrhœa, any thing which will enable us to decide with confidence, that a given discharge has infectious properties or not? I have already, by anticipation, answered in the negative, and, though collateral circumstances, moral considerations, or material evidence may combine to confer probability or certainty on a conclusion, I repeat that there is nothing in the condition of the parts, nor in the characters of the secretion, specific or diagnostic. It must, however, be admitted that this difficulty of discrimination applies rather to the chronic than acuter cases, the former being those which most commonly depend on general and ordinary causes. The reader will therefore clearly understand, that, in describing gonorrhœa in the female, I am simply representing an affection, more or less inflammatory, of her genito-urinary mucous membrane, irrespective of its origin, the discrimination of which in every instance must rest with the surgeon,

and on the circumstances of the case. It matters little whether we term the complaint gonorrhœa, blennorrhagia, blennorrhœa, or what not, this intrinsic vagueness, *ex necessitate*, must attach to it.

The disorder is naturally and practically divisible into two forms,—the acute and chronic. An equally natural and practical subdivision is founded on the portions of the mucous membrane involved. In one case the vagina alone is affected, in another the urethra also is attacked, in a third the uterus is implicated. This variety of extent of the morbid action is not peculiar to either form of the disease, but obtains, almost alike, in both.

I. The Acute Form of Gonorrhœa.

As the complaint, in the main, is similar in the two sexes, I shall now confine myself, as much as possible, to its differential characters in women. For the sake of precision, I shall examine it as it affects the vulva and vagina—the urethra and bladder—the uterus and its appendages.

1. *Affection of the Vulva and Vagina.*

In the vast majority of cases the vulva and vagina are the principal, and in some the exclusive seat of gonorrhœa. This is the result of my experience, both in hospital and private practice, and I have not found the urethra involved as universally as some have done. The symptoms are of a sufficiently obvious character.

A puriform discharge, varying in quantity, density, and tint, with the force and stage of the inflammatory action, and chequered at times with a serous or even sanguinolent character—a sensation of heat, pruritus, or pain—increased vascularity of the mucous membrane of the vulva, os externum, and vagina—perhaps, abrasion of the epithelium, with reticular, punctuated, or vorticose injection and congestion of the corium—increased development of the papillæ and the follicles—in severer cases, inflammatory œdema of the labia, or phlegmonous inflammation of them—or such determination to the vaginal spongy body as to render the walls of the canal turgid or even positively rigid.

Here, as elsewhere, inflammation affects two leading types—the healthy and the erysipelatous. In the former, the symptoms come with rapidity, proclaim themselves decisively, and, however severe, restrain their violence within certain limits. Injudicious management, it is true, may counteract this salutary tendency, and add such intensity to the morbid action that it spreads both far and deeply. Under ordinary circumstances, this is not to be expected, and when it occurs, it is usually owing to sexual indulgences, over-exercise, high or free living, or the employment of stimulating drugs or applications.

The erysipelatous form of inflammation attacks the debilitated and debauched. It runs over the vagina, and frequently extends to the bladder, or even to the kidneys, and the uterus. The subjects of it are usually the pallid and the irritable. Abrasion of the epithelium

of the nymphæ and the labia is not unusually present, and inflammation of the absorbents of the latter, with enlargement of the inguinal lymphatic glands, occasionally attends it. The abrasions may run into superficial ulcerations, and these, if aggravated by uncleanliness and by neglect, may be mistaken for syphilitic sores. In the female, however, syphilis and gonorrhœa may often coexist, and, considering the habits of the depraved portion of the sex, it is not to be wondered at. There are many prostitutes who are never free from chronic gonorrhœal discharge, and the addition of syphilitic infection is perfectly comprehensible. But the combination of the two diseases, when it happens, is an accidental one, and proves no material relation nor affinity. The utmost tact and knowledge of the surgeon will, in some instances, be called for, to distinguish the two descriptions of sores.

2. *Affection of the Urethra and Bladder.*

In acute gonorrhœa, the urethra is sooner or later involved, in a large proportion of cases. The complaint rarely or never commences in it, nor is it likely that it should. When affected, it gives rise to pain and scalding in micturition, accompanied, perhaps, with vesical irritation and tenesmus. The erectile structure which encircles the meatus is sometimes the seat of such heightened sensibility, that the patient's sufferings are extreme in and after the act of making water. I have known this inflammatory state of the meatus confounded with the "irritable tubercle" which forms

there, and much mischief done by the application of caustic. In one instance that came under my observation, it was proposed, and that by a hospital surgeon, to remove "the tumour" by the knife. Fortunately for his patient and himself, the operation was prevented:—its performance might have entailed incontinence of urine upon her, and well-merited discredit upon him.

The brevity of the urethra would dispose the female to frequent and severe inflammation of the bladder, were that organ as irritable as in the male. As it is, she comparatively seldom suffers from it; and, when she does, the symptoms are mitigated, the characters not quite the same, and the bad effects less permanent. For the female bladder is little else than a simple mucous sac, and she escapes those pathological consequences which ensue from a highly sensitive trigone, the seminal apparatus, and the prostate. Vesical inflammation, when it actually occurs, differs from the same affection in men, in the less disposition to produce large quantities of muco-purulent matter—it more nearly resembles gastritis or enteritis, and frequently presents no purulent secretions, but merely minute shreds of lymph disseminated in the urine.

I am inclined to think that the female is more prone to acute inflammation of the kidney than the male. It is difficult to speak with confidence on such a point, but undoubtedly I have seen more instances of renal inflammation in the former, along with gonorrhœa, than I have met with in the latter. In several of the cases,

the patient was taking copaiba freely, and the attack seemed distinctly referable to its agency. The symptoms were severe, but offered nothing unusual; and the disorder yielded to the ordinary active treatment.

3. *Affection of the Uterus and its Appendages.*

So far as my experience has extended, acute inflammation of the uterus and its appendages more rarely results from gonorrhœa, *per se*, than from the employment of stimulating applications. Still, metritis is occasionally developed, as the immediate result of the disorder. Some females are remarkable for the irritability of their uterine system. Unmarried, they are the subjects of menorrhagia—married, of miscarriages or of puerperal phlebitis—and, when affected with vaginal inflammation, the uterus is liable to suffer. The same disposition is observed in those who labour under chronic inflammation of the cervix, and it may be assumed that, cæteris paribus, inflammation of the uterus, irrespective of a direct exciting cause, implies predisposition in the patient.

I need not dwell upon the symptoms. An irksome sense of weight in the loins, bearing down in the pelvis, stiffness or pain in the hips and thighs, malaise, and pyrexia, usher in pain, perhaps intense, in the hypogastrium and the lumbar region, in the course of the round ligament, and in that of the lumbar nerves—irritation of the bladder—suffering in the passage of the fæces—sympathetic disturbance of the stomach—and such fever as the amount of inflammation

warrants. The vaginal discharge is not unaffected; when the uterus is first attacked, it may materially diminish, or it may be mixed with blood, or with bloody serum, or with flakes of lymph; with the subsidence of the metritis, it resumes, more or less, its primitive appearance.

I have not myself seen fatal consequences from this form of inflammation of the uterus. In one instance, the patient's life was in jeopardy. It is worth recording, upon other grounds.

Case.—A young woman was admitted into the Lock Hospital, under the care of Mr. Walker, on account of acute gonorrhœa, attended with much inflammatory swelling of the labia, nymphæ, and prepuce of the clitoris. The urethra was involved, but the disease did not extend above the lower part of the vagina. On the fourth day, she was seized with a rigor and nausea, succeeded by pyrexia. The vaginal discharge rather suddenly diminished. Next day she complained of pain in the hypogastrium, and difficulty in the act of making water. I found, by the speculum, that the upper portion of the vagina and os uteri were of a lurid tint, and the latter tender upon pressure. Violent and uncontrollable vomiting ensued—the belly became swollen and tympanitic—the secretion of urine was nearly suppressed—the symptoms assumed a typhoïd type—and the case had very many of the characters of uterine phlebitis. I had serious misgivings of the issue, when, on the sixth day, an erysi-

pelatous blush appeared upon the vulva, evidently proceeding from the interior. The graver symptoms quickly subsided, and the erysipelas ran a course of about a fortnight. When it had ceased, there was no trace of gonorrhœa.

I conceive that there can be little question concerning the nature of the case. Erysipelatous inflammation, originating in gonorrhœa, passed by the urethra to the bladder, and along the vagina to the uterus. Retracing its course, as erysipelas will do, it arrived at the surface, and spread over it, as usual.

I saw a very similar, though more fatal, instance, at St. George's. It occurred when I was dresser to Mr. Keate. A young woman, under his care, was confined to her bed on account of varicose ulcers of the legs. Erysipelas prevailed in the ward, and she was seized with the premonitory symptoms of it. The complaint shewed itself around the ulcers, and spread up the limb till it reached the groins and pubes. Here it seemed to pause, when the patient was attacked with vomiting—pain in the hypogastrium and loins—tympanitis—almost total suppression of urine—and low typhoïd fever. She died. On examination of the body, the mucous membrane of the bladder, vagina, and uterus, presented a congested, and partially ecchymosed appearance, with here and there, in the vagina, abrasion of the epithelium.

Who can doubt that this was erysipelas, affecting the genito-urinary mucous membrane?

Inflammation of the uterus, though it yields to nature, time, and treatment, is still no inconsiderable evil, for it may lead to occlusion of the Fallopian apertures, or of those tubes themselves. Changes too may occur in the cervix uteri, unfavourable to the due performance of its functions. Acute and chronic inflammation of the womb, are, perhaps, the most efficient causes in producing that sterility so common in women of loose lives.

When the uterus is labouring under inflammation, there is nothing to bar its extension along the Fallopian tubes, to the peritoneum, or the ovary. In a severe case of metritis, it is difficult to decide, from existing symptoms, whether the appendages are involved or not; and I doubt the fidelity of that diagnosis, which should pretend to single out those appendages as *the* seat of inflammation. Such niceties are more easy upon paper than in practice. Happily for those who are sceptical of their powers of discrimination, a doubt does not greatly signify; the case proclaiming plainly enough its gravity, or the reverse, and the treatment being based upon something broader than the precise spot and limit of the morbid action.

II. The Milder and Chronic Forms of Gonorrhœa.

These may be developed on the subsidence of the acute form, or they may exhibit their mitigated characters from the commencement. Their essential feature is, of course, the small quantum of inflammatory action;

a quantum which may be reduced till it ceases to be recognizable. It would be tiresome to attempt to delineate all the shades and degrees of it, and I may safely leave them to the experience or the imagination of the reader.

Chronic, like acute gonorrhœa, may, separately or collectively, affect the vagina, the urethra, and the uterus. Its principal seat is in the first, and the uterus has been, in my experience, more frequently involved than the urethra.

1. *Affection of the Vulva and Vagina.*

The pathological state of the mucous membrane is rather that of venous congestion, than of arterial action. The internal surface of the labia, the nymphæ, and the os externum, look red or of a blueish tint, and turgid—the smaller and even the larger veins are loaded, and perhaps varicose—the epithelium is in parts denuded, or there may be superficial ulcerations. The discharge varies in quantity and quality, with the vicinity or the remoteness of the menstrual period, with the use and the excitement of the parts, with the amount of the congestion or the inflammation, with the health and the habit of the patient. From almost a serous, or a weak sebaceous solution, it presents all degrees of density and colour up to actual pus.

The exact condition of the vagina, beyond the os externum, can only be determined by the speculum. This instrument would seem to be the watchword of two parties, one denouncing its use almost entirely, the

other employing it as freely as they would the stethoscope. I confess that I am not of either way of thinking. I cannot bring myself to ignore some particular organs and functions, nor to assume a delicacy exceeding that of nature herself. If she has given to the human race appetites and passions—an apparatus which, while it gratifies *them*, carries out her own designs—moral imperfections which may push those passions to excess—and physical ones which lead to disorder or disease in their material instruments, it is not the surgeon's office to argue with her. His part is solely to minister to suffering,—his duty to avail himself of every means which can contribute to so beneficent an end. If the speculum is really useful and necessary, its employment is legitimate, and the fastidiousness or hypocrisy arrayed against it will be as impotent, as the opposition to male accoucheurs in Europe: as ridiculous, as the injunction in a Turkish harem against the physician doing more than feel his patient's pulse, through a scarce open door.

But I believe that the advantages of the speculum have been overrated, and its application abused. One reason for resorting to it is the reputed frequency of venereal sores high up in the vagina, or on the mouth of the uterus. This is quite contrary to my observation. During twelve months, I employed the instrument in the case of almost every female admitted into the Lock Hospital. In only two or three was a sore discoverable on the os uteri, and in them there were external ulcers also, and no difficulty in determining the character of

the complaint. My subsequent experience has been pretty nearly of the same complexion.

In the discrimination of the source of the discharges, assistance may, unquestionably, be derived occasionally from the speculum. But, in most instances, there is little difficulty in ascertaining their source from the symptoms, inspection, or the touch, and the treatment is frequently not much influenced by extreme nicety of diagnosis.

Affections of the os uteri are represented by the partisans of the speculum as imperatively demanding its employment. If I were to trust to what has occurred within my own observation, these gentlemen must consider uterine affections very common indeed, and their diagnosis singularly difficult. For, certain it is that females have been submitted to examination with the instrument, on occasions, and with a pertinacity, for which I could discover no sufficient reason. Of course, there *must* be many cases in which it can afford assistance; but, I am sure that there are many more, in which it has been made a piece of gratuitous, or what is worse, of unprincipled indecency. Under almost any circumstances, I cannot but protest against its use in the young, unmarried, modest female. In her case, it can very rarely be required, and its employment is an outrage upon every notion of propriety.*

* We are told by the more sanguine votaries of the speculum, who record its advent as a species of Hegira, and its opponents as on a par with the judges of Galileo, that in France there is quite a *furore* in its favour, and that ladies of rank write billets to their

Much has been said of the form of the speculum, and its introduction has been invested with a sort of operatic dignity. This is absurd. The shape matters little, provided it is passed carefully, gently, and with a due regard to the vaginal axis. For my own part, I employ with equal indifference the old three-branched speculum, or the "bivalve," or the "tubular." Every one may please himself in the selection, for a light hand will be a light, and a clumsy hand a clumsy one, whatever instrument it grasps. I think, myself, that for a narrow and sensitive vagina, the old speculum is preferable.

It has been proposed to place the patient on a chair, of much the same description as that employed by M. Heurteloup, in his lithotritic operations. This is a piece of expensive and utterly useless indelicacy. Those who are accustomed to the performance of surgical operations, simplify, as far as possible, their tools. M. Heurteloup, who confined himself to lithotrity, had endless cases of instruments, and a bed of most artful constitution. The hospital surgeons who now crush calculi habitually, do so on a common couch, with a lithotrite or two, a scoop, a syringe, and a catheter. I have performed this operation many times, without

surgeon, requesting him to call and bring his speculum. This may be true, and our notions of modesty may be overstrained, and out of date. Yet I trust, and I cannot help believing, that some time will elapse before *our* wives and daughters will distinguish themselves in this free and easy style of epistolary correspondence.

one accident and with much success, and have found no necessity for complexity of apparatus, nor any difficulty in the using of it. And yet, to read M. Heurteloup's book, or to have seen him operate, would fill one with a sort of superstitious awe of so mysterious a proceeding.

When the speculum is to be introduced, the sofa, the bed, or even an ordinary seat, is better, because more decent, than the most elaborate chair. Nor is it requisite to expose the patient, in the way too frequently resorted to. She may generally be permitted to lie on her left side, as in accouchement,—a position almost equally convenient for the surgeon, and much more considerate towards her.

A common cause of chronic gonorrhœal and leucorrhœal discharge, is a state of the vaginal mucous membrane, similar to that of the fauces and the pharynx which goes by the name of "relaxed throat." The tissue is tumid, its papillæ are exaggerated, its follicles hypertrophied, and its veins congested and varicose. The tint is sometimes leaden. This condition of the parts is apt to obtain, when the gravid uterus or an ovarian tumour presses on the hypogastric veins.

2. *Affection of the Urethra.*

This is not so frequent in the chronic as it is in the acute form of the complaint. There may be no pain nor disagreeable sensation to indicate its existence. But the meatus is generally red or swollen, and, unless

the patient has just made water, pressure from behind forwards, along the course of the urethra, occasions the discharge of matter from it.

3. *Affection of the Uterus.*

In chronic gonorrhœa, this is common. In no small number of habitual prostitutes, who are seldom quite free from muco-puriform discharge, and many of whom communicate gonorrhœa to the susceptible, there will be found congestion or chronic inflammation of the os and cervix uteri. The form of the orifice is variously modified—the Nabothan glands are hypertrophied, sometimes very remarkably—their secretion is increased, thickened, or morbid in other ways—the uterine mucous membrane, as far as it is visible, is much congested, or condensed—superficial ulcerations, or vegetations, may be present—and the uterine mucus is augmented in quality, and is more or less puriform in character.

The uterus almost always participates in that congested state, which I have adverted to as constituting "the relaxed vagina."

The morbid alterations of the Fallopian tubes, and the ovaria, which we commonly discover after death in the bodies of dissolute women, make it evident that, during life, a species of chronic inflammation of them has obtained. The unnatural stimulation of the organs has much of course to say to this; but much is due, likewise, to the congestion and the inflammation attendant on their gonorrhœal and leucorrhœal affections.

Treatment.

The management of gonorrhœa in the female is at once simple and difficult, successful and unsatisfactory. Paradoxical as this may seem, it is correct. When the case is recent and the vagina only implicated, the disease may be arrested with facility. If the urethra or the uterus has become involved, the treatment is proportionately troublesome, and, in chronic cases, where the uterine and vaginal mucous membrane is the seat of congestion and relaxation of long standing, the case is apt to prove most obstinate. We might anticipate this, from the indifferent success which attends our treatment of chronic mucous congestions elsewhere—in the throat, the bronchial membrane, and the digestive tube.

The same general principles should direct our measures, in the treatment of gonorrhœa in the female, which I have insisted on, at such ample length, when considering the disorder in the male. The presence or absence of inflammation is always to be kept in view, and the cardinal point is to put it down, if it exists, and to prevent or avoid it, if it does not.

1. *Treatment of the Inflammatory Stage.*

It is scarcely necessary to denounce general or local stimulants. They are both improper and unsafe. Salines—aperients—low diet—rest—general and hip-baths—fomentations—injections of warm decoction of poppies or marsh-mallow, with belladonna or opium—

leeches to the hypogastrium, the groins, the vulva, or even the vagina—cupping on the loins—even bleeding from the arm, are all measures adapted for the case, according to its extent and its severity.

If the inflammation has affected the urethra, diluents are of more service than when the urinary organs are exempt. If the bladder or the kidneys are involved, the usual measures must be had recourse to. From what I have seen, I should say that opium is more indispensable in the female than the male, from her greater excitability. Inflammation of the uterus, or appendages, is recognised with ease, and should be met promptly and decisively. Its management is too well understood to require any observations upon my part.

However active the remedies, one thing is particularly requisite—cleanliness. There is so much sebaceous mixed up with the mucous secretion in women, that inattention to ablution renders the discharge most acrimonious. Hip-baths night and morning, or oftener, and frequent injections of warm decoction of poppies, or of very dilute Goulard water, are more than adviseable—they are indispensable.

2. *Treatment of the Non-inflammatory Stages of Gonorrhœa.*

If a female applied with incipient gonorrhœa, prior to the establishment of inflammatory action, the complaint, I have no doubt, would be speedily arrested in almost every instance. For obvious reasons, she rarely

does so. Should the opportunity of treating the complaint under such advantageous circumstances offer, an injection of a strong solution of lead, purgatives, and rest, are the measures which I have practised, and would recommend.

When inflammation has passed away, gonorrhœal like other discharges in the female must be chiefly met with local measures. Copaiba, cubebs, the turpentines, and so forth, have little influence on the disorder, for the urinary passage, on which they mainly act, plays an unimportant part in it. When, however, the urethra is affected, copaiba is useful, if not necessary.

Cold bathing and injections are the most essential remedies for the vaginal discharge. The former should be used several times during the day, with the aid of the hip-bath, the bidet, or the sponge. As an injection, I have the same high opinion of the solution of the acetate of lead in the female as I had in the male. I prescribe it of the strength of from half an ounce to an ounce of the liquor plumbi in the pint of distilled water.* It should be thrown up five or six times daily, without force, and for four or five minutes at a time. If the effect flags or the application fails, more stimulating lotions are required. I need not be at

* The common vaginal syringe is useless. Clarke's, or Hamilton's, or a good gum-bottle, or Read's enema apparatus, is preferable. I frequently employ the latter, which is, in many instances, the best.

the pains to enumerate them. That of the nitrate of silver is the best. Its strength must vary with the case.

When the vaginal membrane is in the state of long-continued congestion, the application of the nitrate of silver in substance often proves of benefit. It may be repeated now and then, the strong solution of lead being employed in the interim.

When a vascular, or thickened and irritable state of the orifice of the urethra obtains, the application of the lunar caustic removes it. An obstinate discharge from the urethra may, perhaps, demand the same remedy.

When the uterus furnishes the discharge, and this assumes a character of obstinacy, it may be requisite to direct our applications to that organ itself. The assistance of the speculum must be invoked, of course. Injections of lead, or zinc, or caustic, may be thrown into the os uteri. This should be done with gentleness, for the patent mouths of the Fallopian tubes *may* convey the irritant to the peritoneal cavity. A more likely accident is that of setting up too much inflammation, which extends along the mucous to the serous membrane. Whichever risk we regard, circumspection is demanded.

The nitrate of silver in substance is applied to the os uteri, and within the cervix. There are cases in which it is beneficial. But it ought not to be lightly had recourse to, for I have known it kill.

Case.—A married lady had always laboured under an irritable condition of the uterus, which led to menorrhagia, several miscarriages, and troublesome leucorrhœa. Her husband contracted gonorrhœa, and she became affected, in turn, with a discharge, which, though unattended with any inflammation, she supposed to have resulted from infection. Be that as it may, it proved tedious, and after trying injections of lead and alum, she consulted a gentleman, who employed the speculum, and freely applied the nitrate of silver to the uterus. Violent pain was the immediate consequence, and acute inflammation of the organ followed. This ushered in the symptoms of puerperal peritonitis, and on the eighth day the lady died. I examined her body, and found a highly congested state of the mucous membrane of the womb, with a quantity of lymph and concrete pus in the pelvic part of the abdomen. The womb itself and its appendages were thickly covered with lymph.

I have, on more than one occasion, seen severe symptoms ensue from the application of caustic to the uterus, though the preceding is the only fatal instance that I have witnessed. I do not object to the measure, with proper cautions and restrictions, but I do believe that it is occasionally resorted to both needlessly and rashly.

There are two obstacles to the cure of chronic vaginal discharges:—the natural excitement of the

menstrual flux, and the pernicious influence of sexual intercourse. The former we are compelled to submit to—the latter should be interdicted. To its continuance, in spite of all remonstrances, much of the obstinacy of leucorrhœa and gonorrhœa is often due.

There are two or three affections of a miscellaneous character, confounded with gonorrhœa, or connected with it. I shall briefly touch upon them.

1. *Inflammation of the Vulva and Vagina in Young Females.*

This is not uncommon in the female children of the poorer class, in whom cleanliness is disregarded. The labia swell—their mucous membrane reddens and excoriates—the nymphæ, os externum, and even the vagina, become inflamed—a puriform discharge is formed in some abundance—and the appearance is that of gonorrhœa. The suspicions of the mother are aroused, and, instead of accusing the want of cold water, they fasten perhaps upon a male lodger or a neighbour. The terrified child is often frightened into an avowal of guilt in herself or crime in the man, an avowal the falsehood of which is intelligible, when we remember the voluntary confessions of witches. There can be little doubt that, in cases of this description, the innocent have suffered the law's last penalty. One instance in which I was myself engaged, showed how ignorantly a charge is made, and how furiously pursued. A girl, about eleven years of age, was brought to me

at St. George's Hospital, with this condition of the parts. The hymen was so perfect, that a small catheter would barely pass through the os externum, and there was not the slightest indication of any sort of violence. The mother asked if I thought that her daughter's chastity had been attempted. I replied that I saw no reason to suppose so. Two or three days and Goulard water set matters to rights. About a week after that, I was summonsed to Marylebone, to give evidence in a case of reputed violation. The accuser was the mother of my patient; the accused, a shoe-maker in her alley. There was no circumstantial evidence against him, and mine produced his immediate release. Nothing, however, would satisfy the maternal ire, and, assisted by a mob of women, she made a savage onslaught upon me, from which I was only rescued most ingloriously by the police.

2. *Adhesion of the contiguous Labia.*

Inflammation sometimes leads in children and young females, to a vesicated state of the mucous membrane of the labia, which may extend to the os externum. The denuded corium secretes lymph instead of mucus, and the opposite labia and nymphæ unite. This may oppose the exit of the vaginal secretions, the catamenia, or even the urine. The union, at first, is soft, and consists merely of lymph. With time, it may, and it would, become consolidated by vascular extension and organization. I have seen several instances of this, amongst the out-patients at St. George's, and as the

cases occurred in young children, and the adhesions were recent, I broke them down readily, in the presence of the pupils, with a strong probe or a director. Lint, smeared with oil or with an ointment, should be worn for a little time, and due ablutions should be enforced afterwards.

3. *Encysted Abscess in the Labia or the Nymphæ.*

The usual situation of encysted abscess, a not uncommon affection, is in the substance of the labium. But it also occurs in the nymphæ, and at the os externum. I do not remember having seen it deeper.

The patient complains of pain, swelling, and, perhaps, discharge. There may be constitutional disturbance. On examination, the labium or the nympha may be found much enlarged, tender, tense, and fluctuating. The latter symptom is not always clear. The affection goes on till the abscess bursts, under a bad surgeon, or is opened by a better one. The discharge is dark, and atrociously offensive. The interior of a cyst is exposed, and if left to itself will probably end in an open secreting cavity, or a sinus. It has been recommended to dissect the cyst away. That would be troublesome, painful, and unnecessary. If dressed in with lint, and duly touched with caustic, I have never found it fail to heal.

I imagine that the complaint has its source in an obstructed sebaceous follicle. The site, and the smell of the discharge, render this opinion probable. However that may be, some women are particularly subject

to it. I know a lady who has suffered from it on four distinct occasions, and on every one the cyst was in a different spot.

4. *Fungus of the Meatus Urinarius.*

This is not an exclusive result of gonorrhœa, as it occurs under a variety of circumstances. Still, I have seen it in some instances follow, or appear to follow, the disorder.

Its characters are clear enough. The patient complains of great, and often of exaggerated sensibility in making water—the pain is referred to the orifice of the meatus—micturition is frequent—the bladder perhaps sympathises, and there is spasm and tenesmus. On examination, a small, vascular fungus is perceived at the urethral orifice—it is exquisitely sensitive, and resembles in that respect, as well as in appearance, and, most probably, in structure, the granular growth that forms at the edge of the nail in onychia—it bleeds readily, and has a loose and highly developed nervous and vascular organization.

The subjects are, in general, young and hysterical. The remedy is simple, and its effects decisive. The fungus should be freely destroyed with the nitrate of silver in substance, and, if it reappears, it should be destroyed again. I have never known the application fail.

This must not be confounded (I have known it so) with inflammatory congestion of the erectile structure

which encircles the meatus. I have alluded to that before. It accompanies the inflammatory stage of gonorrhœa, and must participate in its treatment. Caustic, in such a case, is most improper.

5. *Chronic Inflammation of the Erectile Tissue of the Vagina.*

This is analogous to chronic inflammation of the corpus spongiosum in the male. I have never seen but one case of it; which I shall relate.

Case.—A lady, who was cursed with a husband of most dissolute character, had several attacks of gonorrhœa. Gradually, she began to suffer from vague pains in the hips, the groins, and inside of the thighs —the passage of the fæces occasioned uneasiness, which did not appear to be seated in the rectum— there was constant leucorrhœa—and sexual intercourse occasioned considerable suffering. Her usual medical attendant failed to give her relief, and, by his advice, I was consulted.

I found some degree of prolapsus of the rectum, and internal hæmorrhoids. One of them was an erectile tumour; the others were simply enlarged veins. About half way between the os externum and the uterus, the canal of the vagina was contracted—the constriction was not of the bridle character, but was gradually arrived at—the vaginal wall felt thickened and inelastic —the mucous membrane was unaltered, save that it

was decidedly congested—the attempt to distend the vagina by the speculum gave extreme uneasiness. It was clear that the disease resided in the structures external to the mucous, and, by the logical process of exhaustion, its seat was the erectile tissue.

I prescribed leeches to the vaginal walls—fomentations and hip baths—calomel and opium—laxatives. The rigid state of the canal diminished, but, the constriction not yielding in the same proportion, I cautiously divided it with the bistoire cachée, and subsequently used bougies. The patient recovered, although, when I last had the opportunity of seeing her, there was still a want of the due elasticity of the vagina, and a heightened degree of sensibility.

6. *Chronic Inflammation of the Glands of Naboth.*

This is a common and a most annoying consequence of gonorrhœa. It chiefly occurs in abandoned females. The discharge is muco-purulent, but varies in quantity, colour, and consistence, having sometimes the character of pus, and sometimes resembling bird-lime—it resists all ordinary remedies. The speculum discloses the os uteri turgid and vascular, or else œdematous and glairy-looking—the Nabothan glands enlarged to double their natural size, and very greatly congested—the uterine mucous membrane, so far as it is visible, in much the same condition. No doubt, the glands in the uterine cavity participate, more or less, in the state of the superficial ones.

Leeches to the os uteri, when it is loaded and vascular, have proved, in my experience, beneficial. But the principal remedy is caustic. The nitrate of silver should be applied lightly, once in a week or ten days, and a strong Goulard injection should be thrown up in the interim. When the interior of the uterus is affected, the case is anything but promising.

I feel that the imperfections of this account of gonorrhœa in the female exceed even its brevity. But the work had transgressed its appointed limits, and it was necessary to condense and to curtail. The judgment, however, of the reader and the author is often so radically different, that, possibly, that very brevity of which I venture to complain may be its chief recommendation.

On the work itself, the profession must decide, *if* the profession thinks it worthy of that trouble. On looking back, I am fully sensible of faults, which, if it possesses viability enough to arrive at another impression, I shall endeavour to correct. *Alea jacta est.*

THE END.

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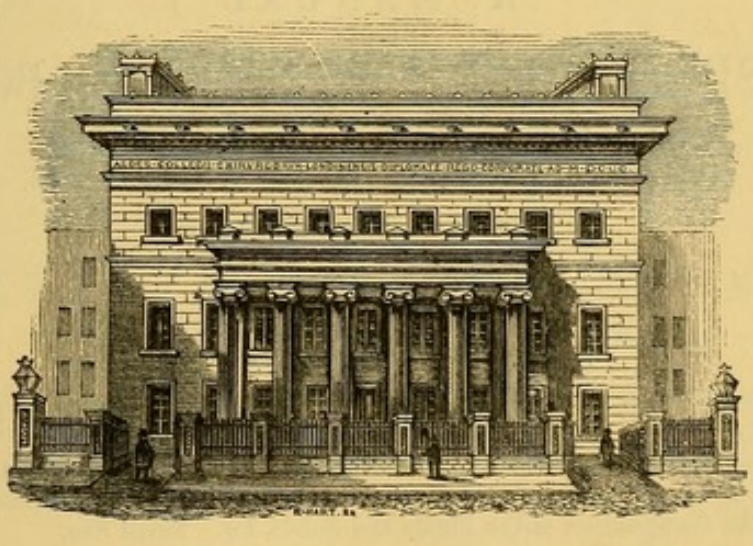

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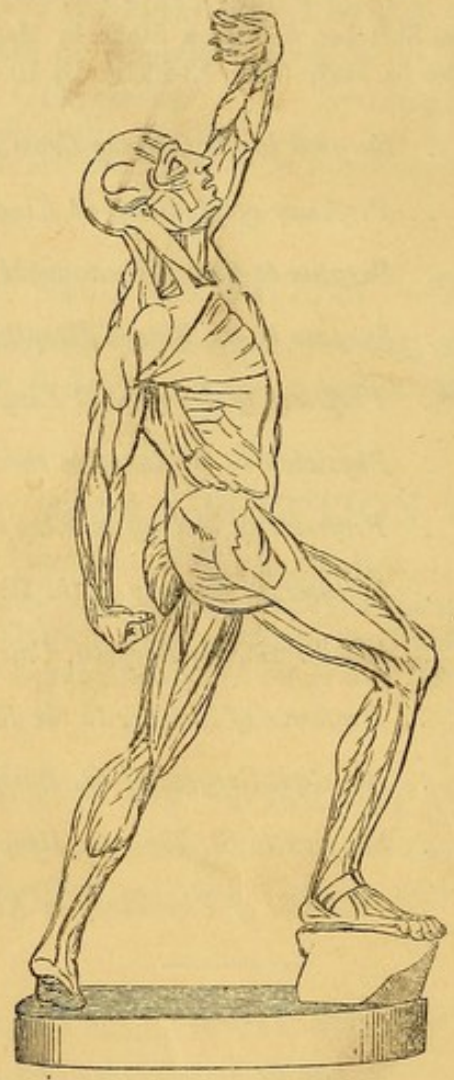

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