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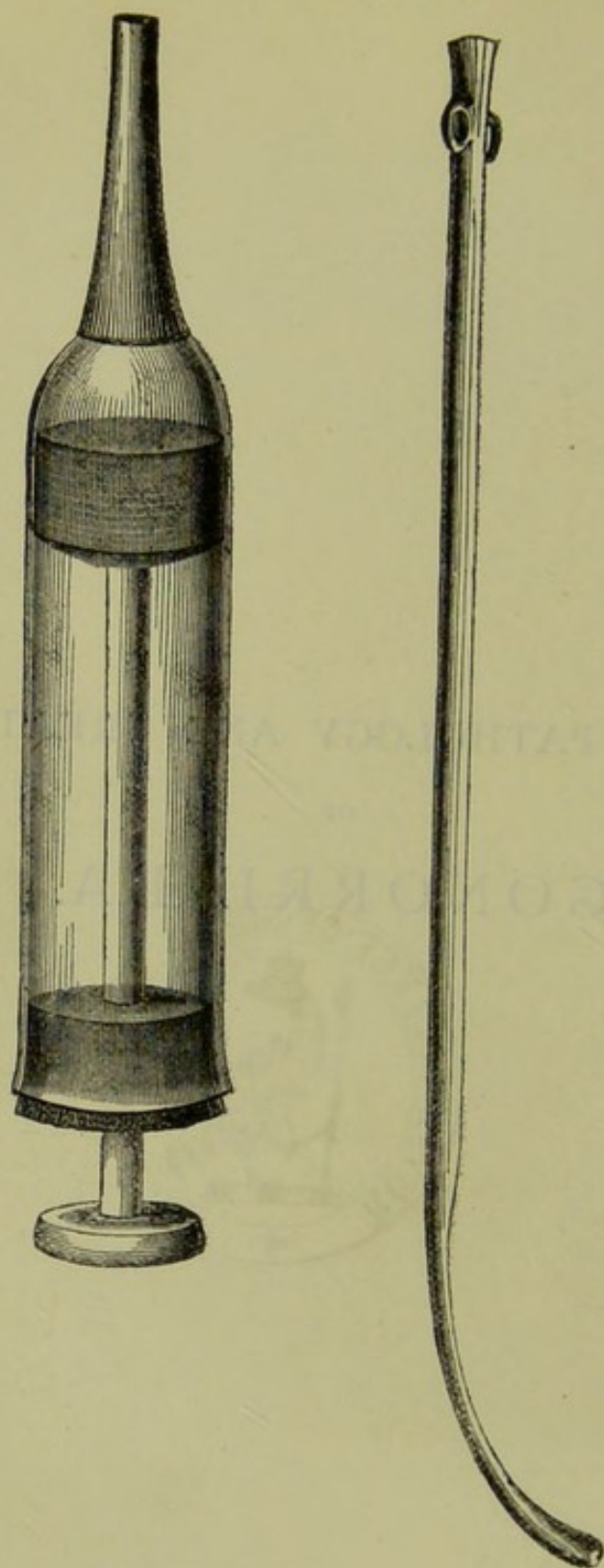
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ON THE PATHOLOGY AND TREATMENT
OF
GONORRŒA.





Long Syringe with detached Tube used for injecting, as mentioned at pp. 181 and 182; the former reduced one-fourth, and the latter one-half.

ON THE
PATHOLOGY AND TREATMENT
OF
GONORRHŒA.

BY
J. L. MILTON,
SURGEON TO ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN.



PRESENTED
by the
AUTHOR.

LONDON :
ROBERT HARDWICKE, 192, PICCADILLY.

1871.

ON THE

PATHOLOGY AND TREATMENT

GONORRHEA.

BY

J. L. MILTON.

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PREFACE.

THE Work now before the reader contains, in an abridged form, the First and Second Editions; the papers on Scalding, Chordee, and Gonorrhœa printed in the *Medical Times*; those on the treatment of Gonorrhœa published in the *Medical Circular*, and several papers read before the Medical Society of London and the North London and Western Medical Societies.

The sections on the Treatment of Inveterate Gleet with Blistering, and on Gonorrhœal Rheumatism, have been revised and amplified.

With the view of reducing the bulk of the work, many of the cases given in the first edition have been omitted, and those which are retained have been selected chiefly as examples absolutely necessary to show the power of certain remedies, or because they illustrate peculiar forms of the disorder which have been rather overlooked.

Whether the attempt now made to prove that all forms of Gonorrhœa, however complicated or inveterate, may be cured without the use of the so-called specifics, is based on sufficient grounds or not, is a point I must leave to others to decide. I can only say that it is made in good faith, and that, if I am deceived, others are deceived also, as the system I have sought to inculcate is certainly making converts.

19, DEVONSHIRE STREET, PORTLAND PLACE,

December, 1871.

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ON GONORRHŒA.

CHAPTER I.

PATHOLOGY OF GONORRHŒA.

Pathology of Gonorrhœa, 1. Genesis of Gonorrhœa—A, in the Male, 1. B, in the Female, 6. Point at which Infection takes place in the Male—Seat of Gonorrhœa in the Male, 10. Period of Incubation, 11. Does Gonorrhœa Infect the System? 12. Prognosis of Gonorrhœa, 12. How long Gonorrhœa has existed, 13.

UNDER the head of Gonorrhœa I propose to include all purulent discharges produced by connexion, or the contact of infecting matter originally yielded by the mucous surfaces of the genital and urinary organs.

GENESIS OF GONORRHŒA. *A. In the Male.*—As regards gonorrhœa in the male, the most natural and practical division of such discharges seems to me to be a separation of them into,—1. cases resulting from connexion with a female suffering under gonorrhœa or gleet; and 2. those which ensue from intercourse with a female labouring under any form of discharge not due to connexion, such as leucorrhœa, prolonged menstruation, an unhealthy, irritable state of the vagina, malignant disease of the cervix, or excoriation and simple ulceration of the os uteri.

Now, though it is often assumed to be an established fact that a female having any one of the affections in the latter category may communicate a discharge to a man who has connexion with her, yet I am inclined to think that far more weight has been conceded to such a factor, viewing it in the light of a common cause of gonorrhœa in the male, than it merits;¹ that it is admitted

¹ M. Diday believes that any woman may give gonorrhœa. “L’amant . . . doit d’abord se pénétrer de ce principe qu’il n’est pas une femme qui ne puisse

in many cases as an individual cause when there was really a very different one at the bottom of the matter, and that instances of gonorrhœa thus produced are exceptional, many of the stories related in support of such a view being open to great suspicion.

It may be as well to examine some of these points a little in detail. The question of the power of the first class of causes to set up gonorrhœa in the male may be regarded as so completely settled that it would be waste of time to dwell on the topic. The others are deserving of more attention. Simple inflammation of the vulva, accompanied by purulent discharge (acute or subacute vulvitis), not, of course, due to connexion, seems at first sight a most likely cause, but I have not met with a single instance of disease thus communicated. Simple ulceration of the neck or mouth of the womb I should be inclined to set down as incapable of conveying infection, nor does the stringy plug of mucus, seen in some women hanging from the os uteri, appear more actively endowed with this quality.¹ According to a report on this kind of discharge given by Dr. J. W. Griffith to Mr. Acton, it contains "neither pus corpuscula nor granule cells." Purulent discharge from the interior of the womb might be thought a more potent agent, and I have been consulted in cases where a slight puriform running had, judging from the evidence, been set up in this way. But I never saw anything which could be put down as gonorrhœa thus generated. M. Ricord, however, mentions an instance in which two young men contracted blenorrhagia from a female affected in this way. There is reason to believe that connexion during or immediately after menstruation produces distinct purulent discharge in the male in some rare cases.² I have met with cases where, with every disposition to be sceptical, I could not shut my eyes to the fact that this was as likely to have been the cause as anything else. Acton and Johnson unreservedly adopt it as a cause.

lui donner la chaude-pisse ; . . . je n'excepte de cet incivil axiome aucun membre du sexe aimable." Of course the power to do this resides in some discharge, but the list of affections which can bring on discharge is appalling, and the perfect innocence of the way in which it is acquired offers no guarantee for safety; metritis, chlorosis, cold, and childbirth may all set up the fatal secretion.—*Exposition Critique*, 1858, p. 515.

¹ *Diseases of the Urinary and Generative Organs.* By William Acton. 1851, p. 39.

² *Diseases of the Genito-Urinary Organs.* By Henry James Johnson. 1851, p. 28.

Dr. Tanner says,¹ "a female suffering from severe leucorrhœa, inflammation of the vagina, simple excoriation of the lips of the uterus, or from malignant aberration of the cervix, can communicate a discharge having all the characters of a gonorrhœa. She may do the same if too indolent to wash herself, or if she permit intercourse during menstruation." Judd distinctly admits² menstruation and fluor albus as causes of urethritis. In none of the very few cases I have seen, where there was reason to believe that any of those causes had produced gonorrhœa in the male, was it accompanied by swelled testicle or irritable bladder; nor have I met with an instance where the gonorrhœal nature of the discharge thus set up was irrefragably established by the fact of the infection being conveyed to a third person; hence, so far as my experience goes, the case is not complete.

About the probability of leucorrhœa being often a cause of gonorrhœa in the male, I am, I confess, very incredulous. While, on the one hand, I have rarely, if ever, sifted a case of this nature without finding in it some strong reason or other for thinking it might be wiser to defer giving any positive opinion, I have reason to believe that men very liable to gonorrhœa perpetually expose themselves to danger in this way, and yet escape; and I may here remark, in respect both to leucorrhœa and menstruation, that I have more than once known a patient who was peculiarly sensitive to the infection of gonorrhœa, have connexion again and again with a woman labouring under leucorrhœa, or so soon after menstruation that the infection has been restored under the influence of the excitement, and yet, never display any symptom of infection, or at most a slight discharge which has ceased with a single dose of a saline and an injection of cold water.

Nor do I stand alone in my incredulity. Dr. Durkee, who has had large experience in these diseases, is as hard of belief as I am. "Were this disease" (leucorrhœa), he says,³ "capable of giving rise to a veritable gonorrhœa, few married men in the wide universe would escape being poisoned with it;" and again,⁴ "My faith in the power of leucorrhœal secretion as a source of blenorragia

¹ *The Practice of Medicine.* By Thomas Hawkes Tanner. 1869, vol. i. p. 306.

² *A Practical Treatise on Urethritis and Syphilis.* By Wm. Henry Judd. 1836, p. 25.

³ *A Treatise on Gonorrhœa and Syphilis.* By Silas Durkee, M.D. Philadelphia, 1864, p. 17.

⁴ *Op. cit.*, p. 18.

in the male is scarcely equal to a grain of mustard seed." "My own (opinion) coincides with that of Sigmund—that gonorrhœa alone produces gonorrhœa."

Dr. Bumstead quotes¹ from Dr. Fordyce Barker a brief description of a disease affecting the interior of the womb, which, while quite innocently acquired, is capable of producing purulent discharge in the male. Dr. Barker considers it to be a peculiar inflammation of the lining membrane of the uterus, under the influence of which the secretion loses its natural alkaline reaction and becomes acid and acrid, as a consequence of which it irritates and excoriates the mucous membrane of the vulva. He has repeatedly known this state induce urethritis in the male. I am not aware whether this affection has been recognized in England.

But admitting that urethral discharges do appear in men as the result of connexion with women suffering under one of the conditions just spoken of, in whom there is no reason for suspecting a present or previous blenorrhagia, it must, I think, be equally admitted that the facts supposed to establish this are, when we come to sift the matter closely, generally vague and few; that the discharge thus established is usually milder than real gonorrhœa, being rarely accompanied by irritable bladder and swelled testicle, and that the proportion of infection to exposure is not large; whereas the facts establishing gonorrhœa as a consequence of gonorrhœa are ample and positive enough; swelled testicle and irritable bladder are common results; severity is the rule rather than mildness; infection is almost a certain result when no precautions are taken to guard against it; and, lastly, this infection may be, and is, reproduced to almost any extent, even under much the same circumstances which seem to interfere very materially with the diffusion of it from the first-named class of causes.

I am well aware that numerous histories exist showing, in the opinion of those who relate them at any rate, that gonorrhœa by no means unfrequently arises at once from sexual intercourse with women who have never suffered from this disorder; the works of M. Ricord, Mr. Johnson, and Mr. Acton, for instance, contain several, related in all good faith, and no doubt constituting very strong evidence in support of the position taken up by these gentlemen. But unless the issues can be narrowed to points really

¹ *The Pathology and Treatment of Venereal Diseases.* By Freeman J. Bumstead, M.D. Philadelphia, 1866, p. 63.

bearing on the question,—unless the cases are individually so complete as to count for positive testimony,—they carry no more weight collectively than singly. When it can be shown, in even a very few instances, that the female was not suffering, and most probably never had suffered, from gonorrhœa or gleet; that the person infected was himself quite free from any relics of a previous attack of this kind—a feature too often overlooked; then I apprehend the believers in the specific nature of gonorrhœa in its present form must give up the cause as lost. Till then I think we are justified in assuming that the matter, by which gonorrhœa is communicated, is as truly specific as the lymph of the cow-pox vesicle,¹ and that the supply of the infecting material is kept up in the same way in both cases—namely, by propagation from individual to individual. Of course, this does not mean asserting that it is never generated spontaneously in the female; possibly such may be the case at times. The disease must have begun with some individual, and accordingly there is nothing so very improbable in its beginning again in the same way.

I need hardly remind the reader that this view runs quite counter to the doctrine held by M. Ricord, that a woman in whom the parts of generation are in a perfectly healthy state (*état parfaitement sain*), and who has never had gonorrhœa, can yet give this disease to a person having connexion with her. Some of the facts narrated by M. Ricord are very strong; indeed, so shrewd and careful an observer would scarcely have broached any doctrine not supported by weighty evidence; still, after carefully weighing them, I think I am justified in abiding by what I have said.

There is ground for thinking that a very small amount of gleet in the female will convey infection. Thus, for instance, a gentleman had connexion with a young person whom he had long known intimately, and whom he had excellent reasons for believing above suspicion. It was followed by a discharge, considered by his medical attendant, a gentleman who had a large practice in those disorders, to be gonorrhœa. This surgeon examined the girl and stated that there was nothing beyond a very slight leucorrhœal

¹ “The common cause [of gonorrhœa] is the application of gonorrhœal matter during sexual intercourse. Although the existence of this animal poison has only been inferred from the effects, yet there can be little doubt that there is such a poison of a special nature, and that it does not arise simply from indiscriminate sexual intercourse.”—Tanner, *Op. cit.*, vol. i. p. 306.

gleet, scarcely more than the natural mucus ; in fact, he more than hinted that she could not give any infection. Connexion again took place and was again followed by the same result, and this happened twice afterwards. Yet, though repeatedly examined, nothing was ever seen beyond a little redness and tenderness of the upper part of the vagina and some glairy mucus. In order, however, to remove all chance of further mischief, the surgeon cauterized the vagina most thoroughly. Some little time after this she married, and within a few days her husband began to show unmistakable signs of gonorrhœa, from which, I may state, the gentleman spoken of was still suffering, and for which he was under my care. As the husband's symptoms were severe, while his wife had, as before, little or nothing the matter with her, I examined carefully into the case, and found, after considerable cross-questioning, that three years previously to all this she had had connexion with a gentleman, her first indiscretion ; that she had by him been infected with gonorrhœa ; that she had got quite well, and up to the time of infecting the person first spoken of in this narrative had believed herself perfectly cured,—an opinion which seems certainly to have been shared by her medical attendant.

B. In the Female.—I believe gonorrhœa to be here always the result of the contact of matter derived from a person suffering under gonorrhœa, generally, of course, communicated by sexual intercourse. In newly-married women a good deal of purulent inflammation, pain and swelling of the vulva, redness and heat of the vagina, ardor urinæ, and uneasiness in sitting or riding on horse-back, may make their appearance, and in some cases excite suspicion that gonorrhœa has been communicated. But the course of the disorder soon reveals the difference, for though in a few rare cases the symptoms rise to such a height as to require medical attendance, yet for the most part they pass off spontaneously, or at the worst yield to any mild simple treatment ; whereas true gonorrhœa is a more severe and infinitely more obstinate affection, generally demanding, in the long run, a decided and sometimes prolonged course of treatment. At the same time I feel bound to admit that this view is in direct opposition to that held by some writers. Dr. Bumstead, for instance, says he has had reason to believe that the frequent repetition of the sexual act has produced gonorrhœa in women free from any previous disease. Again, an

affection due solely to repeated and unwonted intercourse rarely extends to the urethra, bladder, womb, and ovaries, as sometimes happens with genuine gonorrhœa. I know cases are cited in which such symptoms were found, and where the husband most strenuously denied having had any infection at the time of marriage; but it is as certain as any fact can be that many men marry without being perfectly cured—some from natural laziness and neglect, some because they really believe they are cured, and a third class because they must fulfil the engagement at the stated time, &c.

Again, discharge from the urethra will occasionally show itself in a man labouring under calculus, gout, a large discharge of urates, uric acid, or scrofula.¹ It appears also to have resulted occasionally from the use of asparagus and certain other articles of food, and to have followed blows, violent exercise, such as galloping on a bare-backed horse,² the passing of a bougie, a fact about which I should feel rather doubtful unless the patient were suffering under gleet or a tendency to urethral discharge set up by stricture; masturbation, of which I have not seen an instance, though I have known free purulent discharge come on in a patient with spermatorrhœa; dentition, piles, ascarides, and epidemics, the influence of which latter in adults is open to grave doubts. It is also said to accompany paraplegia sometimes. I have not seen an example of this, but I can conceive it to be quite possible, as I have certainly observed a considerable amount of purulent discharge in elderly men which I could not trace to any source.

No doubt the connexion between the assumed cause and this particular effect is in some instances improbable enough. Imagination here often lends wings to facts. Thus, *e.g.*, Dr. Tanner was present when a surgeon suggested that making water in the night air might bring on gonorrhœa; and Mr. Johnson relates³ that a patient wanted the students at St. George's Hospital to believe that in his case gonorrhœa had been brought on by the exertion of lopping a tree; he having nothing the matter with him when he began his task and finding the discharge fully developed when he came down!

¹ Johnson, *Op. cit.*, p. 39.

² Mr. Johnson relates a case of acute urethritis in a gentleman from being thrown with violence against the pommel of the saddle.—*Op. cit.*, p. 36.

³ *Op. cit.*, p. 27.

There is equally little doubt that many men are possessed with a desire for finding any reason but the right one. It is not that they wish to deceive the surgeon. Most probably it arises as much as anything from a desire to extenuate the responsibility of the female, or to set up a higher standard for her health and physique than they are entitled to. Be that as it may, it is quite certain that they will snatch at a straw to save their drowning theory, and are only too happy to find the surgeon concur with them in assigning the disease to such innocent causes as a strain, a cold, &c.

Still, making all allowance for bad logic, for the morbid desire to impose on medical men on the one hand, or on their own judgments on the other, it must be granted that cases of discharge from such causes are met with. Now, though I have known men so infected have connexion, not only with their wives, but with other women, I have never seen undoubted gonorrhœa thus brought on in the female, and I can therefore only conclude that as regards the genesis of gonorrhœa in her, such an event from such a cause is rare.

It is quite certain that some of those women who have suffered from gonorrhœa and discharge produced by other causes than connexion, draw a broad and practical distinction between the two. Among other cases I may state the following :—

A lady was infected with gonorrhœa by her husband. After being under the care of two surgeons, one of whom practised chiefly in this special branch, she consulted me. I had great difficulty in curing her, and only succeeded by means of repeated blistering and cauterizing the vagina and mouth of the womb freely. She now separated from her husband. A considerable time after this she married again, and again contracted gonorrhœa, which also required a considerable time to remove. Seven years subsequently she consulted me for a muco-purulent discharge from the vagina. Knowing how severely she had suffered on the two former occasions I gave a guarded opinion as to the time it would require for a cure, but to my surprise she avowed her conviction that she would soon be well, as the discharge had not arisen from connexion, and as she had three years before suffered from a similar, but more severe attack, after long exposure to great cold when travelling, which though accompanied by considerable pain and even the formation of abscess, got quite well in a few weeks with very simple treatment. It was

a very different affair for all that, she said, from either gonorrhœa. The result in the present case proved that she was right, as she was well in ten days, though she only took some saline and merely used a lead lotion.

Taking all things into consideration, it seems a fair inference that gonorrhœa cannot be set up in the female by connexion, unless there are pus corpuscles in the secretion which conveys the infection. I need scarcely say that it is not very easy—perhaps it is impossible—to prove such a point, especially as one source of observation, the existence of pure mucous gleet in the male, is not very common. The only evidence I have to offer is simply that I have never been able to find, either in the practice of others or in my own, a single complete history of a case of gonorrhœa being communicated to the female, unless there was positive proof of, or very strong reason to suspect, the existence of a certain amount of pus in the discharge by which she was infected. Dr. Durkee says¹ that if there be no pus cells in the discharge, there is no danger of infection, and the reader will see that I agree with him. The requisite amount, however, seems in some cases to be very small.

A lady, whose husband had brutally assaulted her, left him in consequence. As her womb was thought to be injured, I carefully examined her, and certainly I had every reason for saying that she was at this time perfectly healthy. Some time afterwards she became attached to a gentleman who had been very kind to her in her troubles, and who occasionally consulted me for a very slight gleet; so slight, indeed, that sometimes it left no mark on his shirt, sometimes a pale one not bigger than a sixpence, but never more than this. This fluid was simply whitish mucus. Had the patient asked me the question, I should have said that such a discharge, albeit the relics of a gonorrhœa contracted two years previously, was innocuous; fortunately he took this responsibility off my shoulders. The attachment was followed by connexion, of which I first became aware in consequence of the lady presenting herself in great distress, with every symptom of a violent gonorrhœa, from which she suffered very severely. Of course, the infection might have been derived from another source; but knowing her family intimately as I did, having always heard, even from her husband, that her character was up to this time irreproachable, and that her disposition was averse

¹ *Op. cit.*, p. 29.

to anything like sensuality or impropriety, I think it may be inferred that she caught the gonorrhœa from my patient.

It does not, however, in the least follow from all this that such a discharge must necessarily convey infection. I believe most gonorrhœas, if traced home, would be found to have sprung from a far more active and less doubtful source. But just as there are some men so constituted that they are almost certain to catch gonorrhœa nearly every time they commit an imprudence, while other men notoriously court risk and yet escape, or if they do become infected, the gonorrhœa dies out of itself, or yields to such simple remedies as a few injections of cold water; failing, however often the attack may be repeated, to bring on any of the more severe results, or to entail more than some slight inconvenience; so does the susceptibility vary in women. Some will suffer most severely and for a long time where others would probably escape; or again, a woman may be found so constituted as to expose herself with impunity to contagion in its worst form. Frequency of intercourse may have something to do with this power of resisting infection, perhaps more than is generally thought, but it clearly is not the sole agent.

Point at which Infection takes place in the Male; Seat of Gonorrhœa in the Male.—There seems to be a certain amount of confusion on these points. Infection most probably takes place at the reflection of the mucous membrane from the urethra over the glans: the lip of the urethra. I imagine no fluid from the female can possibly enter the urethra during connexion, owing to the turgescence of the penis completely closing the passage; and were any introduced, it must, one would think, be forced out again when the semen is expelled. The glans seems in no way implicated in the process, as gonorrhœa is met with often enough in Jews and others who have the glans uncovered from youth upwards, and in whom the skin covering it is so dry as to be apparently quite insusceptible of infection. Moreover, the symptoms at the commencement are, I believe, invariably limited to the neighbourhood of the lips; chordee, pain in the perinæum, irritable bladder, and swelled testicle, never appear till the inflammatory symptoms near the mouth of the urethra have lasted some time.

I shall perhaps be told that the presence of chancre in the male urethra is fatal to such a view, as in this case discharge from the female *must* be carried down the urethra. There is, no doubt, a good deal of force in the argument. I am myself disposed to think,

from the presence of chancre manifesting itself so generally within a very limited range of space, that the chancrous action begins at the mouth, and when it does not expend its force there, spreads in a diffused form, like the gonorrhœal action itself, till it reaches a part of the urethra where, owing to peculiarity of tissue or tendency to take on an ulcerative action, it can develop itself. My reason for assuming that something of this kind occurs is, that chancre has been found so low down the urethra (and even in the bladder), that it really requires a stretch of the imagination to believe any fluid from the vagina could be propelled so far along a narrow and, at the time, swollen canal; especially considering how strong the disposition is of the urethra to extrude everything in the shape of a foreign body, and even its own secretions when more copious than usual.

The stage of gonorrhœa varies most materially, both according to the date of the infection at which the patient is seen, and the disposition of the urethra to take on the purulent action, a disposition which is not always alike in the same individual, and which is certainly widely different in different persons. At the outset the seat of the disease is, as I said, limited to the very vicinity of the mouth of the urethra, but after a few days have elapsed we find every degree of severity as to extent. In some persons the inflammation spreads rapidly, in others slowly backwards, reaching in succession the bulb, membranous, prostatic portions of the urethra, the bladder, and so on. I tried hard for a long time to make out if there were any law under the influence of which this extension takes place, but after collecting a great number of observations I gave it up.

Period of Incubation.—This has been so variously stated, that if we allow equal weight to all who have given us the result of their observations, no time can very well be laid down. It is, of course, very often a most important question for the patient's peace of mind to know at the expiration of what term he may fairly calculate on escaping from the results of indiscretion; but really the question is not very easily answered, and I believe the only safe way of dealing with it is to extend the limit beyond that often laid down in works. It is true that in the case of a first gonorrhœa, the symptoms, though slight, usually set in quite unmistakably at the end of three, four, or five days; but it is equally true that often enough in after-attacks they appear much later, and not infrequently in so insidious a manner that both surgeon and patient at first look upon what is destined to ripen into a true gonorrhœa, as "a mere touch of

gleet." The time at which the signs of infection appear in the female is by no means easy to decide. The hidden site of the part, and the ignorance of many women as to the nature of the complaint, and, indeed, of such things in general, make it more difficult to fix the era of its outbreak with exactness; but the probability is that it is much the same as in men.

Does Gonorrhœa infect the system?—Dr. Tanner says that the occurrence of such a disease as gonorrhœal rheumatism can only be explained on the supposition of systemic infection. I am not quite clear that I understand exactly what systemic infection is. Extension of the purulent inflammation, Hunter's sympathy of continuity, either in all its integrity or in a modified form, may be imagined as possible all along the mucous membrane of the genito-urinary tract; indeed, there is every reason to believe that it takes place sometimes. Again, inflammation of the contiguous parts (sympathy of contiguity) is clearly excited by gonorrhœa, and is comprehensible enough. But I see neither proof nor possibility of the whole frame being affected; of the lungs, brain, heart, liver, muscles, and bones, being enveloped in one common mass of disease, and yet this is what systemic infection must mean, if it mean what it professes to do. Possibly Hunter's "remote sympathy," of which he gave some instances, and of which I think many more might be given, offers a clue to the solution of the problem.

Prognosis.—According to some writers, gonorrhœa is so mild a complaint as scarcely to require any rules for treatment. I heard a consulting surgeon, in large practice, assert that he always cured his patients in a week or ten days. Dr. Chambers, of St. Mary's Hospital, considers¹ that gonorrhœa is never obstinate or of long duration, unless rendered so by bad treatment on the part of the surgeon, or folly on that of the patient. Like a mild catarrh it passes off of its own accord, if the patient will only be reasonably quiet and the surgeon abstain from mischievous interference. The reader must bear in mind that these assertions are not made by any mere tyro, but by a physician to a large hospital, a Lumleian lecturer, and a well-known author.

This view does not in any way harmonize with my experience, which is that many cases of gonorrhœa are only subdued with great

¹ *Clinical Lecture on Gonorrhœa and Imaginary Spermatorrhœa.* By Thomas K. Chambers, M.D., Fellow and Censor of the College of Physicians. *Lancet*, 1861, vol. i. p. 582.

difficulty, and Dr. Bumstead says¹ gonorrhœa is a disease which, independently of treatment, rarely terminates in less than three months; that,² laying aside those cases which are seen in the first stage, and which are speedily cured by the abortive method, its average duration under the hands of the best surgeons may be estimated at three or four weeks, and that, probably, greater success is not attainable by any treatment we are acquainted with. Dr. Durkee speaks pretty much to the same effect. "The precise time," he says,³ "requisite for a complete and permanent restoration of the parts to a normal state is as uncertain as the winds;" and Mr. Johnson puts down⁴ the average duration of *the acute stage* at three weeks.

How long Gonorrhœa has existed.—I suppose this oft-mooted question may now be looked upon as settled, and that even those who have only superficially studied the subject, will admit that we can trace gonorrhœa as far back as we can trace any disease with certainty. The hypothesis that it made its first appearance in Europe, along with syphilis, towards the close of the fifteenth century, scarcely requires to be refuted any longer. Most likely it began with the introduction of artificial forms of life, and it may be pretty safely assumed that it will die out when they are extinct, and no sooner.

Dr. Bumstead gives in his work⁵ a most lucid history of this disease, tracing it from the times of Moses through the greek and roman writers, in the writings of Mesne in 904, and Hali Abbas in 980, up to the times of Michael Scott, John of Gaddesden, and John of Ardern, from which date onwards evidence of its existence continues to multiply. I have much pleasure in referring the reader to this part of Dr. Bumstead's excellent treatise, which every one who reads it must admire.

¹ *Op. cit.*, p. 63.

² *Op. cit.*, p. 100.

³ *Op. cit.*, p. 43.

⁴ *Op. cit.*, p. 81.

⁵ *Op. cit.*

CHAPTER II.

TREATMENT OF GONORRHŒA.

Difference of Opinion as to the best Method of treating Gonorrhœa, 14. Continuance of the same Fundamental Principles of Treatment, 15. Sydenham's Treatment, 19; Moyle's, 21; Marten's, 21; Turner's, 23; Cockburn's, 24; Astruc's, 24; Hunter's, 26; Howard's, 26; Jesse Foot's, 27; Sir Astley Cooper's, 27; Judd's, 28. Treatment of the present day, 28; at Guy's Hospital, 28; London, 29; St. Bartholomew's, 29; King's College, 29; St. Mary's, 30; Charing Cross, 30; University College, 30; Middlesex, 31. Mr. Chalmers Miles's Treatment, 32. Expectant Treatment, 34. Gonorrhœa as a Cause of Stricture, 36. Table I.—Cases of Gonorrhœa treated in different ways, 38. Homœopathy, 38.

EVERY candid observer will, I think, admit that there is room for improvement in the treatment of this disease, and that the ordinary methods, one and all, fail at times. How frequently, it is impossible to say, for though some authors speak honestly enough, others are silent on this point, or simply indulge in platitudes, which leave the reader little if any wiser than before.

At the close of the seventeenth century four hundred works on syphilis had appeared, most of them containing some account of gonorrhœa. The classed catalogue of the College of Surgeons of London mentions nearly a quarter of a thousand, some of which have gone through three or four editions; and finally, the journals contain thousands of papers on the subject. Yet the publication of such a host of writings, so far from tending to settle differences of opinion, has simply left matters much where they were; and though treatment on the whole has improved, there is as much discrepancy as to the best mode of treatment as in the days of Turner and Astruc. Scarcely two writers hold the same opinion, and this disunion has naturally spread through the profession.

It would now be a useless task to compute how many systems have arisen only to decay. It is enough, that nearly every plan has, at one time or another, been put upon its trial, and the successive abandonment of so many various modes is enough to raise strong suspicion that they were all, more or less, seriously at fault.

Purgatives and diuretics, astringents and laxatives, stimulants and sedatives, demulcents and alexipharmics! mercury and iodine, specifics and treatment on general principles, have all, at times, been the ruling favourites till displaced by new candidates; "thus proving that the specific had not yet been found."¹ As to injections, nearly everything that could be used in this shape has been used, and while some authors put great faith in them, others denounce the employment of such dangerous means.

The external treatment has been just as erratic. One surgeon recommends that the patient should be macerated for five or six hours in a hot bath, while Ricord considers the use of the hot bath, even in the usual form, calculated to develop gonorrhœa. Some surgeons use evaporating lotions or ice, till the penis is nearly frozen; others direct the patient not to make water in the streets, lest the penis should take cold,² humorously telling him at the same time to keep himself cool!

Continuance of the same Fundamental Principles of Treatment.—What may, I think, be called the fundamental principles of treatment, of that treatment which is most largely adopted in each successive age, have, excepting the use of injections, changed less amid all this disparity of opinion during the last century or two than might be supposed. The handling of the subject is more scientific, but possibly not so much more likely to promote success, the grand test after all. The vague and elastic rules of treatment laid down in text-books and dictionaries; the want of tangible proof as to the proportion between cure and failure, mean in plain words, old results in a more modern dress and phraseology.

Judging from what I see and hear, treatment is rather regulated by the impression some striking case of cure or failure has made at the outset of the surgeon's career, or by the views some favourite teacher or eminent specialist may have inculcated, than by con-

¹ Dom. Cirillo.

² See also the explanation, mentioned by Dr. Tanner, of the origin of gonorrhœa from making water in the cold night air, quoted at page 8.—*The Practice of Medicine*. By Thomas Hawkes Tanner. 1869, vol. i. p. 307.

clusions drawn from long and carefully watching the action of medicines. If this be the case, there is no cure for the uncertainty in the present state of things; and the sole remedy would be a system of observation on a simple, uniform plan, *which dealt only with certainties, and which admitted no case as cured or uncured unless the surgeon saw it for himself*; where the history comprehended the beginning and ending of the disease. But of such a forward step, I have no hope. The tendency of the age is to exalt scientific experiment, however reckless, useless, and dangerous it may be, *and to despise the teachings of experience*, as if to gather these did not demand as much toil and self-sacrifice as the other. As a striking instance of this tendency, which has kept and must keep treatment at a stand-still or even throw it back, I may remark that in one of the most recent and able works on syphilis, that of Mr. Rollet, a large volume be it remembered, only eighty pages are devoted to treatment, of which *ten* are taken up with the treatment of blenorrhagia.

The point appears to me of so much importance, that at the risk of appearing ever so tedious, I will take an instance of the vagueness of the rules laid down by our teachers. I select it from the writings of an eminent surgeon. The author in question tells us that gonorrhœa must be treated on *general principles*, and that though it must be admitted that the disease is now and then cut short by an astringent or caustic solution, it is more the result of *chance than judgment*; and in many instances, where it has been supposed that this was the case, gonorrhœa has in reality not been present.

This is all *en règle*; but what a picture of uncertainty, what a maze of doubt it reveals! How much better it would be to say at once to the pupils,—“Gentlemen, you must first of all check the inflammation by antiphlogistics,—not that I ever convinced myself by experiment that these remedies have any power to effect this purpose, but because so many excellent authorities have insisted upon their efficacy. Perhaps they knew no more about the matter than you or I do: however, that is no business of ours; the orthodox plan is to pay them due respect, and quote them on all fitting occasions. Then, if you think it right, and I have no rule to offer you, specifics may be given; they may cure the case, or, which is just as likely, do no good. As to injections, I cannot say that I have myself seen an instance in which stricture, abscess, or swelled testicle resulted from them when properly given, even in the acute

stage ; but then the authorities I have consulted very properly dread the result of imprudent haste. If these remedies fail, you must use your own discretion about trying others. When you have exhausted your stock, send the patient to the seaside, or anywhere else, so long as you only get rid of him. Do not worry yourselves about failure. You have done everything sanctioned by the legitimate practice of surgery, and have therefore nothing to reproach yourselves with."

Such language as this would be honest, but then it would be injudicious. Men like Ricord and Hebra can and do say things of this nature, but what is quite orthodox at Paris and Vienna could not be tolerated here. A writer who would venture to speak his mind so openly in this land of liberty would soon be lectured by the press on the impropriety of his conduct.

I am continually asked if I have tried some new remedy—the copahine-mêge, iodide of iron, chloride of zinc, essential oil of cubebs, oil of sandal-wood, &c.,—to which I simply reply, that I am very glad to try any remedy that is recommended upon good grounds, but as not one in twenty comes within this category, I do not try more than that number.

In fact, there may be too much of a good thing ; simply adding to the list of remedies, which, Heaven knows, is already long enough, and many of which are just as useful as a " beane putte into ye harte of a black cat," and divers other pleasant nostrums of bygone days, can do no good whatever. Any simple remedy and mild injection will cure most cases of gonorrhœa. Several of these may be found every year in those valuable repertories, Schmidt's "Jahrbuch" or Canstatt's "Jahresbericht," and a reader tempted to go into the literature of this subject might be interested and amused to see how many are periodically introduced as though they had never been heard of before. Those fond of new modes of treatment are therefore able to gratify their taste ; but unless it could be shown that these novelties really cure *more* cases out of a given number than the remedies every person is familiar with, or are specially adapted to a particular class of cases which can be diagnosed at the outset, their introduction would only add to the existing confusion. I therefore propose to examine only those which seem exceptionally entitled to notice.

It is perhaps this incessant supply of novelties that has rendered men so inattentive to the few really valuable improvements that have been made in the treatment of gonorrhœa, such as the addi-

tion of long tubes to syringes, the use of *fresh ground* cubebs suggested by Mr. Norman,¹ and the separation of the effete and nauseous parts of copaiba from the more useful constituents by Mr. Thorn.² The discoveries of Mr. Norman and Mr. Thorn may have been useless. I have had no opportunity of making such observations as to enable me to form an opinion, and therefore offer none. What I have to deal with is the total neglect shown by the medical public on both occasions. Judging as well as I can, I should say it is much more likely that they were of great value, and that if properly worked they would have materially alleviated and shortened the sufferings of thousands of patients. There was quite evidence enough in their favour to have recommended them to the notice of medical men. Yet they were honoured with no more attention than if they had belonged to the class of trashy and ephemeral papers on such topics so often seen in our journals. Mr. Thorn's preparation was carefully tested by the late Mr. Tyrrell, and found most efficacious. Yet his work was received with so much coldness, that he soon after threw up the subject in disgust, and left England for a country where he could look for more fair play. Had he scientifically destroyed a sufficient number of helpless animals he might possibly have been now enjoying a competence here, and his method of purifying copaiba might have found a place in the British Pharmacopeia.

It was represented to me that a work of the kind now before the reader would be incomplete without a history of the treatment of gonorrhœa. The suggestion is no doubt founded on a correct view of the case, but on going into the literature of the subject, I found that to execute such a plan thoroughly would carry me too far. Besides, after all, a history of this nature would be more amusing than instructive. It might be made to present a curious picture of bygone times, but it would convey little real information; for it must necessarily be a narrative of the same principles of treatment, recurring again and again under almost countless changes of form and authorship. However complete it might be, it must remain chiefly a collection of theories started only to be forgotten, of ever-changing fashions in therapeutics, varied here and there by a discovery made apparently only to be ignored or censured.

¹ See a paper on this subject read by Mr. Norman before the North London Medical Society, and published in the *Lancet*, 1856, vol. i. p. 631.

² *On the Treatment of Gonorrhœa by a new preparation of the Balsam of Copaiba.* By James Thorn. 1827.

The reader was probably startled by an observation in one of the preceding paragraphs, viz., that treatment had not altered so much in the last century or two as might have been expected ; yet there seems no other conclusion to arrive at. It is true the outward form, the husk, so to say, has somewhat changed ; prescriptions are less complicated, medicines are given in milder doses and rather less nauseous forms. The language of medicine is no longer what it was, and old terms and old formulæ have died out, while new ones have sprung up ; but beneath all this the essence of both practice and theory has remained much the same. The discrepancies of to-day are but amplifications of those which prevailed when Howard commented on gonorrhœa "having been so often cured in a great variety of different ways." In this instance we might say of medicine as of language, that while the outer semblance is in a state of perpetual mutation, the mould in which it was first cast, the radical structure and nucleus, undergoes but little change.

With the reader's permission, I will endeavour to illustrate this by means of a few instances, beginning a little later than the middle of the seventeenth century with the famous Sydenham.

Sydenham's Treatment.—Although this great man separated the treatment of "gonorrhœa virulenta" from that of venereal disease, yet even his acute and diligent observation did not suffice to show him that there was any fundamental distinction between the two. He describes gonorrhœa as beginning with "an uncommon pain in the parts of generation and a kind of rotation of the testicles," while in those who have not been circumcised, "a spot not unlike the measles appears on the glans ;" then the discharge from the urethra comes on, and "when this disease is more virulent and degenerated into the pox," "this matter becomes green, and is mixed with a watery humour streaked with blood." The description is not very clear or satisfactory ; but the fact is, men had removed the landmarks set up by the old writers ; they had long ceased to observe and discriminate these affections as accurately as their predecessors. The writers of the sixteenth century, for instance, knew well that syphilis was communicated by methods which those of the eighteenth century denied, but which the investigations of our day have shown to be quite correct. It is therefore in no way surprising to find, in Sydenham's time, syphilis, gonorrhœa and spermatorrhœa confounded together, or to see this confusion maintained till Benjamin Bell separated the two former.

The first thing that strikes us in Sydenham's treatment is a feeling of astonishment that he did not kill a good many of his patients, or give them bleeding piles, tenesmus, and excoriation of the anus. Possibly, like Howard,¹ he looked upon piles as rather a favourable omen. He directs² "three drachms of cochia (colocynth) pill, a drachm of extract of ruidius, half a drachm of resin of jalap, and half a drachm of resin of scammony," with "sufficient of opobalsamum" to make them into a mass. Of this mass two scruples, in the form of *four* pills, were to be taken *every morning*, till the running had grown considerably paler and the scalding abated. I fancy the patient must often have grown paler under such handling. Those who were "hard to purge"—and I should say they must have been decidedly "hard" when their intestines resisted such a stimulus,—were directed to take, in addition, his "purging potion" now and then, with two drachms of the syrup of buckthorn and the same quantity of the electuary of the juice of roses. If the cure went on slowly, eight grains of "turbith mineral" were given every five days, or half a drachm of "pills of two principal ingredients" and a scruple of "sweet mercury" made into a mass with opobalsamum; not a bad dose. In addition to these remedies he gave opobalsamum³ in doses of twenty-five drops every night, or "the quantity of a hazelnut of cypress turpentine." Sometimes he gave every second day half a drachm "of the pills of two principal ingredients," and three drops of opobalsamum. He also gave half an ounce of Venice turpentine occasionally in a clyster. The patient was always to be "blooded" once or twice towards the middle of the course: rather a bold step, for generally speaking men at that time dreaded the idea of venesection and antiphlogistics, for fear of inducing absorption of the peccant matter. We smile at such absurdity, at treatment founded on preconceived notions of what must result, and continue the same practice in another form.

¹ "When it [the treatment] occasions piles, and those piles bleed freely, such discharge must tend greatly towards a cure [of the gonorrhœa]; and when they are distended and inflamed without discharge, they draw off irritation from the urethra."—*Practical Observations on the Natural History and Cure of the Venereal Disease*. By John Howard. 1787, vol. iii. p. 26.

² *The Works of Thomas Sydenham*. 1788, vol. ii. p. 453.

³ Balm of Gilead, procured from the *Balsamodendron Gileadense*, one of the *Terebinthaceæ*. Physiological effects similar to those of copaiba and the turpentine. Disused in Europe.

Sydenham used also to order his patients a "cooling or thickening diet," one item of which was "emulsions of the four greater cold seeds." For swellings of the penis or testicle he advised elaborate fomentations of marshmallow, white lilies, mullein, elder, camomile, melilot, flax and fennel seeds, for the particulars of which I must refer the reader to his works.

Supposing the drugs used in Sydenham's time were pure, we must believe that his patients had greater powers of endurance, or more faith in their physician, than those of the nineteenth century. A scruple or half-drachm dose of such pills as he prescribes would produce a rather startling effect on a patient in this degenerate age, and nowadays the "turbith mineral" (the yellow subsulphate of mercury) causes vomiting of the most violent kind in half the quantity prescribed by Sydenham.

I now proceed to examine the practice of a somewhat later date, selecting as specimens Moyle, Marten, and Turner.

Moyle's Treatment.—Moyle directs¹ his readers to purge well for the running, but not to give anything to stop it, "lest it mingle with the Blood, and so become a confirm'd Pox"; and not to bleed, for the revulsion thereby occasioned "makes for the malign Atoms or Fumes to ascend from the Pocky ferment in the Inferiour parts and tints the blood in the Superiour." His purgative consists of pil. rudii ℥j. ; resin jalap, gr. v. ; ꝑ dulc. gr. x. ; every second day for five times. The patient is to "forbear strong liquors," and when "the Malignity is carried off" he is to take two drachms of cypress turpentine in an emulsion night and morning "for five times going." This generally cured the patient, but if a "Gleeting" remained he was to purge again.

Marten's Treatment.—Marten belonged to quite as rough a school as Moyle, but one evincing a much lower grade of professional feeling; for the old "sea-chirurgion" is honest and open, whereas Marten kept his remedies to a great extent secret. He is communicative enough about some of his affairs, such as the presents sent to him by grateful patients, the premium which he received with his apprenticeship, the price for which he sold his "general Business," or his benevolence in curing the poor gratis,² but the reader is left in the dark

¹ *The Sea-Chirurgion.* By John Moyle, Senior, one of her Majesty's Ancient Sea-Chirurgions. London, 1702.

² "The poor I cure gratis, no less I believe than to the value of £100 per

as to his real treatment. He says, with an air of innocence which might well call forth a smile, in speaking of some infallible liquor, "But what this Liquor is or how it is to be prepared, the Reader, I say, must pardon me at this time that I do not reveal." Indeed, the surgeon of that day, albeit he might boast of belonging to the "Worshipful Company of Barber Chirurgions," or stood at the top of the tree in some specialty, was often little better than a mountebank or fortuneteller. Sir William Read, the queen's oculist, had been a mountebank.¹ He was so ignorant that he could hardly read,² and even after his appointment continued to sell nostrums. Dr. Thomas Saffold, spoken of in the *Tatler* as "my ingenious friend," had been a weaver and a fortuneteller before he became undergraduate in physic.

To quote almost literally from Marten, when a man, a Mohawk for instance, or a "looser sort of Spark," had "conversed with a Slut," and had caught "a pocky Running" with "a Stupidity of the Yard," he came to the conclusion that he was "inflicted with the Pox," and sent for his medical man, who forthwith came in a mighty periwig, and after a preliminary railing at the "Quacking Empericall Fellow" in the "Dark Entry," or at the sign of "the Hand and Urinal," or the "Frying Pan"; diversified, it may be, with a warning narrative of some "Gentleman who was blowed up to the Planets," owing to his having taken too strong a dose from one of these worthies, he proceeded to strike a bargain with the patient as to his terms for effecting a cure, and this done he set to work.

Marten's practice consisted "in cleansing and destroying the Malignity," in giving "gentle Specificks, appropriated suitable to the Distemper." For "Scalding of Urine" he gave "two or three quarts a day of proper Liquors," which "radically extinguished and destroyed the very Seed of the Disease." He had a great horror of stopping the discharge by "Emplasticks and Restringtons," lest by using them "the Venereal Malignity, absconding itself in the Liminary or Spermatic Parts," might degenerate into "a radicated and ill-contrived Pox," or "a Tumor Humoralis happen upon the testicle." But how he effected all this I leave to be explained by those who can gather anything definite from his book.

Ann., discharging both to Poor and Rich, as near as I can, an honest conscience."
—*A True and Succinct Account of the Venereal Disease.* By John Marten, Chirurgeon. 1706.

¹ *The Tatler*, 1797, vol. i. p. 84.

² *Ibid.*, vol. iv. p. 218.

Has the reader ever heard this theory about purging off the malignity, not stopping a discharge lest it might be absorbed, or be thrown into the system, or something of that kind, repeated under another form in the present day?—because if not, I have, and very frequently too.

Turner's Treatment.—Turner clearly separates¹ gonorrhœa from syphilis in so far, that while he admits the possibility of a neglected or badly-treated blenorrhagia being transmuted into syphilis, he carefully points out that it may run, or rather that it naturally runs, its course without anything of the kind happening. The treatment of gonorrhœa is accordingly kept tolerably distinct from that of the more serious disease, or, as he quaintly terms it, “the second Infection called the Pox.”

His treatment consisted of purgatives given perseveringly till the more severe symptoms had passed off, or, to use his own words, till “the Cacoehmy was discharged,” and “the Stillicidium was lessened in Quantity and had grown better conditioned.” He began with “Ext. rud.,” “Pil. coch. min.” or “Pil. ex duobus,” ʒj. to ʒss. of the latter, or, if the patient were strong, ʒij. along with ʒss. gr. xv. or ʒj. of calomel. After this he gave powdered rhubarb with some preparation of turpentine, and followed these up with copaiba, on which he placed great reliance. Injections he avoided, except very mild ones, such as barley-water, “a small solution of the Troch. Alb. Rhus in aq., Plantag. vel Ros.,” or “a small Aq. Calcis c. Syr. de Ros. sicc. vel Mel Ros.” For phymosis and paraphymosis he recommended that “the Humour should be revulsed by an Emetick,” and that “a good discutient Fetus should be apply’d, to breath out the impacted Humour.” Scalding he tried to alleviate with sedatives, such as poppy and hyoscyamus and “edulcorants,” e.g. gum arabic and milk of almonds. When chordee was present he added five-grain doses of sugar of lead and the same quantity of camphor for painful micturition. His remedies for orchitis were “a suitable Bag Truss” and warm cataplasms, at the same time directing that “all Restricting or Balsamick Medicines be entirely forborn.” For the sympathetic bubo of gonorrhœa he had no separate treatment.

Turner was evidently a sound, careful physician. He held that

¹ *Syphilis: A Practical Dissertation on the Venereal Disease.* By Daniel Turner, of the College of Physicians. London, 1717. This work contains, in accordance with a good old fashion, a well-executed likeness of the author.

the way to improve treatment and gain a better knowledge of disease was to study symptoms and observe the action of medicines. "The new way by Arithmetic, Algebra, and Elementa Mathematica!" he considered only fit to amuse young heads, and fill them with what he plainly calls "gibberish." According to him gonorrhœa, like syphilis, arises from an unknown infecting property in the discharge of the person who communicates it, "a Poison of a peculiar Nature, and acting upon the Blood and Humours of humane Bodies." Treatment he therefore thought must be, for the time being, empirical, and he counsels the reader to "take his Indications chiefly, if not solely, a *juvantibus et lædentibus*."

Cockburn's Treatment.—Cockburn seems¹—for he words his opinions here very obscurely—to have used "Purging, Astringent and Healing Medicines," such as turpentine with lemon-juice and sugar, opobalsamum, peruvian balsam and copaiba, along with rhubarb, acetate of lead, pulp of cassia, syrup of marshmallow, and sal prunella. He had great faith in purgatives and injections, though he believed that the improper use of the latter might bring on "the Lues." He held that diuretics effected a "mere washing of the Urethra," and were apt to be very injurious by causing too great "an Afflux of Humours to the stimulated Part." To relieve scalding, the volatile salt of amber, sugar-candy in tincture of tea, or whey, along with crystal mineral, nitrate of potass and tragacanth, remedies perhaps as useful and pleasant as most of those used nowadays for this symptom; for "Cording of the Penis" cold bathing and internally warm milk, sugar of lead, white lily root, &c. He treated phymosis, which he thought only merited the title when the 'Choaking of the Præputium' gave pain, with a vast variety of remedies, such as bryony, and thought the method which prevailed in his day, of draining the water from the foreskin by "insinuating green Gentian Roots, the pith of the Way-faring Tree, or a bit of Sponge between the Glans and Foreskin" was bad; a view in which my readers will possibly concur.

Astruc's Treatment.—We now come to the practice of an author whose views seem to have been pretty extensively adopted in England, where surgery had been getting on only slowly; for Mr. Pott tells us, that when he began his studies, a little before the time that

¹ *The Symptoms, &c., of Gonorrhœa.* By W. Cockburn, M.D., Fellow of the R.S., &c. 1728.

Astruc's writings began to be known here, there was not, with the exception of Cheselden, Wiseman, and Sharpe, "an English writer on surgery fit to be read," and that no lectures were given in London "on the *Materia Medica*, Chymistry, or the Practice of Physick."¹

Astruc's general plan seems² to have been in the first stage to bleed, give ptisans of cooling plants, such as chicory, wood-sorrel, lettuce, &c. When the bowels were to be moved he gave the ptisan in the form of a glyster, with a drachm or two of "Crystal mineral or an ounce of fresh pulp of Cassia." He poulticed the perinæum with "crumb of bread, milk and Saffron," and injected into the urethra "Saccharum Saturni in Frogspawn water," or "Goat's milk diluted with a decoction of Marsh mallow." He gave "Camphire and Saccharum Saturnum" internally "to assuage the heat of the parts," and prescribed a "light moist diet," with abstinence from all peppered or preserved meats.

In the second stage he "purged gently" with cassia, or gave ten or twelve grains of jalap or "Diogridicon," or a scruple of calomel, which I should think must have purged very gently indeed, though it was certainly quite a common dose in those days. This was followed up by mercurial inunction.

In the third stage, that is to say when the dysuria, erections, &c., had passed off, he gave "Chio Turpentine," powdered rhubarb, and copaiba or Canada balsam in moderate doses, accompanied by a host of other remedies, among which we find nine astringents, such as catechu, dragon's blood, &c., to be taken internally. Mucous gleet he treated with "detersive" injections of decoction of bugloss, geranium, &c., mixed with solution of honey of roses.

In the "œdematous kind" he bled less, purged repeatedly and freely, and gave a sudorific ptisan of guaiacum and sassafras woods. When there was much phlegmon he ordered frequent bleeding, with diluting, softening, and anodyne medicines.

¹ Perhaps it was a deep sense of contrition for their shortcomings in this way that impelled the surgeons of that day often to weep disconsolately at the bedsides of their patients! Disgusting as such an exhibition must seem in our day, it appears to have been quite a common occurrence in Mr. Pott's time, for we are told, as a striking instance of his uprightness, that "he would never condescend to whine over a patient"!

² *A Treatise on the Venereal Disease.* By John Astruc. Translated into English by W. Barrowby, M.B. 1737, vol. i.

For orchitis (the Venereal tumour of the testicles, or the Venereal Hernia), which he warns his readers may degenerate into schirrus, sarcocele, or cancer, he bled, gave aperients, laid aside all astringent and "repelling" medicines in favour of warm sedative applications, such as decoction of marshmallow or lily roots, henbane, &c. ; when the pain was severe, he prescribed narcotics internally, such as laudanum, "Tinctura Anodyna," or syrup of diacodium, "in a convenient dose." He recommends that an attempt should be made to relieve the hardness of the testicles by mercurial inunction, or the application of emplastrum Vigo ; the testicle was also to be supported. When abscess of the perinæum threatened he ordered cooling ptisans, cooling and anodyne fomentations of bear's breech (*branca ursina*), with clysters of quassia and some anodyne. In a stillicidium it was, of course, necessary "to correct the acrimony of the semen," and this was effected by means of softening remedies, such as "cooling broths and apozems," after which the relics of the ulcer were to be deterged with "vulnerary" and balsamic remedies.

Hunter's Treatment.—Hunter thought ¹ the soothing plan the best at the beginning. When the violence of the symptoms had abated, astringents might be employed. He considered diuretics had their advantages, and that injections might be used. He employed as an injection corrosive sublimate, one or two grains to an ounce of rose-water, also opium and lead as soothing injections. He doubted the power of "the vegetable mucilages" to remove scalding. He seems to have made little use of internal medicines, and not to have had much faith in them. Possibly he was too much occupied in his vast anatomical and physiological researches to have had time to establish any fixed principles of treatment, even in his own mind.

Howard's Treatment.—Howard, the confidential assistant, as he puts it, of Percival Pott in his "large general business," gives ² a very careful account of the practice of his day, as also of that for a considerable space of time previous. He draws attention to *the great discrepancy of views as to treatment*, and remarks that *gonorrhœa "has not only been frequently but successfully treated in many different ways."*

Howard bled ³ in almost every case, leeches when there was

¹ *A Treatise on the Venereal Disease.* 1786.

² *Practical Observations on the Natural History and Cure of the Venereal Disease.*
By John Howard. 1787.

³ *Op. cit.*, vol. iii. p. 51.

much inflammation, kept the bowels moderately open, recommended warm baths, opium, and a cooling and well-regulated diet. He considered the period following the decline of chordee the proper one for administering mercury. If the irritability of the membrane did not diminish he gave bark; he also speaks in favour of blistering the perinæum. Cases treated in this way rarely required balsams, such as copaiba, turpentine, colophony (*pix græca*) mastic, and so on. For orchitis the horizontal position, and suspension of the testis, with cooling applications of lead. Inflamed prostate was to be met with antiphlogistic treatment. Perinæal abscess was to be freely opened. He dreaded injections at the early stage, lest "by smothering chancrous infection for a time," they might produce "future symptoms of lues," or stimulate metastasis. Perhaps the reader has heard this kind of thing about injections from men of a later school than Howard. According to this author Pott used injections freely.

Foot's Treatment.—Foot injected¹ with a preparation of blue vitriol precipitated by means of *lixivium tartari*, the precipitate being subsequently dissolved in a saturated solution of volatile sal ammoniac. This was used of a strength of five grains to an ounce of water. With it he gave daily one grain of calcined mercury and half a grain of opium. If the inflammation extended along the urethra, he advised soothing applications, such as constant injections of warm milk-and-water with the application of the steam of hot water. He thought no method protracted gonorrhœa so much as giving purgatives. For gleet, to which term he allows a pretty wide latitude, he prescribed bark, steel, the cold bath, and injections; if these did not succeed, copaiba was to be taken. Chordee he seems to have left pretty much to time. For phymosis, poppy fomentations and poultices containing spirit; internally, calcined mercury. If in this complication the fever ran high, the patient was to be bled and to take antimony. For swelled testicle he counselled rest, lotions of *liquor ammoniæ acetatis*, &c. If the running did not return, and the testicle continued to swell, he resorted to bleeding, leeches, fomentations, &c., giving at the same time *mercurius calcinatus*, opium, and small doses of antimony.

Sir Astley Cooper's Treatment.—Sir Astley Cooper purged his patients freely with salts and senna, calomel and colocynth. He

¹ *Origin, Theory, and Cure of the Lues Venerea.* By Jesse Foot. 1792.

gave carbonate of potass or soda as a drink, or liquor calcis. He recommended warm bathing of the penis ; he also prescribed liquor potassæ with conia in camphor mixture. When the inflammation had subsided, he ordered balsam of copaiba with injections of sulphate of zinc and liquor plumbi. If the disease had existed some little time when he first saw the patient, he gave balsam of copaiba at once. He also gave cubebs when the inflammation did not run high ; and it appears from his account that this medicine was so little used up to that time, that Cooper had never heard of it till a patient brought him some to try. Yet it was used in London nearly six hundred years ago.¹ In old-standing cases he passed bougies.

Sir Astley had the courage to say that the man who gave mercury in this disorder deserved to be flogged out of the profession, and to stigmatize in the strongest way the practice which then prevailed at Guy's, of sending every patient affected with gonorrhœa into the foul ward, where he was pretty sure to be drenched with mercury.

Judd's Treatment.—I have not been able to make out on what principles Mr. Judd treated his cases, or what he considered to be the most useful remedies. He sometimes gave² calomel and colocynth, with fifteen-grain doses of extract of cubebs, sometimes injections of nitrate of silver, ℥j. to ʒj. ; in other cases tincture of muriate of iron as an injection, with sulphate of magnesia internally. And again in a third case a zinc injection gr. x. to ʒj. ; he also prescribed, in combination with purgatives, essence and balsam of copaiba and essence and spirit of cubebs, without assigning any reason for the variation, except such as his readers can make out from the history of the case, which, so far as I can see, throws no light on the point.

I have spoken of the difference of opinion which prevails as to the best mode of treating this disorder. In support of this statement I now proceed to give a summary of the treatment pursued at the different London hospitals. It is condensed from several able reports published in the *Lancet* during the year 1867.³ I do not know who is the author of these papers, but they are extremely lucid and well written.

Guy's Hospital.—Mr. Bryant gives scruple or half-drachm doses

¹ Pereira's *Elements of Materia Medica.* 1840, p. 754.

² *Op. cit.*

³ Vol. i, pp. 331, 362, 458.

of tartrate of potass, adding, when weakness is present, potassio tartrate of iron and tincture of the muriate of iron. He has given up injections, but in some cases introduces a concentrated solution of tannin into the urethra by means of a bougie.

London Hospital.—Mr. Maunder gives a mixture of copaiba, liquor potassæ, spirit of nitric ether and camphor julep. In the acute inflammatory stage a scruple of nitrate of potass, with or without an eighth of a grain of tartar emetic and morphia, every four hours night and day. An occasional purge is ordered. For gleet he prescribes twenty drops of tincture of muriate of iron thrice daily. In private practice he prefers injections of sulphate of zinc and treatment on general principles.

St. Bartholomew's Hospital.—Injections of sulphate of zinc two grains to an ounce. When there is much inflammation this is first of all allayed by means of warm fomentations, warm baths, opium, or a suppository of morphia. Free action of the bowels is maintained. Diluents are prescribed. This treatment is described as almost invariably successful. Should it fail, the local application of bougies and the counter-irritant effects of blisters applied to, or nitrate of silver rubbed over, the front of the upper part of the thigh, Scarpa's triangle, are found the most efficient remedies. Orchitis is treated with opium, rest, and linseed poultices.

King's College Hospital.—Mr. Wood in the acute stage gives a saline aperient, or a drachm of compound jalap powder, or a drachm of jalap and calomel if the patient be bilious, at intervals of three or four days, or a week, during the treatment. Afterwards he gives liquor potassæ or bicarbonate of potass in camphor mixture or infusion of pareira, with plenty of diluents. He prescribes early and frequent injections of lead lotion and glycerine. For orchitis he punctures the tunica albuginea. To allay chordee he uses compound henbane pills, or in severe cases morphia or chlorodyne, aided by the local application of iced water.

In the chronic stage, while the discharge is profuse, Mr. Wood gives copaiba and sulphuric acid, with frequent injections of sulphate of zinc, alum, or nitrate of siver; in obstinate cases powdered cubebs in drachm doses. In sluggish cases, with gleety discharge, tonics, mineral acids, and especially tincture of sesquichloride of iron in twenty-minim doses, three times a day. If the discharge become gleety or thin, injections of a weak solution of chloride of zinc, or perchloride of iron and glycerine. Sometimes he

employs the same substances in the form of a soluble bougie or uses matico.

St. Mary's Hospital.—Mr. Gascoyne gives weak astringent injections in the very early stage, but not when the symptoms have become severe, preferring copaiba in doses of forty to sixty drops daily. Should the ardor urinæ, irritability of the neck of the bladder and chordee, be very severe, he adds suppositories of soap and opium. After the violence of the symptoms has passed off weak injections may again be employed, along with drachm doses of cubebs when the discharge is very obstinate; after this he finds quinine, tincture of iron, and other tonics often serviceable. He considers salines and depleting means in the early stages not only useless but injurious, and he has scarcely ever known abortive treatment succeed, while he has seen gonorrhœa exasperated by it.

Charing Cross Hospital.—Mr. Barwell avoids copaiba. In a first attack he purges, orders hot bathing, diuretic or aperient alkalies as may be indicated, followed by an injection of sulphate of zinc, two grains to an ounce. For second or subsequent attacks, free use of aperients and injections; chronic cases may be treated with tannic acid injections, three or four grains to an ounce. For slight but continuous discharge, either chian turpentine or Canada balsam, with black or Cayenne pepper. He often finds tincture of steel and tincture of capsicum useful. Cubebs is not better than the other peppers. The most certain and efficacious treatment is to pass down every other day, for an inch or an inch and a half, a bougie smeared with an ointment containing three, five, or even ten grains of nitrate of silver to an ounce of lard.

University College Hospital.—Mr. Christopher Heath, in the early stage, injects from the very beginning a strong lead lotion, an ounce of the liquor plumbi to seven of water. In the ordinary acute form he prescribes injections of warm water and weak lead lotion, followed by sulphate of zinc injections when the acute symptoms have subsided. Rarely gives copaiba. For chordee, extract of belladonna and glycerine applied to the under surface of the penis, with a pill of opium or henbane at night. He finds acute orchitis yield readily to antimony and sulphate of magnesia. When there is much cedema, he punctures the tunica vaginalis. Later on strapping and mercurial ointment remove any enlargement of the testis. In gleet he examines the urethra with the bougie and endoscope, and if, as frequently happens, he discover a distinctly diseased surface, a

strong solution of nitrate of silver is applied topically ; if the disease appear to be more general, an astringent injection is given, a large metal bougie passed and steel prescribed.

Middlesex Hospital.—In the early stage Mr. Hulke prescribes an injection of acetate of lead frequently repeated, and purges freely, generally giving compound jalap powder. In the more chronic condition he orders frequent injections of one grain of nitrate of silver to eight ounces of water. For old gleet copaiba or cubebs, more frequently however tincture of sesquichloride of iron. In acute orchitis, Mr. Hulke prescribes nauseating doses of tartar emetic with Epsom salts.

I have now endeavoured to give the reader chapter and verse for the three postulates I ventured to bring forward, namely—1. That except with respect to injections treatment has not changed so much within the last century or two as might have been expected. 2. That there prevails an irreconcilable discrepancy as to the best method of coping with this disorder. 3. That the ordinary method of stating the results of treatment does not enable the reader to form a positive opinion as to the relative value of the remedies actually employed. For instance, in the pages the reader has just passed through eight different systems are found to prevail in as many different hospitals, all adopted and put in force by able and experienced surgeons. What is more, my inquiries lead to the conclusion that had the number of hospitals reported upon been multiplied tenfold, the result would have been to display ten times as many different systems. Added to this it must be remembered that great discrepancies of opinion prevail among those who have devoted special attention to the subject. If amidst these conflicting views we could find some secure basis for drawing conclusions ; if an analysis of each separate system would place us in a position to ascertain *how many cases are cured by it out of every ten or every hundred subjected to it, and in what space of time*, we could arrive at some definite opinion ; as it is we are left to infer that each surgeon is equally satisfied with his own plan, and that all these various modes of treatment are equally successful. Whether the surgeon uses injections or not ; whether he gives specifics or treats on general principles, seems a matter of indifference ; systems diametrically opposed to each other conduct to one common goal. Under such circumstances it appears to me, that to extend such observations can only increase the bewilderment which the reader

must necessarily feel on noticing such a uniformity of effect from such a diversity of causes. If, however, I have erred in this or in the other portions of these deductions, I hope the reader will admit that I have furnished the materials for my own refutation ; indeed, this is only the line of argument that I care to pursue.

It would lead me too far out of my way to give a full analysis of the modes of treatment laid down by all the eminent specialists of the present day. What I have to say of their views may, I think, be more fittingly appended to the remarks on the different remedies used for this disorder. At one time I purposed examining the various plans of treatment adopted by modern authorities in gonorrhœa ; but I soon found it was impossible to carry out this idea, for as many of these plans are exactly alike in great part of their details, the same arguments would require to be urged each time the separate elements of treatment came to be discussed. I therefore hurry over this part of the subject to examine rather more in detail the views of a gentleman (Mr. Chalmers Miles) who has struck out a path for himself. There are also one or two points in connexion with this subject, such as the expectant treatment, which I propose to discuss before taking up the subject of the remedies for gonorrhœa.

Mr. Chalmers Miles's Treatment.—Mr. Miles, after commenting with dry humour on the significant fact that so many successful modes of treating this complaint have been recommended, goes on to speak ¹ of the results obtained by blistering *not only in gleet but in gonorrhœa* ; a treatment which, he says, has proved in his hands of singular efficacy, and which he submits to the public only after having tested its success during a period of eighteen months, and in some sixty cases.

Gonorrhœa, it seems, occurs pretty freely among the artillerymen at Halifax, who are mostly young men from twenty-two to twenty-seven years of age. Now and then they have a periodic debauch, commit some offence when intoxicated, are sent to prison, and a few days after are found to be suffering from gonorrhœa. So soon as a patient is found to be in this state he is brought to the hospital, and blisters are applied to both thighs, or to the penis, as the case may be supposed to require them, and in all probability *the running*

¹ *On the Cure of Gonorrhœa by Blisters.* By H. Chalmers Miles, Esq., M.R.C.S., Assistant Surgeon, Royal Artillery ; in medical charge of Royal Artillery and Royal Engineers at Halifax, Nova Scotia. *Lancet*, 1861, vol. i, p. 558.

will be found to have ceased entirely on the sixth day in the former, or the fourth day in the latter, instance after their application. The man is at once discharged from the hospital and taken back to his cell, where he is able to undergo the remainder of his sentence.

This treatment, which Mr. Miles says was first suggested to him by Mr. Park, the accomplished surgeon in charge of the third brigade at the Royal Artillery Hospital at Devonport, and who told Mr. Miles that he had adopted the plan with great success for a considerable time, has not merely the advantage of effecting a very rapid cure, but of stopping in a most summary way a trick by which soldiers used to evade punishment, and of restoring to the ranks a great number of men who used formerly to be on the sick list. It is a very common circumstance, just prior to a garrison field-parade, for the men to go out "on pass," and, as a natural result, catch an infection. Prior to their being taken before the commanding officer, they are brought to the surgeon for inspection, and when found to be suffering from gonorrhœa are placed under treatment; blistering, however, soon restores them to active service. Again, men who were sentenced to punishment as defaulters, used frequently to report themselves infected; in consequence they were sent to the hospital, and thus escaped punishment. This, too, blistering has stopped.

In a severe case Mr. Miles¹ begins treatment by giving an emetic so soon as the patient is admitted, and on the evening of the same day a couple of purgative pills followed by an aperient draught in the morning. After this a blister, six inches by four, is placed high up on the anterior and inner part of each thigh; these are put on at night and left till morning. They are made with the ordinary cantharides plaster of the London Pharmacopeia, spread rather thickly on adhesive plaster. The blistered surface is afterwards dressed with lint dipped in castor oil, and the medicine marked below² ordered. The patient is put on spoon diet, and told to inject now and then a syringeful of cold or lukewarm water, according to the season of the year.

¹ *Lancet*, 1861, vol. i. p. 605.

² ℞ Magnes. sulph. ℥ij.

———— carbon. ℥ss.

Antim. potass. tart. gr. ij.

Tinct. hyoscyam. ℥ij.

Aq. menthæ pip. ad ℥xvj. m.

Capiat coch. ampl. duo (℥j.) quartis horis.

Mr. Miles finds that at first there is every possible variety of result: generally the symptoms are rather aggravated, but with a little patience this soon passes off. On the third morning the patient is usually better. *By the sixth day there is no running, and on the seventh day the man is discharged, fit for duty, with one day's convalescent leave.*

In milder cases our author blisters the under surface of the penis, but in other respects treats the patients in the same way. *He has had repeated instances of an immediate cure by a single application.* Sometimes the patient is discharged cured on the fourth morning after admission. When a relapse happens from the men getting out and giving way to a debauch, an injection or two of nitrate of silver will generally soon stop it, and if not, blistering the thighs is sure to succeed. Should any pustules follow the blister, they are to be pricked, squeezed, dressed with a linseed poultice, and then rubbed over with castor oil.

Mr. Miles's experience of the treatment by blisters is that it is more speedy and effectual than any that he knows of; that it is suitable to all classes of cases; *that the period required to cure a gonorrhœa in this way is from four to seven days*, though in some rare instances it may extend to fourteen; that relapses seldom occur, and then only after a debauch or some imprudence; that such relapses always yield to blisters; that there are no obstacles to the use of them; that men employed in the civil departments voluntarily come to him to be treated in this way; and, finally, he thinks "the treatment by blisters will be acknowledged to offer the means best adapted for use in the case of men in our armies and fleets."

I quite concur with what Mr. Miles says at the conclusion of his most valuable and interesting paper. His observations are evidently made with such care, and the results of treatment so precisely stated, and so distinctly superior to those which generally follow ordinary methods, that I think none but the unobservant and prejudiced can fail to be struck with them. I only wish such a simple and efficient system could be carried out in private practice, but I must admit that my own attempts to do so were a failure.

The Expectant Treatment.—This system has at one time or other had advocates of such capacity that it cannot be passed over. Not long ago it found an able champion in Dr. Chambers, of St. Mary's Hospital. This gentleman, as I understand him, says¹ that gonorrhœa

¹ *Clinical Lecture on Gonorrhœa. Lancet, 1861, vol. i. p. 582.*

is naturally a most mild disease both in the male and the female, *and if left to itself will get well in a short time, occasionally in four or five days*, while the simplest treatment will remove it *in a fortnight* if it be not made severe by the folly of the patient or his medical attendant. "I consider," he says, "all primary heroic treatment of urethral discharges *a most unjustifiable interference with nature.*"

I shall state further on my reasons for thinking that this kind of disbelief in the powers of medicine is unfounded, and that the treatment I have ventured to recommend will on an average always cure gonorrhœa in less time than it requires to wear itself out. Besides, it appears to me that the experience of Mr. Chalmers Miles completely proves the superiority of treatment. I regret that I cannot give a full account of what Dr. Chambers's treatment is, but the fact is that the part of his lecture devoted to gonorrhœa only occupies half a column of the *Lancet*.

I have collected a good many cases in which the expectant treatment had been pretty fairly tried, by the patient, however, rather than the surgeon, and where the gonorrhœa disappeared quickly of its own accord. But in all these I had to depend on the unsupported evidence of the patients, which I need scarcely say is, with all conceivable good faith on their part, almost useless in a scientific point of view. When a man, on whose truthfulness we feel able to rely, tells us that a discharge went away in a few days without his doing anything for it, we at once admit the fact; but it would be a step of a totally different nature, it would argue the want of reasoning power, to accord to such a fact any value in determining the average duration of gonorrhœa under the influence of expectant treatment. Yet such is the only evidence I have been able to procure, and so far as I can make out it is the only evidence employed by those who recommend this system. I have never yet seen a gonorrhœa run its course and get quite well; indeed, I need scarcely say that the vast majority of patients would not give a surgeon the opportunity of trying such an experiment. They go to him expecting he will do his best to free them from a disagreeable complaint, and any patient who found his surgeon doing nothing would naturally imagine he could do that as well himself. Hospital in-door practice would alone afford a proper opportunity, and in that department I believe the experiment has not yet been tried.

But for one case where so fortunate a termination as spontaneous extinction of a gonorrhœa thus treated took place, there were at least

ten where the result was widely different, where the patients had, according to their own statement, taken all possible care not to aggravate the disorder, abstaining carefully from stimulants, &c., and where the cases had lasted months and even years, and might have in all probability lasted much longer were it not, that even the most indifferent persons generally get wearied in the long run of seeing the hateful discharge for ever hanging about them, and at last make up their minds to do what they should have done at first, go to some surgeon who will set them right. Indeed, I suppose it is difficult to limit the length of time gonorrhœa might sometimes last if systematically neglected. I believe M. Ricord used to relate a case where the patient had suffered from gonorrhœa for thirty years, and I have seen several where the patient had had it for five, six, or seven, and in one instance for twelve years. True, in all these cases there was not much running, but it was distinctly purulent; the severity of the first symptoms, too, had long passed off, but it was evident that a slight irritant would speedily rouse them to very unpleasant activity, a fact of which the patients were quite aware. Mr. Johnson very justly remarks, that "the surgeon who calculates in a sanguine manner on the natural cure of gonorrhœa will probably be more remarkable for patience than success." It is, according to him, repeating the old story of the rustic by the bank of the river waiting till the stream ceases to flow!

Gonorrhœa as a Cause of Stricture.—Again, it is to be borne in mind, that should the experiment (of leaving gonorrhœa to itself) fail, and should the disease in consequence last a certain time, it will, in a given percentage of cases, certainly be followed by swelled testicle and stricture. In many old-standing gonorrhœas the surgeon, on passing the bougie, finds a certain degree of contraction, with tenderness of the urethra at different spots, and often, even when there is no discharge from the urethra at the moment of examination, small clots or strips of pus and mucus will be found adhering to the bougie when it is withdrawn. There is indeed reason to believe that in some persons a tendency to stricture takes place *almost as soon as the gonorrhœa has well established itself*, and that up to a certain degree, at any rate, *it constantly and uniformly tends to get worse*. Hunter's old rival, Jesse Foot, pertinently says "that a gonorrhœa may cease to be a gonorrhœa if left to its own action may be true, but it may also be as true that it might not cease

to be a gonorrhœa till it had reduced the organism within the urethra to a condition which could not afterwards be restored to a sound state."

Hunter and many other surgeons have, it is true, considered the theory of stricture arising from gonorrhœa as a mere prejudice, and as I was anxious to investigate this subject carefully, and had no theory to serve, I made for a long time a careful collection of cases, going into the most minute details. I was at last obliged to confess, that the mere history of the case, as given by the patient, always offers insufficient and doubtful data. However, after carefully weighing what facts I could collect, I think myself fairly warranted in drawing the following conclusions, which after all contain nothing new:—

1. That strictures arise in persons who have never had a gonorrhœa, and in some, at such an early age as to preclude all probability of gonorrhœal infection.
2. That occlusions of a similar character occur in mucous canals, without being preceded by any inflammatory and purulent discharge.
3. That the progress of the stricture seems to bear no sort of proportion to the duration or severity of the gonorrhœa.
4. That the proportion of patients attacked by stricture to those who suffer from gonorrhœa is extremely small.
5. That gonorrhœa appears to develop the tendency to stricture in persons who would otherwise never have been assailed by it.

But I need scarcely point out to the reader how untrustworthy such conclusions are. To get at the truth we require information which we are never likely to procure; for, first of all, it would be necessary, before attempting any deduction, to divide the whole male population of a given district into—*a*, those who had had gonorrhœa, and *b*, those who had not; secondly, the males must be again separated into *c*, those suffering from, and *d*, those free from stricture. The proportion of *c* to *a* and *b* would give us something like data.

The following table is taken from the *Edinburgh Medical and Surgical Journal*.¹ It contains, as the reader will observe, cases of gonorrhœa treated in different ways in the hospital of the Castle of Edinburgh by Messrs. Johnston and Bartlett:—

¹ 1818, p. 264.

TABLE I.

Cases of Gonorrhœa treated in different ways.

CASES TREATED WITH REST AND ABSTINENCE.

No. of Cases.	Result of Treatment.
3	Discharged cured in 3 days.
2	„ 5 „
4	„ 7 „
4	„ 10 „
1	„ 18 „
1	„ 23 „

Or an average of $8\frac{1}{2}$ days.

Cases treated with Cubebs.	Cases treated with Capsicum.	Cases treated with Camphor.
2 were cured in 4 days.	4 were cured in 8 days.	1 was cured in 5 days.
2 „ in 5 „	4 „ in 12 „	1 „ in 8 „
4 „ in 6 „	2 „ in 24 „	1 „ in 14 „
Average $5\frac{1}{4}$ days.	Average $13\frac{1}{2}$ days.	Average 9 days.

It will be observed that of these cases fifteen treated with fasting and quiet were cured in three to twenty-three days ; eight by cubebs, in four to six days ; three by camphor, in five to fourteen days ; ten by capsicum, in eight to twenty-four days ; whereas twenty treated with injections of lapis infern. 3j. to 3j. , were cured in three to forty-two.¹ With the exception of the cases in which cubebs and injections were given, these figures may be held to represent pretty well the effects of expectant treatment, as it is difficult to believe that either capsicum or camphor would materially shorten the course of gonorrhœa ; at any rate, we do not as yet know that they do. I have cited this list, as it is the only thing in the shape of statistics bearing on this point that I have met with. The results of treatment, as given in it, by no means harmonize with my experience, the time for cure appearing to me much too short.

Homœopathy.—Of that singular compromise with expectant treatment called homœopathy I have no personal experience to record beyond what I have learned from patients, and their report is to the effect that the action of the remedies is so slight as to elude the closest observation. I fancy, too, that even the supporters of homœopathy would be puzzled to bring forward a series of cases showing that gonorrhœa was cured more quickly by infinitesimal doses than by active allopathic treatment. Till that is done, or at any rate attempted, it will be unnecessary to pursue the subject further.

¹ *Op. cit.*, p. 263.

CHAPTER III.

DIVISION OF THE MEANS OF TREATMENT NOW IN USE.

Division of the Means of Treatment now in Use, 39. *A. INTERNAL REMEDIES :*
 —1. Copaiba, 39; Table II.—Cases treated with Copaiba, 42; Dose and Mode of giving Copaiba, 44. 2. Cubebs, 48; 3. Turpentine, 50; 4. Ngan Plang, 50; 5. Oil of Santal-wood, 51; 6. Gurgum, or Wood-oil, 53; 7. Antiphlogistic Means, 53; 8. Purgatives, 57; Table III.—Cases treated with Purgatives, 59; 9. Aperients, 60; Table IV.—Cases treated with Aperients, 61; 10. Diuretics, 64; 11. Alteratives, 65. *B. EXTERNAL APPLICATIONS,* 66:—1. Cold Applications, 66; 2. Hot Applications, 67; 3. Sedative Applications, 69. *C. DIRECT APPLICATIONS,* 70:—1. Injections, 70; Great Variety of Substances used as, 70; Can Injections bring on Stricture and Orchitis? 74; Nitrate of Silver, 76; Table V.—Cases treated with Strong Injections of Nitrate of Silver, 78; Chloride of Zinc, 82; Table VI.—Cases treated with Injections of Chloride of Zinc, 83; Table VII.—Cases treated by Ricord, 86; Table VIII.—Cases treated by Judd, 87. 2. Pastilles of Nitrate of Silver (Soluble Bougies), 87. 3. The Caustic Plug, 90. 4. Cauterizing the Urethra, 91. Proposed Plan of Treatment, 93. Abortive Treatment, 93. Ordinary Treatment, 96. Syringes, 101. Treatment of Gonorrhœa in Women, 105. Diet, 112. Smoking, 114.

THE most practical arrangement of the various means of treatment for gonorrhœa, appears to me a division into *A*, internal remedies; *B*, external applications, such as lotions and fomentations; and *C*, direct applications, comprising injections, caustic, bougies, and so on.

A. INTERNAL REMEDIES. 1. *Copaiba.*—Perhaps without exception the most potent and generally used of all the internal remedies for gonorrhœa is copaiba, one of the most nauseous drugs ever found out. It is quite time that men banished it from the therapeutics of this complaint. Excepting, perhaps, the plan

devised by Mr. Thorn, no method of really disguising its filthy taste without impairing its efficacy has been discovered, and other objections apart, this alone is an insuperable drawback. I have heard scores of persons say that they would rather leave a gonorrhœa to itself than again take copaiba. Besides in a certain percentage of cases, copaiba, if given in sufficiently large doses to influence the discharge, brings on nausea, retching, and vomiting, griping and purging, great irritability of the stomach and often of the temper too. Symptoms of strangury not unfrequently follow its exhibition. Mr. Johnson has seen¹ acute inflammation of the bladder, extensive suppuration in the thigh, severe gastro-enteritis, and even death follow the use of it. M. Ricord has seen² serious effects on the nervous system, such as partial paraplegia and temporary hemiplegia, follow the exhibition of it. In several instances, when taken during an epidemic of cholera, it appears to have determined an access of this complaint. Dr. Durkee mentions³ an instance where a patient was attacked with a species of cholera, the symptoms being griping, vomiting, and purging, from taking merely half an ounce. Again, in certain constitutions it brings on pain in the region of the kidneys, hæmaturia, severe headache, giddiness. The vomiting, too, it must be remembered, which copaiba brings on is horrible, and few but the most resolute, who have once suffered in this way, can be induced to make a second trial.

One pretty certain result of all this kind of thing is, that some patients give up treatment in despair, others are driven to try some dangerous remedy, such as a very strong or irritating injection, *e.g.*, one of bichloride of mercury, a mistake I have known several times committed; while a few try to overwhelm the disease by swallowing an inordinate quantity of wine or spirit, a freak of very probable occurrence, inasmuch as probably every patient has in his turn heard some wonderful story of gonorrhœa being cured in this way. When to all this is added the fact that copaiba is never really indispensable, inasmuch as every case that can be cured may be got rid of without resorting to it, I think there are very strong grounds for the views just laid down.

It will perhaps be said in reply, that such objections apply to all remedies; that any potent drug taken in excess will produce serious symptoms; that to discard all remedies for such reasons would be

¹ *Op. cit.*, p. 52, &c.

² *Traité Pratique*, p. 732.

³ *Op. cit.*, p. 39.

to reduce medicine to a nullity. I have heard such a method of getting over these objections repeatedly put forward, but it does meet the case. *These disagreeable results occur when copaiba is given in doses which very good surgeons have not hesitated to recommend.*

Even were it an infallible remedy for the discharge, its disagreeable action in so many cases, and the smell it communicates to the breath, would always be obstacles to its use. It is however anything but infallible.¹ It fails in a large proportion of cases it is given for; it fails in every dose and in every form. Half-ounce doses are no more to be relied on than those of half a drachm; it is often no more to be trusted to in the form of capsules than in that of injections,² enemata³ or suppositories. Now as no amount of experience will enable the surgeon to diagnose *at the outset* those cases in which copaiba will be useful from those in which it will almost certainly fail, it necessarily follows that every surgeon who treats *all* cases with copaiba, and there are plenty who do so, *must give it in many instances where it is sure to be of no service.* It seems to me that there is no getting over this fact.

It appears that whatever disadvantages the use of copaiba may entail it still has numerous advocates. My own experience has satisfied me that the practice of giving it is very extensively diffused, and Mr. Weeden Cooke confirms this. On inquiry at the London Custom House, he found that during the first ten months of the year 1859, no less than 118,396 pounds of copaiba were admitted, or at the rate of 151,075 pounds annually,—a quantity sufficient to supply five hundred thousand people every year with a strong dose three times a day for nearly four weeks!

The following table, drawn up from cases in my own practice, contains some statistics which may be of value to those really desirous of investigating the subject.

¹ Johnson, *Op. cit.*, p. 88. Ricord, *Traité Pratique*, p. 726.

² Sigmund has found that injections of the urine of persons taking copaiba are inert.—Schmidt's *Jahrbuch*; also Braithwaite's *Retrospect*, vol. xxxviii. p. 451.

³ *British and Foreign Medical Review*, July, 1856.

TABLE II.

Cases treated with Copaiba.

	Initials.	Nature of Case.	Treatment.	Result.
1	J. D.	Mild gonorrhœa of three months' duration.	Copaiba. Injections of sulphate of zinc and nitrate of silver.	Not quite cured at end of 27 days.
2	W. J.	Gonorrhœa of three or four days' standing.	Potassio tartrate of antimony, copaiba, turpentine, and steel.	At the end of 86 days left off attending. Not quite cured.
3	—	Gonorrhœa of three days' standing.	Pulv. salin. At the end of fourteen days copaiba, and then turpentine. Afterwards colchicum.	Cured in 65 days.
4	J. S.	Ordinary gonorrhœa.	Had been treated for seven months with sulphate of magnesia, copaiba, &c.	At the end of this time he was still suffering from gleet, cloudy urine, and pain over the bladder.
5	L. H.	Gonorrhœa of a month's standing.	Injections and purgatives for fourteen days. Pulv. salin. and inject. of sulph. of zinc. Copaiba, turpentine, and pulv. salin. Injections.	Cured in 52 days.
6	W.	Gonorrhœa of a week's duration.	Magnes. sulph., followed by copaiba and nitrate of potass. Injections of sulph. of zinc.	Not quite cured at the end of 3 months. Subsequently he reports that the disease died out without anything further being done for it.
7	J. W.	Gonorrhœa of some days' standing.	Aperients and copaiba perseveringly used for seven months.	Rapid improvement. Severe relapse, apparently from bathing. At the end of 7 months scarcely well.
8	Mr. N.	Gonorrhœa, second attack, very severe.	Copaiba, liquor potassæ, compound calomel pill at night.	Cure twice deferred by his giving up treatment just as he appeared to be getting quite well.
9	Mr. R.	Gonorrhœa of four days' standing, complicated with a sore on the penis.	Copaiba and liquor potassæ with five grains of blue pill every night for a short time. Injections of nitrate of silver and sulph. of zinc.	Discharge removed in 3 months.

	Initials.	Nature of Case.	Treatment.	Result.
10	Mr. W.	Gonorrhœa of a fortnight's standing. First case.	Copaiba, cubebs, zinc injections. Almost constant rest.	Little improvement at the end of 12 weeks.
11	Mr. E.	Gonorrhœa of four days' standing; second attack.	Brisk purgatives, copaiba, liquor potassæ, pil. hydrarg. chlor. comp. Injections of arg. nit. and zinc sulph.	Cured in about 7 weeks.
12	Mr. B.	Gonorrhœa of some weeks' standing.	Copaiba, liquor potassæ, compound calomel pill.	At the end of 2 months still some gleet remaining.
13	A. T.	Ordinary gonorrhœa.	Took six drachms of copaiba, and the same amount of spirit of nitric ether, every week for one year.	Still some purulent discharge remaining at the end of that time.
14	Mr. H.	Ordinary gonorrhœa. Patient very delicate.	Took two pints of copaiba in two months, under the care of an experienced surgeon.	No better at the end of the time.
15	C. S.	Simple gonorrhœa.	Took half a pint of copaiba a month for four months.	Discharge diminished to a very small amount; returned directly on the copaiba being left off.
16	Mr. F.	Rather severe. Patient himself a surgeon.	Copaiba in small doses, and then an ounce daily for above two months.	Little if any improvement at the end of this time.

I could easily lengthen this list, but I cannot see that doing so would serve any useful purpose. If what has been said will not work conviction, I am afraid but a small amount of faith would be gained by constructing a more elaborate table. It is of little use to accumulate evidence when the reader is indifferent or has resolved beforehand that he will not be convinced. I heard a surgeon say before the Medical Society of London, that he did not believe gonorrhœa *could* be cured without copaiba. The reader's experience will possibly supply him with equally striking instances. Of what use then can be the most positive proof in such cases?

It may be supposed that the copaiba here was given injudiciously, and that the surgeon had not waited till the inflammation was subdued, or that the patient was refractory or intemperate. Nothing,

however, could be more incorrect ; these were model patients—men most anxious to get well. In the cases treated by myself, every precaution I had ever found of service was used, for at that time I believed in copaiba.

Here the reader may object that I am making out a case against copaiba ; so far from this, however, I am quite ready to admit that it is of service in a great number of cases, though I myself never had such success with it as some writers have recorded. Graves, for instance, tells us that Dr. Roe cured his patients in a fraction less than twelve days. I never could do so ; and besides, I think, no one will deny that it *does not* cure a great number of cases, which is of far more importance, and any person who finds such results, after a long and fair trial, is plainly justified in seeking for a more generally useful remedy.

Dose and Mode of giving Copaiba.—It would be satisfactory if those who recommend copaiba would really come to an agreement as to the most suitable dose, the best mode of giving it, and the period at which it should be used. At present any person seeking for reliable information on these points must be rather apt to get bewildered. Some surgeons give four-and-twenty times as strong a dose as others. Again, it was not long ago stated by a reviewer in one of our leading medical journals, that no sensible or experienced surgeon would think of giving copaiba in the acute stage of gonorrhœa ; and many authors, M. Ricord for instance, strongly advocate the necessity for preliminary steps in the shape of antiphlogistics, &c. But it is quite certain that numbers of patients take copaiba at this stage, not only with impunity but with benefit. Irrespective of the evidence on this head met with daily in practice, some surgeons distinctly recommend it at this period. "It would appear," says Dr. Bumstead,¹ "that copaiba can be administered with safety and to much greater advantage in the acute stage of gonorrhœa, or at an early period of the stage of decline, than afterwards ; and the same is true of cubebs." My own experience quite confirms this. As to waiting till the inflammation is subdued before administering it, it is, as Mr. Johnson says of expectant treatment, just as bad as the peasant waiting for the river to subside, while he was quietly seated on the bank. Moreover, copaiba, when it does cure the disease, cures it more quickly and certainly when given at

¹ *Op. cit.*, p. 91.

once than after antiphlogistics. As to any danger from using it in this way, it is simply imaginary. The few recorded instances of serious or fatal results from prescribing it in the acute stage, when analyzed, seem to have been due to the irritable constitution of the patient, imprudence and intemperance on his part, or to the medicine being continued when it was manifestly acting as a poison, and would probably have followed to a considerable extent at any rate, had copaiba been administered under similarly unfavourable auspices at another stage. I have repeatedly known it make strong and temperate patients very ill when taken for a mere gleet.

The most efficacious way of giving copaiba is, to my thinking, in combination with liquor potassæ. Spirit of nitric ether or nitrate of potass may be advantageously added, as may the compound spirit of lavender, which, mawkish as the last is to some persons, still serves to disguise the more disagreeable flavour of copaiba. Mucilage is useful for the same purpose as well as for suspending the balsam. Mint-water is the best vehicle that I know; some persons, however, strongly object to the taste of it. in which case cinnamon-water or camphor mixture may be substituted.¹ With regard to the addition of such substances as cubebs, alum, tincture of cantharides, of sesquichloride of iron, and so on, I have had little experience, but that little is decidedly unfavourable. However I give² two or three formulæ taken from Dr. Bumstead's work.

- ¹ ℞ Copaibæ ʒij (ad ʒiij).
Mucilaginis acaciæ ʒiij.
Liquoris potassæ ʒiss.
Potassæ nitratis ʒiss.
Aq. menth. pip. ad ʒvj. ℥.

Capiat ʒj. bis die.

- ℞ Copaibæ ʒij. ad ʒiij.
Spir. ætheris nitrosi ʒiij.
— lavand. comp. ʒij.
Syrupi flor. aurant. ʒiv.
Aquæ cinnam. ad ʒvj. ℥.

Capiat coch. amp. duo bis quotidie.

- ² ℞ Copaibæ ʒj.
Liquoris potassæ ʒij.
Ext. glycyrrh. ʒss.
Spir. æther. nit. ʒj.
Syrupi acaciæ ʒvj.
Olei gualtheriæ gtt. xvj.

Mix the copaiba and the liquor potassæ, then the extract of liquorice and spirit

Dr. Durkee recommends that copaiba should be taken in coffee, wine, or compound tincture of cinchona. Other authors have suggested sucking a slice of lemon immediately afterwards.

It seems to me a great pity, if surgeons will continue to prescribe and patients to take copaiba, that Mr. Thorn's plan is not tried. This gentleman found that in two ounces of copaiba there are five parts in which all the virtues of the balsam reside, and eleven parts containing only useless and nauseous residue, so that several score tons of dirt are annually swallowed by patients to no purpose.

Mr. Tyrrell obtained the most extraordinary success with Mr. Thorn's extract, and certainly the trial could not have been made by better hands; but neither this nor the real merits of the discovery proved of any avail. Mr. Thorn's work, too, not being a thick octavo, was too small for our standard of respectability, and as it did not contain two or three hundred pages of reference to the laws of Moses against the unclean, the greek and arabian writers, and old statutes breathing vengeance against stewholders keeping women with the perilous infirmity of "brenning," it was soon laid aside.

But sometimes the question is not what is the most efficacious formula, but what preparation the patient's stomach can bear best.

of nitre together, subsequently adding the other ingredients. A tablespoonful to be taken after each meal.

℞ Olei copaibæ,
— cubebæ, aa. ʒj.
Aluminis ʒij.
Sacchari albi ʒiv.
Mucilaginis ʒiij.
Aquæ ʒij. m.

A teaspoonful to be taken three times a day.

℞ Copaibæ ʒx.
Tinct. cantharidis,
— ferri chloridi, aa. ʒij. m.

Dose from half a teaspoonful to a teaspoonful.

The following formula is copied from Dr. Druitt's admirable *Vade-Mecum*, 1870, p. 808:—

℞ Copaibæ ʒiij.
Olei cubebæ m. xx.
Spir. ætheris nit.,
— lavandulæ, aa. ʒij.
Olei cinnam. gutt. ij.
Aquæ fl. ʒv.

Dosis ʒj. ter die.

Many persons cannot support copaiba in a liquid form, and the surgeon looks round to see in what solid vehicle it can be got to stay on the stomach. There is no lack of variety here ; invention has been racked to produce something which will be pleasant or, at any rate, tolerable. Capsules of all kinds, sizes, and degrees of solubility ; pills, lozenges, dragées, pastes, &c., have been brought forward in plenty—some of them ingenious enough. I believe common experience has united to condemn them one and all as more or less unreliable. Perhaps one of the best substitutes for copaiba in the form of mixture, is that of the balsam solidified by magnesia.¹

One thing is absolutely necessary, and that is to secure pure copaiba. Most medical men have, I presume, noticed a very great difference in different samples of this drug, but generally speaking they have little idea of the extent to which it is adulterated, and possibly some part of the discrepancy in the results from using copaiba might be explained by the varying degree of purity in which it is met with. Rape oil seems to be a favourite ingredient for adulteration ; some specimens contain a large amount of this useless substitute. Dr. Durkee says that this adulteration is easily detected by dropping a little of the fluid into water. The pure copaiba assumes a spherical form, while the other does not. Irrespective of this, two kinds of copaiba are met with in commerce. Although neither of these is known to be adulterated, yet one is naturally much weaker than the other ; the stronger one solidifies with magnesia, but this is not the case with the other. Again, it seems that unobjectionable specimens differ materially as to the amount of volatile oil they contain. Of the value of this oil, when given separately, I have had no practical experience. It seems generally agreed that we can depend less upon it than upon the balsam.

The cutaneous eruption which sometimes follows the use of copaiba, would not, in my opinion, be a sufficient ground for with-

¹ One-fourth of its weight of carbonate of magnesia should be added to the balsam. Heat is then applied till the whole mass becomes transparent. This mass is divided into five-grain pills, of which four to eight are to be taken three times a day. Dr. Durkee recommends their being sugared in the following way. Put the pills into a vessel to moisten them ; then turn them out upon a pan and sprinkle over them finely-powdered sugar, at the same time rolling them about by shaking the pan, so that they may be entirely and equally coated. This process may be repeated, after they are dry, as many times as may be necessary.

bolding it. For the most part it is a mild form of exanthema, akin to roseola and urticaria, distinguished by diffused redness of the neck, shoulders, face, and upper part of the body, accompanied generally by itching, tingling, a feeling of not being well, and disorder of the stomach. It usually passes off under the influence of a saline¹ or febrifuge,² aided by rest and light diet.

2. *Cubebæ*.—What I have been able to learn respecting the action of this remedy would lead me to place it pretty much on a level with copaiba, but the statements about it are so vague and conflicting, that it is impossible to form any certain conclusions. One observer, Mr. Broughton, reports³ that he cured nine cases out of ten with it. Another, Mr. Crauford, asserts⁴ that it fails in many cases. A third, Dr. Pereira, found it exert⁵ no influence over the disease in the majority of instances, a statement which is much more in unison with my experience than that of Mr. Broughton. Again, it is pretty widely known that the use of cubebæ in this complaint owes its origin in part to the story related⁶ by Sir Astley Cooper, of one of his patients having cured himself of a gonorrhœa with this drug in four days, or more strictly speaking, in some space of time between a Thursday and the Monday following; now I believe this experience has been so rarely verified that it must be looked upon as most unusual. Possibly some part of all this discrepancy may be explained by a fact, which Mr. Norman stated in a very practical paper read before the North London Medical Society; some other part, perhaps, by a statement of Dr. Frazer's, that he has seen a large quantity of nutmegs, which

¹ ℞ Magnes. sulphatis ʒvj.
Potassæ nitratis ʒij.
Syrupi rhæad. ʒiv.
Aquæ menthæ pip. ad ʒvj.

Capiat coch. amp. duo bis terve quotidie. Or tolerably full doses of the citrate of magnesia may be given every morning.

² ℞ Liquoris ammoniæ acetatis ʒiss.
Spiritus ætheris nitrosi ʒiij.
Vini antimonii ʒij.
Mist. camph., ad vj. m.

Capiat cochlearia ampl. duo ter quotidie.

³ *Transactions of the Medico-Chirurgical Society*, vol. xii. p. 99.

⁴ *Edinburgh Medical and Surgical Journal*, 1858, p. 52.

⁵ *Elements of Materia Medica*. By Jonathan Pereira. 1840, vol. ii. p. 756.

⁶ *Lectures on Surgery*.

had been subjected to distillation, sent to be used as cubeb! Mr. Norman brought forward¹ some very strong facts to show that the action of the pepper, when freshly ground, is much more certain and potent than when it has been kept some time. He however admitted, that even thus used it often fails. To this difficulty must be added an objection made against copaiba, viz.; *that it is utterly impossible to separate, at the outset of the treatment, those cases in which it is likely to be of service from those in which it is almost certain to fail*; and hence, that a surgeon treating twenty cases with this drug, cannot tell beforehand how many out of this number he is even likely to cure, leaving aside any question of certainty.

Cubeb is said in some cases to have exasperated the symptoms of gonorrhœa, but this I think is doubtful, and most probably arose from its having exercised no control over the disease it was given for. I am much inclined to doubt if any medicine can aggravate the disease, except in failing to cure it. Behrend, in his "*Syphilodologie*"(!), says cubeb does not suit an irritable stomach—an announcement I can easily credit. There is however good reason for believing that in some cases large doses have set up considerable irritation, if not actual inflammation, in the prostate² and bladder.

It occasionally cures gonorrhœa with marvellous rapidity, but these cases occur in those happily constituted persons who throw off disorders with extreme ease, and who are cured of a severe gonorrhœa by very simple remedies.

When the surgeon has decided to prescribe cubeb, it should, I think, always be ordered in teaspoonful doses of the fresh-ground pepper two or three times a day. Mr. Squire suggests moistened wafer-paper as a vehicle. The paper may be flavoured with essential oil of almonds.³ The powder is made into a paste with syrup of ginger and then laid upon the paper, which is folded over it. The patient takes a mouthful of water and then tosses the bolus down his throat. It is said in the *Pharmaceutical Journal*,⁴ that "it is surprising how easily patients acquire the tact of bolting these boluses, without any convulsive action of the muscles of the throat." The surprising part of the matter to me is that they ever require the power of doing so, and indeed that they do not choke

¹ *Lancet*, 1856, vol. i. p. 631.

² Acton, *Op. cit.*, p. 99.

³ Acton, *Op. cit.*, p. 98.

⁴ Vol. v. p. 503.

themselves at the first attempt. I should have thought it almost equalled the feat of swallowing a clasp-knife.

The practice of giving copaiba and cubebs together, when one or both have failed separately to cure the gonorrhœa, is, I believe, a useless experiment. After giving my best attention to the facts, I can only conclude, that all the instances in which this combination is said to have effected a cure, were simply cases in which the separate ingredients had been of defective quality, or taken irregularly, or in too small doses, or where their action had not been properly seconded; and that it is very doubtful whether this combination possesses any curative power superior to that of either drug given separately.

3. *Turpentine*.—In a scientifically arranged treatise, turpentine ought perhaps to have followed cubebs and copaiba, but as I aim only at being useful, I trust to stand excused for placing together the two remedies most frequently used and most frequently combined.

Turpentine was, however, in its time quite as fashionable a remedy for gonorrhœa as cubebs at the present day. It seems clearly to possess a certain amount of control over the discharge in the later stage, when it has become partly mucous but is still profuse. Some substances of this nature, such as the resin of the spruce fir, act very beneficially when the inflammation of gonorrhœa has extended to the neck of the bladder, and even to the body of this viscus. In all other stages of gonorrhœa, and particularly when it is acute, every preparation of turpentine that I have seen tried has always appeared to me inert.

In large doses it may occasion sickness or nausea, but I believe it is quite unnecessary to use it in such a way, and that all the benefit likely to accrue from its use will be obtained by giving it in moderate quantity. Perhaps Chian turpentine will be found as useful as any. It should be simply allowed to dry to the consistence of an ordinary extract; it is then rolled in magnesia and divided into five-grain pills, two, three, or four of which may be taken twice a day. Care, however, should be taken to secure genuine Chian (or Cyprus) turpentine, the resin of the turpentine pistacia (*Pistacia Terebinthus*), as the coniferous turpentines are only too often substituted for it.

4. *Ngan Plang*.¹—Some time ago my attention was called to the

¹ Pronounced *Ne-an-plang*.

value of this medicine in gonorrhœa, and half a pint was sent to me for the purpose of making some trials with. It is a reddish-coloured fluid, about the consistence of syrup and of a warm balsamic taste, reminding one of a delicately-flavoured kind of copaiba or turpentine. It is, I believe, for I have not been able to obtain such full and precise information about it as I could have wished, found only in Java, where it is considered a specific for gonorrhœa. It is taken in doses of a teaspoonful two or three times a day, no other means being used. No restriction as to diet, &c., is imposed on those taking it. I gave it, in four cases, in drachm doses two or three times a day. All the patients assured me that they took the medicine with the greatest regularity, and I have every reason to believe that they would only state the exact truth. The report in every case was that they did not notice any particular effect from the remedy. It was not unpleasant, they said, to take, and agreed very well with them; beyond that they had nothing to relate. I examined the patients nearly every day while they were using it, but did not notice any appreciable action on the gonorrhœa.

5. *Oil of Santal-wood*.—According to the statements made to me by chemists, who have really better means of knowing how the current of professional opinion sets in such matters than any surgeon can possess, this remedy is coming into very general use. Many of those gentlemen who have prescribed it largely consider it quite as efficacious as copaiba, and infinitely more pleasant both as to taste and operation. Dr. Atkinson, formerly house surgeon of St. Bartholomew's Hospital, Chatham, who was one of the first to employ it in England, and who watched its action with great care, was kind enough, in reply to some questions, to inform me that he had seldom found it fail in acute and sub-acute cases; that pain in micturition generally stops after the third or fourth dose, whilst the discharge itself usually ceases after the third day. Dr. Atkinson however thinks it is as well to continue the oil up to the seventh or eighth day, so as to guard against the possibility of a return. With the exception of very slight griping pains about the bladder, he has never known any unpleasant results from the use of this remedy. The dose he generally gives is from twenty to thirty minims in a little mucilage and cinnamon-water three times daily.

A Glasgow correspondent of the *Practitioner*, however,¹ has ques-

¹ September, 1869.

tioned its possessing any power, the remedy having failed not only in his hands but in those of other practitioners, and Dr. Purdon found that, so far from occasioning little nausea and having little smell, as stated by Dr. Thomas Henderson, of Glasgow, who first introduced it, he had on many occasions to discontinue its use on account of the nausea it occasioned, and that the odour was extremely well marked, remaining in the breath and on the hands for hours after being washed, and being evident in the urine.

Now it is very probable that some part of this discrepancy might be explained by a fact with which these gentlemen do not seem to have been acquainted. The fact is, that oil of santal-wood is so extensively adulterated with balsam of copaiba and castor-oil, that the genuine fluid forms in many cases but a very small part of what is administered. Some time ago I was assured by a gentleman on whose opinion I can quite rely, and who was kind enough to take a great deal of pains in order to procure me the information I required, that there was not a pint of pure santal-wood oil to be procured in the market at any price, and yet the supply to the retail houses was so regular and large as to seem practically inexhaustible. The pure oil of santal-wood is of a light but clear yellow, without the least tinge of brown, almost exactly the same hue as pure, fresh, sweet almond-oil; whereas that generally sold has a tint approaching the colour of copaiba, and a look like mastic varnish which has lost some of its transparency. The pure oil is intensely strong, and so acrid in taste that I can only compare it with croton-oil. Though I have prescribed the oil as usually sold, I have not made any experiments as to the dose with the pure oil, partly because it seemed so extremely acrid, partly because I could only procure a very small quantity of it; but judging from the powerful effect it produced on my mouth, I should not think it possible that any person could take thirty minims of it with impunity. As to Dr. Henderson's statement, that it has a very slight smell, I cannot understand it. I have a specimen of the pure oil now before me; it has been many months in my possession, and yet the smell, when the oil is even slightly warmed, is extremely pungent and most characteristic; in fact it seems to overpower that of any material the oil may be adulterated with. With regard to the cures said to have been effected by means of this oil given in combination with liquor potassæ, I may say that the latter fluid, given in moderate doses in conjunction with very small quantities of balsam of copaiba, or

mucilage of acacia, linseed tea, veal broth, pale ale, or any bitter infusion, will cure a great many cases of gonorrhœa ;—a fact which I briefly pointed out many years ago in the first edition of this work ; still I may say that some of my trials with the oil were encouraging. Given as below¹ it seemed to agree very well with the patients, who found it rather stomachic than otherwise, and it certainly appeared to remove slight discharges very effectually, particularly when injections were also used.

6. *Gurgum or Wood-oil*.—This remedy was also recommended by Dr. Henderson. It is a medicine of the same class as the oil of santal-wood. I have no practical experience of its action, and I have not been able to learn whether any trials, of such a nature as to furnish the means of arriving at a reliable opinion, have been made of its power over gonorrhœa. This concludes the list of specific agents, so far as my knowledge goes, and I therefore pass on to the consideration of some which are more comprehensive in their meaning. Of these the first on the list is—

7. *Antiphlogistic Means*.—It is unnecessary to state here how many excellent surgeons have insisted upon the necessity for resorting to these means, in order to pave the way for the use of specifics. Let us deal with the fact as we find it, which simply means that one-half of the modern practitioners swear by this dogma, though the treatment has not the least influence over the disorder.

If I understand the term aright, antiphlogistic treatment means the indiscriminate application of a certain series of measures, such as the use of mercury, tartar emetic, digitalis, blood-letting, leeches, cupping, and low diet ; all employed with the view of combating the inflammation, quite irrespective of the structure primarily or chiefly invaded. Now this practice appears to me founded on false principles, or rather founded on a total disregard of any principles whatever ; for as every structure, every secreting organ, has, from the moment life begins, an unalterable tendency to take on certain forms of action and development, whereby its anatomy and normal

¹ R Olei santali ʒj.

Ovi vitelli unius q.s.

tere bene et adde

Spir. ætheris nitrosi ʒij.

Syrupi flor. aurant. ʒiv.

Aquæ cinnam. ad ʒvj. m.

Capiat coch. amp. duo ter quotidie.

functions differ from those of any other structure and organ, so its disorders will necessarily be peculiar to itself.

It is of no use to tell us that they are fed by the same blood and feel through the same nerves ; that they are covered by the same skin and joined by one common bond ; structures differ in the essential part—the task assigned to them—and hence differ in their diseases. As disorder is exaggeration of some part of a function, and as scarcely two parts can be said to perform the same function, so disease will scarcely ever run exactly the same course in any two different structures ; albeit, parts resembling each other will show a resemblance in disease, and in the action of medicines on them. Hence, I think it is not going too far to say, that till experience decides the question, similarity or difference of structure should form the guide for treatment.

Indeed, the application of such measures in gonorrhœa is an instance in point. Remedies which scarcely ever fail to control inflammation of the cellular tissue exert the most insignificant power here, even when used heroically. Bleeding from the arm, leeches on the perinæum, calomel and tartar emetic, *scarcely ever effect the same amount of change in gonorrhœa which a single injection will induce.* They lower the patient, it is true, and make him weak and ill ; nay, they often render him as tractable as the disease, which is really saying a great deal, but they do no more, for all this, than rest and abstinence would do.

That the treatment of inflammation by the abstraction of blood should have been so long inculcated and so resolutely defended, shows that an error may be very widely spread, and upheld by almost irrefutable reasoning, and yet be an error. If anything but their own personal experience could teach men to be a little more tolerant, to reflect before they decide, instead of zealously seeking for arguments to oppose a doctrine because it is new, the history of the struggle which ended in the overthrow of this destructive practice might well point the much-needed moral. I suppose there now remains little doubt, that the man who most of all contributed to the putting down of lavish and indiscriminate bleeding was Dr. Samuel Dickson. Yet he was vilified in one medical journal as if he had been a common quack, and it is said that the fellows of one society were in such a hurry to show how much they abominated innovations of this kind, that they very nearly black-balled another gentleman of the same name by mistake.

Now I am quite ready to admit that Dr. Dickson's way of making his views known was possibly objectionable enough; but the question is, would he, had he confined himself strictly within professional limits, have succeeded in arousing the attention of the profession; and supposing he conscientiously believed that bleeding was yearly sending thousands to their graves, and ruining tens of thousands of constitutions, which was the right step to take—to leave the evil flourishing unchecked, or to brave the storm of obloquy, force the profession to recognize his views, and trust to time for justice? I leave the answer to the collective experience of those who have tried the former plan.

I am disposed to think that the abstraction of blood in gonorrhœa, speaking of it in the past sense, was simply a piece of routine, an offshoot from the great red-tape root. When I was young I saw patients bled for this disorder, but beyond making them low and faint, I never observed any effect; and though I have often asked the question, I have never yet been able to learn that a single observation, to say nothing of such a complete and accurate series as would be absolutely necessary, was instituted by any person for the purpose of determining whether it had a positive influence over the disease or not. There is, however, almost always one redeeming feature in the mode of giving the advice which ought not to be overlooked. The writers who tell us that local or general bleeding may be required, rarely fail to add that leeches usually suffice, so that orthodox adherence to tradition may here, at any rate, go hand in hand with a due appreciation of the enlightened teaching of the present day.

It may appear very heretical to think that these excellent old gentlemen, who dwelt so much upon the virtues of experience, gold-headed canes, wigs, and quarto volumes, were, after all, not better observers than their heterodox successors in beards and turn-down collars; but really it is impossible to avoid concluding, that those who first recommended such unnecessary deterioration of the health, did it on the same principle as their successors, and that principle a false one. Both appear to have thought that unless the material on which those medicines were to act was properly thinned down, medicines could not produce their due effect; for bleeding can only act either by the shock it gives to the system or by diminishing the quantity of fluids on which a given amount of drugs has to act; so that, were it not that blood is so much more

easily reproduced, I should hold the abstraction of such a vital fluid, in a disease like gonorrhœa, *to be as unjustifiable as taking away the same quantity of muscle or any other vital solid.*

The force of habit, however, is difficult to overcome ; and though it is easy to see that the most exact, consistent, and vigorous use of antiphlogistic measures leaves the urethra as hot, and even painful, as ever, the impression will still remain that, after all, these were the most proper means to use. If the reader doubt this assertion, let him read a paper at any of the Medical Societies ; he will soon see how many of the members are imbued with a due horror of the dangers likely to arise from an untimely resort to measures which will check the disease, and will take away with him the consoling reflection, that the faith in such time-honoured ideas, as that of the necessity for subduing the inflammation of gonorrhœa before ordering either specifics or injections, will outlast his day and perhaps that of many succeeding races.

One most extraordinary thing is, that such remedies as bleeding should be recommended by those very persons who confess that they never saw a case of such severity as really to demand their employment. It is difficult to set limits to the extent and violence of inflammatory actions, but as, in an experience extending now over many years, and embracing many thousands of cases, I never saw a gonorrhœa which did not yield (when it did yield) to a much milder treatment, I must decline giving up the evidence of my own senses, and therefore beg leave to say, with all possible humility, that the treatment is useless.

And, let me ask, what is the conviction which a dispassionate examination of the merits of this system must elicit from the very evidence *of those who have used it*, and given the results in some tangible form ? Direct failure, I answer, without any hesitation. Take, for example, the revelations of M. Ricord ; few authors have treated gonorrhœa more energetically than he has ; and yet, though it is difficult to ascertain what time he requires for the cure of his patients, there is evidence enough to show that they often remain for weeks under his antiphlogistic treatment, even when seconded by rest, specifics, injections, and cauterization.

Judge by the confession of his own pupils in Germany, France, and England, and see if they do not reveal the same tale. Hear what one of his most ardent and distinguished students, M. Melchior Robert, says. He tells us of the interminable duration of gonorrhœa,

its "durée désespérante ;" the half-cured state in which the urethra remains when "preceding blenorrhagias have left in it a leaven ever ready to ferment," and honestly admits that, except in a few rare instances, when the abortive treatment avails, the disorder is only cured in the most fortunate cases, by the aid of specifics and injections, at the end of thirty or forty days.

In the cases I collected from my own practice and that of my friends, the cures effected by this mode did not amount to more than one in four, and they were both slow and uncertain. Those which yielded were mild forms of the disease, and yet they lasted from thirteen to thirty-seven days ; when injections also were used, antiphlogistic measures proved nearly equal to copaiba, for then out of twenty-three cases thirteen were cured, the average period of treatment being twenty-eight days. Even this disproportion in the results might lead reflecting persons to doubt if the antiphlogistic treatment had any influence over the complaint, and ask, if the cures obtained were not rather due to some agent which had been overlooked. I may possibly have been under the influence of some baneful star at the time I made these calculations, but the fact remains as I have stated it, and it has certainly made me very sceptical about the powers of this system.

8. *Purgatives* are another favourite remedy in this disorder. Some surgeons set a high value upon their revulsive action, others simply view them as a part of the great antiphlogistic family, and a great deal of the reader's time, and mine too, might be very unnecessarily wasted in discussing the question. As it is not of the slightest moment, I will simply proceed to examine their power of arresting or curing the disease.

Greatly to my surprise, I was not able to collect any evidence of the slightest value as to this point, by far the most important of all ; and what I could make out by experiment was, that a powerful purgative will, in some very mild cases, or at the beginning of the attack, most materially aid in cutting short the disease, and this is about all it will do. Dr. Bumstead, who seems to have paid great attention to the subject, says, "We often meet with patients who have treated themselves with low diet and purging *for weeks*, and are no better of their gonorrhœa."¹ Mr. Whately relates an instance in which a purgative was repeated every day for thirty days together,

¹ *New York Journal of Medicine*, 1859, vol. ii. p. 210.

accompanied by a strict adherence to an antiphlogistic plan of treatment; and all this was done "without producing any material alteration in the complaint, or any considerable abatement in the inflammatory symptoms!" Dr. Durkee is strongly opposed to over-purging. "If," he says,¹ "repeated evacuant medicines be given, they will be liable to interfere with the digestive functions, will render the bowels more and more torpid, and an increase of the dose will be needed on every successive occasion. In many cases where free purgation is resorted to a long and tedious course of treatment is required. Patients of their own accord often pursue a cathartic plan for several weeks, and then report that their urethral difficulty is as troublesome as at the beginning."

The faith of man in purgatives seems to have been always great. The medical men of the latter part of the seventeenth century and the beginning of the eighteenth used them, as we have seen, quite as freely as the most reckless quack herbalist of our day; and at a considerably later date we find Rowley citing a case which shows that the belief in the virtues of this system was by no means extinct. In the instance he speaks of, the patient was purged and drenched till he looked like "a dead corpse" (*sic*). The result of this vigorous treatment was, that purple spots appeared on every part of the body; the greater part of the penis "dropped off," and very soon afterwards the patient dropped off also—that is to say, he died. The reader may possibly wonder what a jury would say nowadays to such a case.

Perhaps it may be said that these were merely the errors of a bygone day, to which my answer is that, so far as I can learn, a general belief in the virtue of purgatives is nearly, if not quite, as firmly rooted as ever. True, men do not, and probably never did, generally purge their patients, nor do the latter physic themselves, till they look like "dead corpses" or induce piles, but the old faith is as strong as ever in many quarters.

I now proceed to give a table of cases in which these remedies were tested with all the care I could use.

¹ *Op. cit.*, p. 31.

TABLE III.

Cases treated with Purgatives.

	Name.	Days previously ill.	Character of the Disease, and previous Treatment when ascertained.	TREATMENT.		Date of final Disappearance of the Discharge.
				Medicines.	Injections.	
1	W. D.	10	First clap.	Strong purgatives. Pot. sod. c. rhei gr. reac. c. pot. nit.	Sulph. zinc. arg. nit.	On the 35th day a stricture was detected. Cure in 2 months by bougies.
2	J. B.	3	...	Strong purgatives.	Nit. of silver.	Cure in 16 days.
3	W. H.	Not ascertained.	...	Ditto.	Sulph. of zinc, and occasionally nit. of silver.	Cure in 28 days.
4	J. S.	60	...	Pulv. salin. Steel and purgatives.	For one month none, then a strong injection once a week, and used one himself occasionally.	Cure in 47 days.
5	S. C.	Not ascertained.	...	Hyd. chlor. and haust. cath.	None.	At the end of 15 days no improvement.
6	H. H.	Not ascertained.	...	Ditto, followed by pot. iod. c. infus. rhei.	Injection only in the latter part of the treatment.	At the end of 35 days still some running.
7	G.	Not ascertained.	...	Purgatives.	Ditto.	At the end of 13 days still some discharge.

9. *Aperients*.—Aided by injections, aperients will effect quite as much as the most torturing and depressing purgatives; and could we but discriminate the cases at the outset, it would in many instances not be necessary to do more than prescribe these two remedies. But this is impossible. It will constantly happen that in very healthy-looking persons gonorrhœa becomes so severe or obstinate under this plan of treatment, that other means have to be resorted to after a considerable waste of time and money. Nay, it will occasionally happen that the very same patient, apparently suffering from the very same form of the disease, can be cured at one time by these simple remedies, and yet at another require all our resources. Besides, this plan is slow and uncertain, even when injections are used.

I give below a table of cases thus treated, and ask the reader if he does not think that it bears out this view. I could easily add to the number, but resist the temptation, as the returns agree so closely with those previously obtained.

And here I may observe that the reader will probably enough object to these tables as embarrassing, superfluous, and difficult to carry in the mind. My answer is, that the object in this work is to separate, as far as I can, *certainities from uncertainties*. It appears to me that this is the first step on the true road to knowledge, and that, without such a standing ground as this method offers, there can be no real progress. The number of opinions and the aggregate amount of experience may indeed increase, but such increase can only augment the difficulties of those who essay to analyze the mass and extract the truth from it. I therefore hold that the only plan is to reduce observations to such a form as will not merely admit of their being clearly comprehended and easily tested, but will reduce almost to a minimum the imputation of any vagueness. When observations are impartially digested down into figures, we can deal with them better than in any other form I know of.

TABLE IV.

Cases treated with Aperients.

	Name.	Days previously ill.	Character of the Disease, and previous Treatment when ascertained.	TREATMENT.		Date of final Disappearance of the Discharge.
				Medicines.	Injections.	
1	R. M. K.	...	...	Salines, carb. of soda and pulv. jalap.	None.	Left at the expiration of 13 days, in no way im- proved.
2	A. R.	10	...	Saline powder, consist- ing of pulv. rhei, pot. nit., and sulph. mag- nes.	Sulph. of zinc ʒj. to Oj.	At the end of 35 days the discharge disappeared, but returned immediately on leaving off treatment.
3	J. S.	30	Complicated with rheumatism.	Ditto.	Ditto.	Cure complete in 19 days.
4	J. B.	21	...	Pulv. sodæ c. jalap.	None.	On the 25th day only a slight gleet remain- ing.
5	H. B.	Not ascer- tained.	...	Pulv. salin. pot. nit. c. pulv. antim.	None.	On the 35th day the dis- charge was still bad.
6	J. R.	Ditto.	...	Pulv. sod. c. jal., pulv. salin., mist. salin., fol- lowed by tincture of steel.	None.	On the 34th day there was still some scalding, accom- panied by purulent dis- charge.
7	J. C.	Ditto.	...	Pulv. salin.	Sulph. of zinc.	At the end of 75 days there was some improvement. He now took no medicine for 35 days, during which time there was no further alter- ation in the disease.

TABLE IV. (*continued*).
Cases treated with Aperients (continued).

	Name.	Days previously ill.	Character of the Disease, and previous Treatment when ascertained.	TREATMENT.		Date of final Disappearance of the Discharge.
				Medicines.	Injections.	
8	W. B.	...	Apparently from over-walking.	Dilute sulph. acid and aperients.	None.	The discharge ceased on the 3rd day.
9	...	30	He had drunk beer, and tried to cure himself with salts.	Pulv. salin. Restricted diet.	Sulph. of zinc.	Cure by the 35th day; the scalding ceased on the 6th day.
10	A. D.	30	He complained of the scalding being very severe.	Pulv. salin.	Ditto.	By the 21st day the scalding had nearly ceased, and by the 25th the discharge was gone.
11	...	3	Not very severe.	Pulv. sod. c. jal. No restriction in food or drink.	Lotio saturn. to the penis.	On the 30th day there was still some purulent discharge.
12	A. S.	Not ascertained.	...	Pulv. sod. c. jal. mist. salin.	Ditto, followed by injec. of sulph. of zinc.	On the 39th day there was still some purulent discharge.
13	W. S.	...	...	Pulv. sod. c. jal., pulv. salin.	Lotio saturn. as an injection.	On the 61st day there was still some purulent discharge.
14	A. S.	4	...	Pulv. sod. c. jal. No restriction in diet.	Ditto.	On the 16th day almost well.
15	A. H.	4	...	Ditto. ditto.	Ditto.	No improvement at the end of 33 days.
16	D. F.	6	...	Ditto. ditto.	Ditto.	At the end of 14 days there was but little improvement.

17	R. K.	90	He had taken copaiba and catechu, and used injections.	Pulv. salin.	Lotio saturn., and after 24 days sulph. zinc.	Cure in 78 days.
18	S. C.	7	...	Pulv. sod. c. jal., salines.	Lotio saturn.	On the 30th day the chordee had ceased, but scalding and discharge were present.
19	E. S.	90	Very mild.	Pulv. salin.	Sulph. of zinc.	Cure in 4 days.
20	M. J.	42	...	Ant. and salines.	Ditto.	Cure in 30 days.
21	B. B.	42	Cubebs in mixture.	Pulv. salin. Not restricted in diet, drank beer.	Ditto.	On the 40th day there had been no discharge for a week; there was still some smarting on making water.
22	J. P.	270	Thick white discharge, no chordee: lived regularly, took medicine, and no malt liquor.	Pulv. salin., tinct. of steel.	Lotio saturn.	On the 49th day there was still some discharge.
23	W. C.	3	...	Pulv. salin. Drank beer.	None.	No improvement at the end of 33 days.
24	A. S. K.	6	...	Pulv. salin.	Sulph of zinc.	In 12 days had diminished to a gleet, and a few injections completed the cure.
25	H. C.	3	...	Pulv. salin.	Ditto.	Cure in 43 days.
26	G. W.	24	...	Pulv. salin., followed by copaiba and turpentine.	None.	Cure in 16 days.
27	H. H.	Not ascertained.	Said to be non-venereal.	Pulv. salin.	Sulph. of zinc.	Cure in 12 days.
28	J. S.	60	Copaiba and injections.	Pulv. sod. c. jal.	Ditto.	Cure in 12 days.
29	S. W.	Not ascertained.	Said to be from a strain.	Ditto, and tinct. ferri m. xx. ter die.	None.	On the 37th day there was still a slight gleet, when the tincture was commenced. Cure in 8 days more.

Here, then, with the exception of four cases, one of them (Case 8) being very likely not gonorrhœa at all, where I began injecting within the first fortnight, the results were of the most unsatisfactory kind. Many of these patients were as bad as ever at the end of thirty, forty, or fifty days, and the treatment had to be exchanged for something more calculated to effect a cure. A few slowly recovered; and some, who thought the disease gone at the end of a long course of medicines, found it return so soon as ever they left off treatment.

I have heard these views disputed, and heard surgeons say at the Medical Societies that they generally found a few days sufficient to bring down the disease to a gleet. So I thought at one time; but when I came to put down the results in black and white, and limit myself to cases in which I positively ascertained what the action of these remedies had been, I changed my opinion.

The objection urged against copaiba and cubebs holds good here. When once a case proves refractory no further benefit seems to arise either from increasing the dose or persevering in the use of aperients. Of this practice affords us every day the most convincing proofs; and there is perhaps no surgeon, however limited his sphere of observation, who has not seen cases in which patients, attempting to cure themselves, had persevered in their use for months without even materially relieving the disease.

10. *Diuretics*.—The principal diuretics used in gonorrhœa are the spir. ether. nit., nitrate of potass, and liquor potassæ; though perhaps the latter ought only to be classed exceptionally under this head, being an ant-acid.

The action of liquor potassæ, by means of the kidneys and urine, is possibly one of the very few successful instances of a means yielding the results expected, for unless its use arose from some person imagining that it would produce the same effects when employed in this way as when applied to the tissues, I am at a loss to know how it was introduced at all into the treatment of this and similar diseases. It certainly does exert, however, a most extraordinary control over the purulent discharge, and in women it often, combined with bitters, acts better than remedies which prove more powerful in the male.

As to the employment of diuretics, I never could make out any reason for using them, although I am always glad to avail myself of their employment. And, indeed, a moderately increased action of the kidneys so generally alleviates the disorder, that these valuable

remedies have been admitted into almost every plan of treatment. The spirit of nitre is perhaps the most unexceptionable and pleasant to take, as it rarely offends either the taste or the stomach, and even when not beneficial never acts injuriously. As to the nitrate of potass I must give a more qualified opinion, and in the chapter on scalding, in a later chapter of this work, it will be seen that it was given to the extent of six drachms a day without producing the least effect either on the disease or scalding.

The acetate is unquestionably, I think, a much more powerful remedy as an adjunct. It was first introduced, I believe, by Mr. Hilton to the notice of the profession as a remedy for gonorrhœa. Long previously I had used it extensively, but I had ceased to place any reliance upon it as a specific, and this is really the only decision to arrive at.

A close scrutiny of Mr. Hilton's cases will, so far as such a small number can prove anything, prove this assertion. In the first case the discharge ceased within sixteen days; in the second on the eighth day; while in the third instance no very material improvement took place for the first fifteen days, and it required thirty-nine days to subdue the scalding and discharge. Even then the cure was not complete.

11. *Alteratives*.—I have little or nothing to say on this head likely to interest the reader. It seems almost unnecessary to state that the belief of the old surgeons in the power of mercury over this disease did not very speedily die out among their representatives in more modern times, even when men became convinced of what they might have learned at any time, when they chose to learn from nature—viz., that syphilis and gonorrhœa are two entirely distinct disorders, although we must admit that so much progress has ensued as to make the salivation of gonorrhœal patients and faith in mercury for this disorder matters of history in Great Britain at least. I say Great Britain advisedly, for while this faith still flourishes in many parts of Germany, Belgium, and Italy, it is not quite extinguished in the most enlightened capital of modern Europe. M. Robert, in a work published but a few years ago, after stating his firm conviction that mercury has no power over chronic runnings, admits that he has failed with it (and therefore that he had needed to convince himself by actual trial), and tells his readers that about a year previous (in 1860) he was consulted by one of his *confrères* for a chronic discharge, who had tried to no purpose a *long mercurial treatment*!

Really, when I hear of men who at any rate seek to influence

professional opinion, writing essays and memoirs on modes of treatment long proved to be worthless, wasting their readers' time, and discussing the most trifling minutiae of utterly useless plans with all the gravity of sages, such, for instance, as that of Knoblauch for treating this affection with calomel (in Canstatt's *Jahresbericht*, 1858), I am at a loss to know whether irony and ridicule are not the only weapons one can resort to.

Fortunately enough, the belief in such remedies is well nigh exploded, and they are rarely used, except when alteratives are required to improve the general health, which was about the last thing thought of when they were in vogue.

The iodide of potassium, one of the most powerful alteratives in proper cases, has been repeatedly made a subject of discussion, and at one time a paper regularly appeared in some journal or other, treating more or less fully of its merits. It is, however, inert, and any benefit that arose during its use was certainly due to some other agent. In a paper by Mr. C. Cornwall, in the fifteenth volume of the *Medical Gazette*, of which I will not say what I think, it will be seen that the author's success in treating gonorrhœa in this way amounted to effecting a cure in thirty-four days.

B. EXTERNAL APPLICATIONS.—For the sake of accurate examination it will be best to divide these into—1. cold applications, as ice and evaporating lotions; 2. warm applications, as hot fomentations, baths, &c.; and 3, sedative applications. We may thus ascertain their comparative value, and see if there are any fixed rules to guide us in making use of them.

1. *Cold Applications.*—How far cold evaporating lotions, particularly when used as they generally are, act beneficially in checking the pain and inflammation and in abating the heat felt in the penis, and, indeed, in any inflammation where a mucous membrane is implicated, is a question which a future race of surgeons will, perhaps, subject to a more rigorous examination before recommending them. As yet there is nothing more than individual conviction to show that, were equal numbers of patients submitted to the same treatment, those who were in addition treated with cold applications would derive more benefit than the others. Now, until some evidence of this kind can be produced, the patient should not be subjected to the trouble and expense of using them, and a fair trial should be made to see if the rest generally observed is not the real source of relief.

2. *Hot Applications.*—The reader may possibly feel surprised when he finds that one surgeon considers a cold bath a useful means, that another stews his patients for four or five hours in a hot bath, and that Ricord condemns the hot bath, as Howard did long previously,¹ as being liable to promote the outbreak or occasion the reappearance of the discharge;² but such is the state of opinion. With respect to the last-named contingency, I would remark that it may have been a very possible occurrence in England in bygone days; it may be so yet in France among the rather inflammable youths seen occasionally at the Hôpital du Midi, good-for-nothings of the first water, decidedly too fond of leading the same kind of life as Sybaris did after being subdued by Lydia, and in whom I should say being affected with gonorrhœa was rather the normal state than otherwise: but I fancy it is a rare event nowadays in english surgery, and, so far as my own experience goes, I never saw or heard of an authentic instance in which hot baths exerted any influence for good or evil over gonorrhœa.

Prior to bringing out the first edition of this work I made a careful series of observations, and could not verify these opinions about the prejudicial effects of hot baths in a single instance. Blank forms were prepared like the following, and mostly filled up only from cases seen every day; and it may perhaps save some repetition if I state here, that all the remedies spoken of in this work as having been tested by myself were experimented upon in this way.

Form for Calculating Action of Remedies.

Name	A. B.	
Date		
Feels	Better.	Worse, &c.
Discharge	Lessening.	Increased.
Chordee	Much the same.	
Erections	Troublesome.	
Bladder	Irritable.	
Urine		
Bowels		
Tongue		
Effects of Medicine		
,, Injections		
,, Baths		
General Remarks		

¹ *Op. cit.*, vol. iii. p. 61.

² *Traité Pratique*, p. 667.

On these data alone was any reliance placed, and after destroying all the incomplete returns and computing the results, it was not found that the warm bath had ever induced the slightest change in the character of the purulent discharge. On the contrary, I found that the patient's health and comfort were materially promoted by a moderate use of hot baths ; and in this, as in all other maladies, I believe that what refreshes the patient and makes him feel lighter and better never really does him any harm.

The only external application which I can safely say has never disappointed me, and which is at once simple and useful, is that of very hot water to the penis. But to do any good the water must be hot, not lukewarm, and when the case is very severe, it should be used at such a temperature as to make the penis quite red. When thus employed, and especially in the earlier stages of the disease, the weight felt about the testicles soon disappears, the pain on making water and using injections is soothed, and the glans and prepuce lose their unhealthy appearance.

The best plan of employing it is, I think, the following :—The patient should stand over a slop-pail, holding a small basin brimful of very hot water in his left hand. With the right hand he should lift up the penis by the skin of the upper part, and just allow the lower surface to come in contact with the fluid. When there is uneasiness about the perinæum, he should roll up a piece of rag, flannel if possible, into a ball about the size of a walnut, tie this firmly to a small piece of firewood, dip the ball in almost boiling water, dash off the drops, and press it against the perinæum. Dr. Bumstead says, "Water as hot as it can be borne is the most grateful application that can be used. I have found it afford great relief to the scalding in micturition, and the local pain and uneasiness, and can fully endorse Mr. Milton's statements in regard to it."¹ Dr. Durkee, also speaks² very highly of the value of hot water in such cases. "I was first induced," he says, "to try this method of applying heat and moisture on the recommendation of Mr. Milton. The utility of the procedure in soothing the diseased organs and the patient I have repeatedly witnessed. In fact, in nearly all cases where the fomentations have been faithfully tried, the anodyne effect has been immediate, and no untoward result has ever followed. If there be tumefaction and pain in the glans, or if the patient be

¹ *Op. cit.*, p. 79.

² *Op. cit.*, p. 32.

tormented with chordee, the employment of this simple and cleanly remedy will prove highly serviceable. It needs no addition of poppy-heads, opium, or lead. Its therapeutic action cannot be improved by any medication."

Were it no way superior in its effects to other applications, this remedy would far surpass them in point of convenience. No smell, no mess, no cumbersome apparatus. A piece of sponge, or a rag, and a little hot water suffice.

3. *Sedative Applications*.—This simplicity, on which its value is in some measure dependent, vanishes the moment we essay to increase (?) its efficacy, by adding such things as decoction of poppies, solution of opium, laudanum, &c. Now as one grain of opium taken internally will really allay any pain the patient may feel more effectually than the most elaborate messes, I should be glad to know if it is not high time that the employment of such filthy concoctions should be summarily put down. Why will surgeons persist in trying again and again some useless compound which has failed a thousand times, which can only add to the patient's discomfort, complicate treatment, and waste time ; which must dirty the linen, sheets, &c. ? Is it because routine, tradition, and authorities say that something of this kind must be done ?

The only thing I ever thought relieved the pain and aching in gonorrhœa is the acetate of lead used in large quantities, such as two or three drachms with an ounce or so of acetic acid and five ounces of camphor mixture, applied constantly by means of a rag, after bathing with hot water. But I at once admit that I have never satisfied myself of its possessing any action whatever. Nay, I am somewhat disposed to think that I have occasionally caused the purchase and consumption of a very unnecessary amount of it.

I wish some physiologist would condescend to be useful, and leave off very transcendental experiments on dogs, cats, frogs, &c. (I wonder, *en passant*, how professors would like to have these humane researches prosecuted on them), and give us a satisfactory explanation of some matters we know very little of ; such, for instance, as the action of heat and cold on inflamed surfaces. All I have been able to make out is, that in slight inflammations cold is often more beneficial than heat, especially if the mere outward surface is inflamed ; but if deeper structures be involved, the application of heat is more useful. Even here there are contradictions I have

never seen explained. For instance, if the penis be exposed to cold air during the acute stage of gonorrhœa, an exacerbation is apt to follow, but if the organ be kept cool and moist, the very opposite result ensues ; again, if it be kept too warm, an aggravation of all the symptoms, especially of the chordee, sets in, while the free use of scalding hot water materially relieves all this, and is invaluable in such complications as perinæal abscess and sympathetic bubo. In mammary abscess, an increase of pain is often induced by exposure to cold, but if warmth and moisture be applied, relief of the most gratifying kind is experienced. Heat and moisture have the same soothing effect upon whitlow, and under their influence the skin becomes cooler and less uncomfortable. Dry heat, such as that of a hot sun, especially if accompanied by much light, will often rapidly aggravate eczema ; the heat of a furnace is frequently far less injurious than that of a cold wind, and sometimes appears rather beneficial. Some persons, suffering from eczema of the backs of the hands and wrists, find that holding them before a bright fire till the skin is almost scorched gives great relief. Bathing an eczematous or erysipelatous surface with hot water seems to me useless or injurious, whereas this application, properly carried out, is of much service in many forms of inflammation, such as croup, peritonitis, suppurative inflammation of the cellular tissue, &c. Are we then still in the dark as to the value of remedies in vogue from the darkest times of antiquity, and is our boasted progress at fault about the rudest elements of treatment ?

C. DIRECT APPLICATIONS. 1. *Injectiōns*.—But we now approach the consideration of what may fairly be termed the right arm of the service ; I mean *injectiōns*. Without them internal remedies and external applications are alike slow and unsatisfactory in their working, and, notwithstanding that the abuse of them has sometimes led to mischief, and that the most unexceptionable employment of them is now and then of no avail, the man who discovered them merits—and I say this without wishing to round or swell a sentence—our common gratitude. Men have been deified and canonized for less important services, but that was in barbarous times, and we live in an enlightened age.

Variety of Substances used as Injectiōns.—A list of the substances recommended for injections within the last few years would perhaps show, more strongly than anything I could say, the discrepancy of opinion that prevails as to which is the best. I therefore give

a selection—chloride, tannate and acetate of zinc, Condyl's fluid,¹ nitrate of silver, acetate of lead, sulphate and chloride of copper, iodide and potassio-tartrate of iron, tincture of sesquichloride of iron, solution of perchloride of iron, solution of persulphate of iron, trisnitrate of bismuth, pernitrate of mercury, chloride of soda, chlorate of potass, alum, tannate of alumina, tincture of iodine, recommended² as having never failed during a ten years' trial; nitric acid combined with strychnia, tannin, glycerine of tannin³ matico,⁴ subsequently stated by Signor Carlo Ambrosolè⁵ to be the last medicament of the kind we should have recourse to, starch, carbolic acid and potass, carbolate of zinc, sulpho-carbolate of zinc,⁶ tincture of catechu, vinum opii, tincture of opium, watery extract of opium,⁷ opium and glycerine,⁸ decoction of poppies, tincture of aloes, hydrastin,⁹ leptandrin,¹⁰ red wine, copaiba, volatile oil of copaiba,¹¹ repeatedly tried in vain at the recommendation of previous observers; chloroform, honey, green tea, wine, ice-cold water, and retention of the urine by means of an apparatus.¹² Though the last can scarcely be considered as an injection, it is intended to act in the same way.

Many years would not suffice to examine with anything like accuracy the comparative value of the different substances here recommended. I say this quite deliberately, for it took me more than two years, at a time when I was not overburdened with private practice, to satisfy myself even imperfectly as to the relative power of three drugs only, namely, the sulphate of zinc, acetate of zinc, and the nitrate of silver.

¹ *The Doctor*, April 1, 1871.

² *Lancet*, 1867, vol. i. p. 411.

³ *Lancet*, 1869, vol. i. p. 398.

⁴ *Union Médicale*, Mai 18, 1860.

⁵ *Lancet*, 1866, vol. i. p. 47.

⁶ *The Surgeon's Vade-Mecum*. By R. Druitt. 1870, p. 166.

⁷ Durkee, *Op. cit.*, p. 54.

⁸ Dr. Bumstead speaks highly of the power of this combination in relieving local pain and uneasiness. His formula is—

℞ Extracti opii ʒj.

Glycerini ʒj.

Aquæ ʒiij. m.

A syringe-ful to be thrown up very gently every time the patient makes water.

⁹ Bumstead, *Op. cit.*, p. 89.

¹⁰ *Ibid.*

¹¹ *Gleet: its Pathology and Treatment*. By Henry Dick, M.D. 1858, p. 49.

¹² See a paper by M. Diday, *Gazette Hebdomadaire*, Dec. 9, 1860, recommending this means, as also the actual cautery in gleet.

Opinions as to the strength in which it is advisable to employ injections can only be divided into three varieties,—those in favour of moderately strong, of very weak, and of strong injections; yet we find here as much disparity of opinion as the case admits of. Thus for instance, nitrate of silver has been used in solutions varying in strength from a quarter of a grain to an ounce, up to half a drachm in the same amount of fluid.¹ Even this was not strong enough for some surgeons, and it has been more than once recommended to employ the solid nitrate.

Is not this simple statement sufficient to convince any one, that if we are ever to attain to anything like accuracy in medicine, it will be absolutely necessary to have a better system of recording cases—a *school in short*, as I have often suggested, *of experimental medicine*, with a system of registration for correcting errors of observation? Are not the very number of substances used for injections, and the varying strength in which they are recommended, proof enough that there is some vital defect in our present method of trying to get at the truth? The basis on which our principles of treatment rest must be, indeed, ready at any instant to crumble under our feet, if all the teachings of authority and experience are liable to be overturned at once in favour of some new remedy which has not been tested in more than three or four instances. In some cases in the literature of gonorrhœa, there was scarcely even this ground for recommendation, as even a most cursory examination left it very doubtful if the substance in question had exerted any influence whatever; *e.g.*, the evidence about tormentilla and chloroform was of this class. It is rather a suspicious circumstance that the number of cases is generally small on these occasions. One gentleman candidly admitted that in his own case this was owing to “the author’s limited sphere of observation;” but his readers were consoled by the assurance, that so soon as he had had an opportunity of trying the experiment further, he would again trespass on the editor’s kindness. No more cases, however, I believe, appeared on this occasion; indeed no more generally do appear. Why, I am at a loss to know, but surmise that perhaps the patients do not like the ex-

¹ A solution of nitrate of silver, “in the quantity of a scruple or even half a drachm to an ounce of water, was, some years ago, in consequence of some reports in favour of it, recommended by the heads of the Army Medical Department, as deserving the consideration of regimental surgeons.”—*Outlines of Military Surgery*. By Sir Geo. Ballingall. 1855, p. 513.

periment, or that the result has not been so satisfactory, or finally, that the editor's kindness does not extend so far as to insert a second paper.

While on this subject, I must not pass over the labours of Mr. de Méric, who examined the action of a remedy in 140 cases before bringing the subject under public notice.¹ The substance experimented with was the trisnitrate of bismuth. A special register was kept of all cases, but owing to the neglect shown by the patients themselves, Mr. de Méric was only able to obtain an account of the results in 52 instances. The results were not satisfactory. Out of the 52 there were 36 cured, 5 much better, and 11 not improved at all. Even in those cases which were cured, the patients remained on an average two-and-twenty days under treatment, and this, so far as the injections were concerned, did not begin till the inflammatory stage had subsided.

An exception also, as regards the efficacy of the substance employed must be made in favour of the liquor hydrargyri pernitratī, recommended by Mr. Borlase Childs, who tells us,² that in some instances six injections of this fluid have been sufficient to effect a cure, and that treatment by injections with it only, constitutional means being almost wholly left on one side, rarely exceeds ten days. The strength of the injection employed is half a minim of the solution of the pernitrate to an ounce of water, to be used three times a day.

I think I am not going too far when I say that the introduction of some of these substances, such as honey, chloroform, ether, tincture of aloes, creosote, *et similia*, must be ascribed to some defect in the reasoning powers of the persons who first recommended them, and that any one who could expect to derive benefit from the use of these remedies must be incapable of forming a sound view of therapeutics; for what property is there in any one of them which would lead us to infer that it could possess the least power of controlling such a disease as gonorrhœa, or even modifying purulent inflammation of any kind? Only practical experience could of course prove they were worthless; as might have been expected it did so whenever these wretched tricks were put to the test, but it

¹ See a paper read before the Medical Society, April 30, 1860. *Lancet*, 1860, vol. i. p. 468.

² *Lancet*, 1861, vol. ii. p. 350. The liq. hyd. pernit. may, I believe, be procured from Messrs. Darby & Godsen, 140, Leadenhall Street. It contains twelve grains of the solid pernitrate of mercury in a fluid drachm.

proved at the same time that they were most injurious. Some of the persons injected with chloroform suffered severe pain, amounting, it was said, even to agony for hours, *followed by copious discharges of blood from the urethra*, and any person who has suffered from the contact of chloroform with his lips knows how severe the pain is which it occasions, and will appreciate the torment these unfortunate patients must have gone through. The profession ought, in my opinion, to have visited with equal reprobation those who perpetrated such shameful experiments and the journals which lent them the sanction of their columns. I beg to record this as my deliberate opinion. To give, as a mere experiment, an injection producing frightful pain for hours and copious discharge of blood, is in my judgment a most shameful act, and if the reader will kindly hold a teaspoonful of one of these chloroform injections in his mouth for a few minutes he will, I think, be of my opinion. I dare say these abominable tricks now and then effected a cure, and so would, perhaps, an injection of pure sulphuric acid or a red-hot wire, with the additional advantage of preventing any new infection by closing up the urethra.

Can Injections bring on Stricture and Orchitis?—To this pertinent inquiry the most unhesitating denial may be given. Stricture occurs by far the most frequently among those who have been treated only with medicines, or with medicines and injections given in a very inefficient manner, and is so rare among those treated with injections *properly given*, that in the course of many years I have never been able to trace a single case to this source.

One would suppose that those surgeons who object to their use on this ground would have adduced some facts in proof. All these disorders are so common that, with ordinary industry, any writer might have accumulated materials enough to support his views. But, instead of doing this, which might entail the inconvenient risk of being converted to an opposite opinion, they content themselves with the safer plan of detailing their fears of *what ought to follow*; they never appear to dream of relying solely upon a critical analysis of what *has followed* the use of such means. However, it is gratifying to find that all writers are not so prejudiced; Mr. Whately, M. Ricord, Dr. Bumstead,¹ and some others, who are to be weighed

¹ Dr. Bumstead says: "Much influence in the production of stricture has been attributed to the use of injections. I feel obliged to dissent *in toto* from this opinion."—*Op. cit.*, p. 279. "I have seen as many strictures after gonorrhœas

rather than counted, have convinced themselves that strictures do not result from injections, though even M. Ricord is afraid of giving them when the testicle is affected, a fear quite as chimerical as the other.

If injections bring on orchitis, how is it that they scarcely ever produce this effect when given within the first fortnight from the breaking out of the disease—the very time when they induce the most pain? M. Diday and M. Ricord have never seen this complication before the fifteenth day,¹ and I have not observed it in my practice so early as this in a single instance. If their strength is the object to be dreaded, how does it happen that in the cases mentioned in Table V., where eighteen persons were treated with injections of nitrate of silver, ten grains to an ounce, no symptoms of orchitis were induced in any instance—a result I have since repeatedly verified?

I must now, upon the lowest calculation, have given with my own hands injections of nitrate of silver several thousands of times in gleet and spermatorrhœa, and as I have not yet seen orchitis or stricture arise from doing so, I am inclined to think that such a result is scarcely to be looked for.

When a patient has neglected a gonorrhœa for some time, say three or four weeks, or has been for a time trusting to medicines only, and in consequence of not deriving from them the benefit he expected, takes to injections, it will sometimes happen, that so soon as those are begun with orchitis comes on; and I need scarcely say, that should this complication occur at any period when these remedies are being used, it is at once ascribed to their employment. I am rather disposed to think that in some of those cases the use of the injection does hasten the appearance of the swelling, but that it cannot be considered as the predisposing cause. Even as an exciting cause its agency must, I apprehend, be limited to this, that it calls forth *what would have happened spontaneously at a later date*. I have not found orchitis more prevalent under such circumstances than where medicines alone were trusted to; and my experience is, that a certain percentage of cases of orchitis will happen under any

that have been cured without injections, as after those cured with them.”—*Works of John Hunter*, 1835, vol. ii. p. 232. Hunter’s commentator, Babington, doubts the power of injections, more than that of gonorrhœa, to cause stricture.”—*Ibid.*, p. 233.

¹ *Exposition Critique et Pratique*. Par P. Diday. 1858, p. 484.

system of treatment which does not cut short the gonorrhœa within a few days.

In contrast to the authors who declaim so vaguely, Mr. Johnson gives us¹ something tangible. Out of fifty-nine cases of orchitis which he quotes, sixteen were known to have used injections, and nine had taken copaiba. Now, so far as this evidence goes, it clearly shows that the disorder occurred more frequently when injections were not given, and therefore there is no reason, were prejudice only laid aside, for assuming that they had any share in inflaming the testicle in the other cases.

I presume it is unnecessary to discuss such questions as the power of injections to throw any infection into the system, or produce a metastasis of the disease,² or do harm by checking the purulent running. Such doctrines might do very well for a country nurse, or the feeble-minded class of persons who encourage homœopathy, or join anti-vaccination leagues; but I need scarcely say that the opinions of such people, when utterly unsupported by proof, do not require discussion. Further, I am not aware that the questions themselves have ever been supported by any reasons. I therefore pass by this part of the subject, simply remarking that what is really wanted, is not the putting an end to frivolous objections, but to the gonorrhœa, and that without giving pain, and in the shortest possible space of time. Long ago Hunter pointed out³ that injections could not possibly drive the disease into the system, because the poison resides in the secreted matter.

A very similar kind of dread prevails about checking gonorrhœa at all in the acute stage. Mr. Johnson says that at this period of the disease "the more discharge the better." But it is certain that the more discharge, the more extensively and severely is the urethra affected, and, *cæteris paribus*, the longer does it take to cure. Besides, it is utterly impossible to suppress a discharge except by means which make the membrane secreting it healthier, and it is difficult to understand how that can be injurious to the patient. Very strong remedies used for the purpose of trying to cure gonorrhœa may do mischief; but it is because they set up pain and irritation, not because they stop the discharge.

Nitrate of Silver.—Of all the substances ever yet employed for

¹ *Op. cit.*, p. 197.

² Howard, *Op. cit.*, vol. iii. p. 123.

³ *Works of John Hunter*, 1835, vol. ii. p. 199.

injections this is, to my thinking, the best. I have seen a great number of injections tried, and have one time or other tried a good many myself, but I have never observed any exercise such a marked control over gonorrhœa as a solution of nitrate of silver, properly given, and of the proper strength. Yet it is used by comparatively few surgeons, and it is no uncommon thing to hear surgeons say that they have given it up in consequence of failing so often with it, or from its bringing on stricture. The latter objection is, I think, already got over. The former merits decided attention.

I am not sure about the matter, but I believe the merit of first using this powerful remedy is due to an East-India surgeon,¹ who, being detained for some time "on the island Madagascar," about the year 1737, practised on the natives! I marvel much, by the way, that they did not eat him or put him to death as a sorcerer. Certainly

"Illi robur et æs triplex
Circa pectus erat."

He used to dissolve three grains in half a pound of soft water, and thicken it a little with powdered coral. But it was too bold a flight for the physicians of that day, and even for those of a later date, so that for something like a century afterwards this valuable remedy remained almost totally neglected.

When employed at the very outbreak of the disease, and particularly in mild cases, it will often cure gonorrhœa with magical rapidity. This fact I think no one will deny. In some instances its action is so sudden that on the very next day only a slight gleet remains, which soon vanishes under the influence of any mild astringent. Even if it fail, it generally so alters the action of the parts that very simple means will remove the dregs of the disease; and, in point of fact, much greater progress towards a speedy and lasting cure is often effected by one injection, than by the most heroic employment of antiphlogistic medicines, rest, and low diet. But it does not always, or indeed often, succeed when used alone, and then in bad cases the disease will go on, and stricture will set in, or some other complication ensue, and the surgeon is blamed for using injections, "driving the disease in," and ruining the patient's constitution.

That its power as a purely curative agent when employed without

¹ Howard, *Op. cit.*, vol. iii. p. 136.

the aid of other means is very limited, I am quite satisfied. As an instance out of many others, I selected eighteen patients who were anxious to be cured at once at all risks: they were injected with a solution of nitrate of silver, ten grains to an ounce; a dose of calomel and opium, with a purgative draught, was ordered, and the following results were obtained:—

TABLE V.

Cases treated with strong Injections of Nitrate of Silver.

Name.	Number of days the Disease had lasted.	Symptoms and Result.
J. B.	60	Pain, bloody urine, but improvement; still some discharge.
J. N.	90	Pain and scalding lessened. Improvement; still some discharge.
S. B.	270	Much pain and scalding; little improvement.
H. H.	29	Some pain; great improvement; discharge lessened.
J. W.	17	Great pain; discharge much lessened.
E. C.	35	So much pain caused that he refuses to have another injection. Discharge lessened.
J. B.	5	Great pain for four hours after; no discharge to be seen; cure.
G.	14	So much pain that he will not be injected again. The discharge is lessened.
E. G.	14	Great pain; the discharge went away and then returned, but it is lessened.
B.	10	So much pain that he has no desire to have it repeated; speedy cure.
W. N.	18	Great pain; the discharge is gone.
E. E.	23	Discharge almost gone; irritability of the urethra greater; rapid cure.
H. H.	60	Not much pain; the discharge lessened.
H. C.	130	Pain for three hours; the scalding increased; discharge lessened.
R. T.	21	The pain trifling; pain and uneasiness in the penis and scrotum relieved; the discharge almost immediately lessened.
J. R.	5	Great pain; the discharge was stopped, and then slowly returned.
J. T.	2	Lost sight of.
W. H.	42	Lost sight of.

Here, then, we see that out of the eighteen two were immediately cured, and in nine others there was a considerable improvement; some of them, indeed, were quickly freed from their malady, though they had long suffered under it. Of the remaining seven, two disap-

peared without giving notice, and the residue were not cured for a long time.¹

Subsequent experience has only tended to corroborate the conclusions then arrived at. Over and over again patients have applied to me with the request that I would cure them with a strong injection and without medicines, but the result has generally been that I was obliged to resort to the use of the latter, and that the injection failed; and I know that some of those surgeons who once pooh-poohed drugs of every kind have now considerably modified their views.

Mr. Acton's experience is certainly very different. He generally finds two strong injections of nitrate of silver quite sufficient. He seldom has recourse to a third, and his patient "is quit of a troublesome complaint in a very few days" (*Op. cit.*, p. 90). M. Diday, who employs strong injections, speaks² quite confidently of curing the disease at a single sitting with an injection ("d'un seul coup de piston" . . . "en une séance"). His one injection, however, really means two, or what he calls³ a "séance d'injections," one being required to clear the way for the other. The curative injection is a solution of the nitrate, not quite ten grains to an ounce (three decigrammes of the nitrate to eighteen grammes) of distilled water. He injects about a drachm of this, keeps it for about a minute in the urethra, and all is finished. Of course this applies to cases seen at an early stage; but still, as I understand M. Diday, when the disease is unmistakably there.

I believe that in the inability of nitrate of silver to cure gonorrhœa without the aid of other means, lies the explanation of its use

¹ In a table of twenty cases of gonorrhœa treated in the hospital of the Castle of Edinburgh by Messrs. Johnston and Bartlett with injections of nitrate of silver, twenty grains to an ounce, the results were as follows:—

Number of cases.....	I.....	Discharged cured in	3 days.
".....	1	"	5 "
".....	1	"	6 "
".....	2	"	10 "
".....	4	"	15 "
".....	4	"	17 "
".....	4	"	20 "
".....	1	"	25 "
".....	1	"	28 "
".....	1	"	42 "

The average time required for a cure was therefore $17\frac{1}{10}$ days.—*Edinburgh Medical and Surgical Journal*, 1818, p. 263.

² *Exposition Critique et Pratique*, 1858, p. 88.

³ *Op. cit.*, p. 91.

being followed by stricture. The contraction is not caused by the employment of the nitrate ; *it invariably ensues in a certain percentage of cases when treatment fails to arrest the discharge.*

Chloride of zinc, first proposed, I believe, as an injection by M. Gaudriot,¹ was at one time strongly recommended by the late Mr. Lloyd, of St. Bartholomew's Hospital. It is not often that there happens such a success with any novelty in the therapeutics of gonorrhœa as occurred in this instance. According, however, to a pretty general rule, the result, when the remedy came to be fairly tested, proved to be so much below the expectations raised, that the chloride fell into very unmerited disrepute.

During the winter preceding the appearance of Mr. Lloyd's lecture recommending the chloride, I had been engaged for several hours every day in examining the value of certain substances as injections. Among these was the salt in question. As, however, my observations ran quite counter to those of Mr. Lloyd, I never had the least idea of claiming any priority ; in fact, I could not claim it, because I never discovered such valuable properties in the chloride as he did.

The patients on whom the chloride was used were seen daily. They were injected daily with a solution varying in strength from one to ten grains in an ounce of distilled water, and every effort was made so to regulate the strength of the injection as to avoid giving anything like severe pain, while a decided, though slight sensation, lasting from a quarter to half an hour, was aimed at. The patients were instructed in the use of the syringe, and furnished with a weak solution of the same salt to use at home. The disease was at the same time combated with aperients, salines, and in some cases copaiba and turpentine, and the patients were diligently questioned as to every indulgence in diet, drink, and sexual intercourse.

Notwithstanding all this care, more pain was caused than with nitrate of silver or sulphate of zinc, while the disease did not disappear more quickly. In some cases it proved ineffectual, and had to be superseded by nitrate of silver or blistering ; in two strictures sprang up, and some patients left dissatisfied, so that I was induced to give it up : in one or two instances only was it of benefit when the nitrate of silver failed. I tried weaker solutions, commencing with a quarter of a grain to an ounce, but after two years' careful examination I was compelled to return to the conclusions previously arrived

¹ *Journal des Connaissances Médicales*, Sept. 1840.

at, namely, that, *cæteris paribus*, the chloride is equal but not superior to the acetate and sulphate; and I may mention that I have seen so many cases in which stricture followed either from the chloride possessing no proper control over the disease, or from its really adding to the existing irritation, that I think its action ought to be carefully watched.

When used of the proper strength,—that is, so strong as only to produce transient pain, no one of the salts of zinc appears to me to possess greater curative power than another, but in respect to the amount of suffering they may entail, when used too strong, they differ more widely; for while the sulphate produces a sharp fleeting pain, seldom difficult to endure, that from the use of the acetate is more severe, and I have seen absolute torture arise from the employment of the chloride, even in a solution of moderate strength. One patient said, that “if it were not considered a liberty, he would beg to draw my attention to the close resemblance between the sensation induced and that which he should fancy would be brought on by passing a red-hot knitting-needle along the urethra!”

Hence I am inclined, in cases where there is much pain, to prefer the sulphate; if very little pain be present, the chloride may be prescribed. As to the sulphate of alum, the sulphate of copper, and one or two other substances of the kind, on which I foolishly wasted my time and that of the patients, I am disposed to consider them as of very inferior value. A tabular view of the results of injection of several substances is given from Mr. Judd's excellent treatise at page 87, and the reader can compare it, if he likes, with what I have stated.

I have been so often questioned, both by surgeons and patients, as to how injections act, that I seize this opportunity of publicly avowing my total ignorance of the subject. My readers will be good enough to bear in mind that no instrument as yet contrived, even one so valuable and elaborate as the endoscope, enables us to see more than a minute portion of the urethra, and that only for a very short space of time. Next, I suppose, it will be admitted, that to observe with precision what is being done in such a matter the surface operated on must be seen. In that case, a man must be able *to look bodily down the urethra for hours*, or *see right through its walls*. Further, it would be necessary for the eye of the observer to possess a special magnifying power of from 225 to 450 diameters; otherwise all that could be seen would probably be a certain amount

of punctate redness of the urethra, the formation of a filmy coat of white deposit (supposing the nitrate were used), followed by increased redness and then a somewhat paler hue than before. When, therefore, I find a writer attempting to explain the action of those fluids by the hypothesis that "by arresting the discharge they relieve the urethra from the stimulus of the virus,"¹ or that they "close up the orifice of the ducts" (what ducts?), or that they "dry up the discharge without curing the inflammation," when the discharge arises solely from the inflammation, I really cannot help thinking that such statements do not tend to raise the character of medicine among sensible men. If I were pressed to give an opinion on the matter, I should feel tempted to say that *I do not believe any person knows how injections act*, and that in the present state of medicine any explanation must simply mean theory founded on personal conviction.

I think it is just possible that the *modus operandi* is as follows:—The secretion of pus is equivalent to exalted action in the mucous membrane of the urethra, which means that there is an accumulation of vital force at the part, for there could be no secretion without motion, and without force being applied there could be no motion. Now it seems pretty clear, that while a part will go on with a certain amount of morbid action for a time, the application of certain agents to this part being superadded so as to produce a sudden increase of this morbid action, a rebound takes place; and as the action of the agent subsides the part is found less capable of continuing the morbid action for the time, or, in other words, with less accumulation of vital power in it. I have so repeatedly traced this form of action, for instance, in the application of a blister or galvanism to a sluggish ulcer, the influence of erysipelas in the same disease, in lupus, &c., the operation of a blister in gleet, and in some obstinate forms of tinea, &c., where the morbid action is first increased and subsequently diminished by one and the same agent, that I think the point merits inquiry. But any lengthened digressions on such a subject would be quite out of place in a work like this, and I therefore gladly revert to the more practical part of the subject, and give in a tabulated form the results of my trials with the chloride.

¹ Babington, *Works of John Hunter*, vol. ii. p. 208.

TABLE VI.

Cases treated with Injections of Chloride of Zinc.

Name.	Days previously ill.	Character of the Disease.	Strength of injection.	Treatment.	Results.
J. A.	42	Mild.	gr. v. to 3j.	Pil. tereb. c. strych.	At the end of 15 days little improvement.
G. S.	3	Thick pus, severe.	gr. ijss.	Salines.	Swelled testicle. In 21 days discharge gone.
A.	Not marked.	Severe.	Ditto.	Acet. pot.	No improvement on 25th day. Treated then with purgatives and nitrates. Cured in about 52 days after.
C. L.	1	Ditto.	gr. ijss. to iv.	Nit. pot. c. p. ipec. co. ; salines and aperients.	No improvement at the end of 27 days. Left.
C. C.	21	Ordinary.	gr. jss. ad ijss.	Pulv. salin. ; mist. acid benz.	The plumb. acet. was used for 12 days, and then the chl. zinc, which almost cured him in 2 days. Left not quite well.
J. S.	11	Severe.	gr. ijss. and ij.	Pot. nit. c. pulv. ant. ; pulv. salin. &c.	Severe pain ; discharge disappeared in 2 days, but returned. On the 31st day still a little gleet.

TABLE VI. (continued).
Cases treated with Injections of Chloride of Zinc (continued).

Name.	Days previously ill.	Character of the Disease.	Strength of Injection.	Treatment.	Results.
C. L.	12	Ordinary.	gr. iij. and ij.	Pot. nit. c. pulv. ipecac. c.	Gave him so much pain he would allow it no longer.
A. S.	21	Ditto, first clap.	gr. ijss. ad x.	Sulph. magnes., pulv. sod. c. opio pulv. salin.	In 8 days there was only a little moisture, and this remained 10 days after, when he left me. Gr. x. gave only slight pain.
C. G.	4	Severe, second clap.	gr. j.	Pulv. salin., pot. nit. c. pulv. ipec. c.	In 8 days discharge had diminished, but swelled testicle came on, and he left me.
D. M.	3 to 4 months.	Ordinary.	gr. vijss. to ij.	Pulv. salin.	Discharge disappeared in 11 days.
J. M.	6	Ditto.	gr. ij. ad iv. and then to vijss.	Ditto, pot. nit., mist. salin.	At the end of 37 days discharge still thick, purulent, and greenish.
T. R.	4 or 5	Ditto.	gr. j. to iij.	Salines, pulv. salin., mist. cop. c. tereb.	Caustic pastilles had to be resorted to on the 15th day; the cure was somewhat prolonged by his absence for a day or two. Cure in 62 days.

R. L.	Not known.	Very mild.	gr. ij.	Mist. acid benz.	Left the next day.
S. L.	Ditto.	Mild.	gr. iij. to viijss.	Ditto, pulv. salin., bark and acid.	Discharge disappeared in 6 days. But a slight gleet came back and lasted 30 days.
W. H.	21	Very severe.	—	Ditto, ditto, pot. nit.	On the 40th day the discharge was still bad. He then left.
G. C.	10	Ordinary.	gr. j. to v.	Pulv. salin.	Disappeared in 8 days.
T. J.	49	Very mild.	gr. j.	Sod. phos., sod. sulph. and mist. acid benz.	The discharge was nearly gone by the 9th day, when he left.
R. A.	Not marked.	Severe.	gr. jss. to v.	Pulv. salin., mist. pot. chlor., tincture of steel, pot. acet.	On the 20th day he left as bad as ever.
C. H.	A few days.	Ditto.	gr. j. to ij.	M. acid benz., pot. nit. c. pulv. ant. pulv. salin.	38th day no better. This case was followed by stricture.
W. T.	8 months.	Ditto.	gr. j. to v.	Pulv. salin. &c.	Stricture detected on the 75th day.
R. S.	3 months.	Ordinary.	gr. j.	Pulv. salin., bitters and acid.	The discharge gone in 10 days; a little gleet from time to time.
T. S.	Not marked.	Ditto.	gr. v.	Mist. pot. ac. c. rheo.	Left next day.

In conclusion, I may say that I think very favourably of both the chloride and sulphate of zinc used as adjuncts to other treatment. The mode of thus using them will be examined further on.

The reader can now compare the average results of treatment as put down in those tables with those in a series of cases extracted from Ricord's *Traité Pratique*, and from Mr. Judd's work.¹ The first column of the three in Table VII., compiled from cases in the *Traité Pratique*, A, marks the number of days between the date of infection and the entry of the patient into the hospital. The second column, B, means the number of days the patient stayed in the hospital under treatment. The third column, C, contains the principal remedies used.

TABLE VII.

Cases treated by Ricord.

A.	B.	C.	A.	B.	C.
—	20	Injections and cubebs.	15	25	Inject. arg. nit.
30	27	Copaiba.	30	20	Inject. arg. nit. copaiba.
15	20	Copaiba.	6 ²	20	Ditto ditto.
Old	10	Injections of alum.	21	20	Inject. zinc sulph.
Gleet	33	Inject. argent. nit.	8	20	Cubebs and inject. arg. nit.
8	20	Inject. argent. nit.	—	35	Inject.
—	32	Ditto and copaiba.	63	30	Cauteriz. and cubebs.
30	35	Inject. zinc sal. and cubebs.	60	34	Inj. plum. diac. and copaiba.
8	31	Cubebs, steel.	11	17	Copaiba and cauteriz.
10	41	Cubebs and injections.	5	28	Argent. nit. and copaiba.
4	21	Inject. arg. nit. and copaiba.	4	22	Ditto ditto.
21	13	Cubebs and inj. arg. nit.	—	14	Cauteriz.
8	37	Cauteriz. and copaiba.	12	22	Inject. and copaiba.
17	35	Cauteriz. inj. cubebs.	8	22	Inject. argent. nit.
—	29	Cauteriz. cubebs.	42	21	Inject. zinc sulph. and copaiba.
—	41	Inject. plumb. diac. copaiba.			

¹ *Op. cit.*, p. 16.

² Months.

TABLE VIII.

Cases treated by Judd, showing the duration of Treatment under various kinds of Injections.

Names.	Substances used.	No. of Days.
S—s.	Sol. liq. plumb. and extr. belladonnæ.	2
G—e.	Ditto.	5
G—t.	Ditto.	3
S—d.	Ditto.	5
G—t.	Tinct. ferri c. aquâ.	5
C—s.	Ditto.	4
H—s.	Ditto.	7
W—l.	Ditto, cubebs and copaiba.	6
McD—d.	Sol. arg. nit.	5
T—r.	Ditto, copaiba.	7
B—t.	Ext. cubeb.	3
R—e.	Inj. zinc, sulph., bals. cop.	By twice using injection, in one evening.
K—e.	Ditto.	1

The average time for cure is much below anything I have seen.

2. *Nitrate of Silver Pastilles (Soluble Bougies).*—In the first edition of this work, published in 1852, are some briefly detailed notices of attempts to cure obstinate gonorrhœa with pastilles. The marked effect produced by frequently repeating injections led me to hope, that if the action of such a salt as the nitrate of silver could be kept up for some hours, a more speedy cure might be obtained. For this purpose pastilles or small bougies, containing sometimes a grain, sometimes half a grain, of the nitrate, mixed with powdered gum arabic, were made into a paste, and after being shaped like a small bougie, an inch and a half to two inches long, were, while still soft, oiled and introduced into the urethra. In the course of from two to five hours they dissolved, but, instead of effecting any improvement, they either produced no change at all, or else brought on an aphthous state of the mucous membrane, such as is often seen after strong injections of nitrate of silver have been used, and equally difficult to remove. In some instances they occasioned such discomfort, that the patients were glad to remove them, or expel them by making water.

Four years after the appearance of the second edition, and fourteen

after that of the first edition, of this work, mention was made in the *Mirror of the Practice of Medicine and Surgery*¹ of the use of soluble bougies in the practice of Sir Henry Thompson, who was trying them in the treatment of gonorrhœa at University College Hospital. The practice was spoken of as quite a new idea. "Believing," says the reporter, "that the imperfect action of injections depends upon the very short time that they are in contact with the mucous membrane, Mr. Thompson conceived the idea of applying the astringent in such a form as would enable it to remain for a much longer period in contact with the inflamed surface." If Sir Henry Thompson communicated the information in this form to the reporter, his memory must have played him false, as he had himself long previously informed me that he had read the first edition of this work, where he must have seen a similar reason assigned for the experiment in almost the same words, which run as follows: "The greater effect which is observed when injections are frequently repeated, led me to hope that if the action of such a salt as the nitrate of silver could be kept up for some hours, a more speedy cure might be obtained." Some short time after, Mr. Henry Smith stated² in the same journal that two months previously Mr. Cooper, of Oxford Street, had suggested to him the idea of employing the substances used for injections in gonorrhœa in the form of bougies of cocoa butter; and again, subsequently to this, a letter appeared³ from Mr. Edgar Browne, of Liverpool, saying that he had used such bougies before either Mr. Smith or Sir Henry Thompson, and that he was led to do so from observing the beneficial effects of bougies smeared with lard ointment or medicated glycerine.

Subsequently, Sir Henry Thompson pointed out, in reply to Mr. Browne, that medicated bougies made of wax, in which some active chemical agent had been dissolved, were used even before the time of Wiseman. The surface of the bougies being capable of liquefaction, a portion of their contents was set free by the heat and moisture of the urethra. I should think, therefore, that there was an error in the report spoken of.

From this time forth the subject disappears, and, so far as my reading carries me, there is no further mention of it in the public journals.

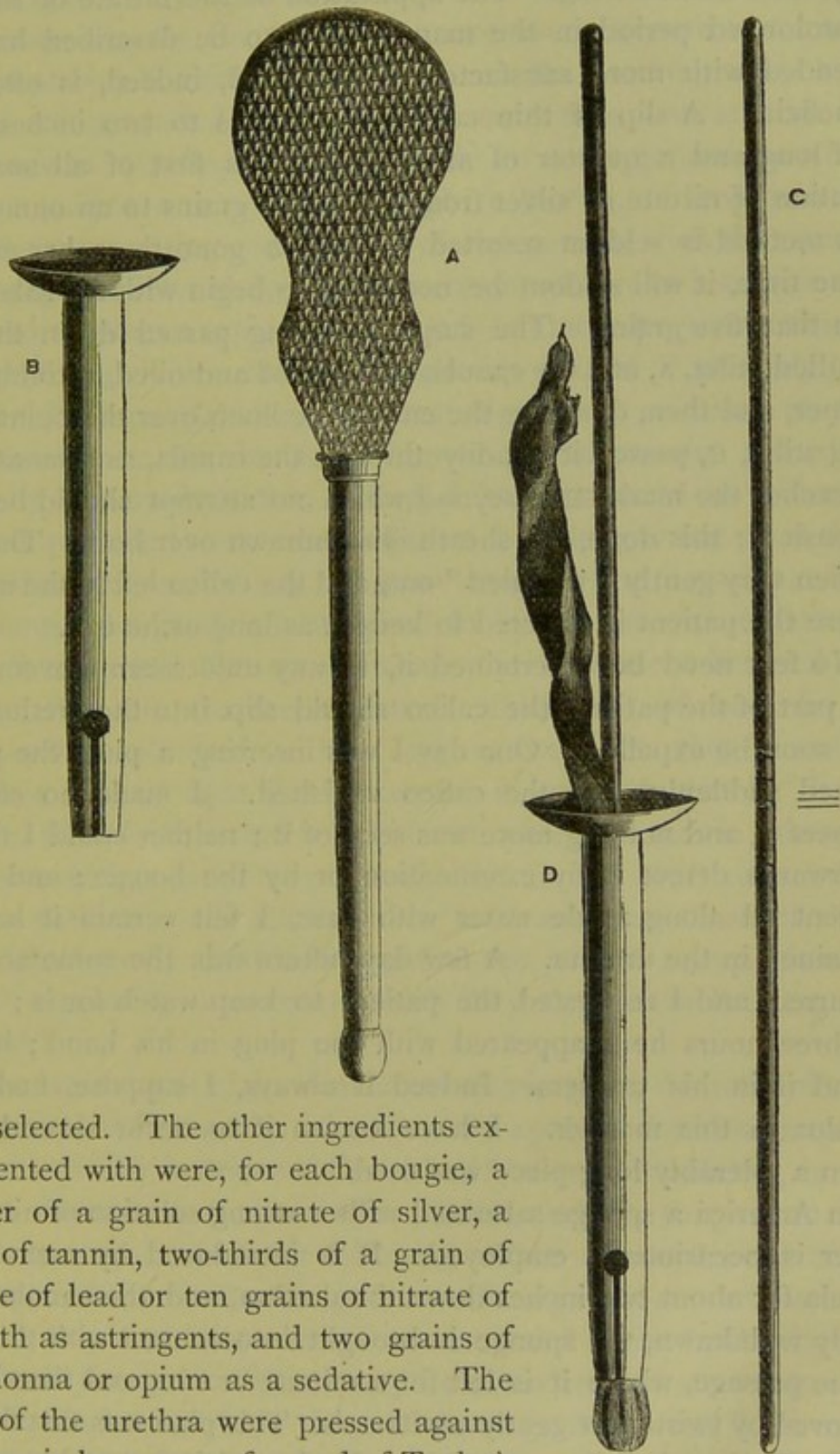
The material used for the bulk of the bougie was, in Sir Henry

¹ *Lancet*, 1866, vol. i. p. 513.

² *Ibid.*, p. 674.

³ *Ibid.*, p. 724.

Thompson's experiments, cocoa butter, which, as it melts at a temperature of 100° Fahrenheit, is perhaps the best that could have



been selected. The other ingredients experimented with were, for each bougie, a quarter of a grain of nitrate of silver, a grain of tannin, two-thirds of a grain of acetate of lead or ten grains of nitrate of bismuth as astringents, and two grains of belladonna or opium as a sedative. The walls of the urethra were pressed against the bougie by means of a pad of Taylor's stout lint and a slip of adhesive plaster, with the view of squeezing the melted bougie into the lacunæ of the urethra. Judging from

the recorded effects, I am of opinion that the pastilles are cleaner, and that neither can be considered very efficacious.

3. *The Caustic Plug.*—The application of the nitrate of silver for a prolonged period in the manner now to be described has been attended with more satisfactory effects, and, indeed, is often very beneficial. A slip of thin calico, two inches to two inches and a half long and a quarter of an inch wide, is first of all soaked in solution of nitrate of silver from five to ten grains to an ounce. As this method is seldom resorted to until a gonorrhœa has endured some time, it will seldom be necessary to begin with a weaker solution than five grains. The surgeon having passed down the saw-handled stilet, A, and the canula, B, sheathed and oiled, withdraws the former, and then, doubling the end of the linen over the point of the long stilet, C, passes it steadily through the canula, as seen at D, till it reaches the mark $\equiv$, beyond which no attempt should be made to push it; this done, the sheath is withdrawn over both. The stilet is then very gently “wiggled” out, and the calico left in the urethra, where the patient is directed to keep it as long as he can.

No fear need be entertained if, by any unforeseen movement on the part of the patient, the calico should slip into the urethra, as it will soon be expelled. One day I was inserting a plug, the patient turned suddenly, and the calico vanished. I made no effort to recover it, and nothing more was seen of it; neither could I then or afterwards detect it by examination or by the bougie; and as the patient all along made water with ease, I felt certain it had not remained in the urethra. A few days afterwards the same accident occurred, and I requested the patient to keep watch for it; in two or three hours he reappeared with the plug in his hand; he had found it in his trousers. Indeed it always, I suppose, makes its exodus in this manner. I have known it to occur several times when a tolerably long piece was used.

In America a sponge saturated with a strong solution of nitrate of silver is occasionally employed. It is introduced by means of a canula for about two inches down the urethra, and the canula being partly withdrawn, the sponge is brought into contact with the walls of the passage, where it is left for a minute or two, and then slowly removed by twisting it gently on its axis. This plan was first devised by Dr. F. Campbell Stewart, of New York, and is favourably spoken of by Dr. Bumstead,¹ who has employed it, and says that we can

¹ *Op. cit.*, p. 77.

limit the extent of the application at will, and can therefore use a stronger solution. Unless the sponge were strengthened, I should have thought it very liable to break.

4. *Cauterizing the Urethra.*—I suppose every surgeon who has to treat gonorrhœa has either tried caustic to the urethra, or has been strongly recommended to do so, and more than one attempt has been made to introduce it as *the* remedy for acute gonorrhœa whenever the patient was resolute enough to face it. I have in a few cases, with the entire concurrence of the patient, tried the remedy at this stage, and certainly cannot recommend it. In a case or two it seemed to effect a rapid cure, but it failed more frequently than it succeeded, and it was always abominably painful if properly performed. Perhaps, however, the most significant evidence on the subject would be the desuetude into which the practice has fallen among its former advocates; indeed, I fancy it would be rather an awkward question to ask some of them how long it was since they had used caustic in this way. I know that on one occasion, when at the house of a gentleman who had in his time recommended the nitrate, I requested him to show me the instrument he used for applying the salt; to the no small amusement of both he at once candidly admitted, without any equivocation, that it was so long since he had used the implement in question that he didn't know exactly where to find it! He still contended that in principle the treatment was excellent; the objection to it in practice was that very few patients would allow it to be used, and that those who did so inveighed loudly and bitterly against the pain it set up, blaming him for suggesting a measure which they themselves had eagerly accepted.¹

In the later stages of gonorrhœa, as also in gleet, the solid nitrate is a most valuable remedy. I constantly apply it for this purpose by means of the instrument described further on,² which is, in my opinion, superior to Lallemand's. I had, indeed, to give up the latter in consequence of the following rather untoward occurrence. I had applied the nitrate to a patient suffering from gonorrhœa, and on attempting to withdraw the instrument, found it was held so tightly that I could not stir it. This was quite a new state of matters to me; but, at last, when quite in despair about getting it out, I hit upon

¹ Mr. Johnson mentions a case of death from the use of the nitrate in this disease. *Op. cit.*, p. 58.

² In the section on "Strong Tendency to Stricture."

the idea of applying scalding hot water to the penis. By this means I certainly overcame the spasm and brought away the instrument ; but in the mean time all the nitrate of silver had dissolved in the urethra, and the torture the unfortunate patient endured was a lesson I have not forgotten.

It would be wasting the reader's time to mention at length some of the remedies (?) which have been recommended for acute gonorrhoea, such as compression of the urethra, passing a bougie into the bladder, &c. &c., for the simple reason that most of them cannot possibly be carried into effect.

And now, in order to bring into as narrow a focus as possible the arguments for and against all the systems of treatment as yet discussed, I shall take the liberty of reducing them to a few aphorisms, in which, indeed, if I could, I would have written the whole work ; for I like, above all things, not only to see at a glance what an author has borrowed and what he has found out for himself, but to find his meaning honestly, tersely, and clearly expressed ; and in no way can this process be made so easy as by condensing his views into aphorisms, which, as Bacon says, " except they should be ridiculous, cannot be made but of the pith and heart of sciences." The conclusions, then, which I venture to draw are—

1. That all the remedies yet enumerated, recommended, and dismissed to oblivion, often by their unnatural parents, though adequate to cure by far the greater number of cases, still leave many unrelieved.

2. That some of them are disagreeable, some dangerous, and some futile.

3. That there are no rules to guide us in distinguishing at the outset those cases which are, from those which are not, amenable to these remedies ; the divisions given by Eisenmann, Swediaur, &c., having no bearing on this point.

4. That where so large a list of remedies is given, some attempt ought to be made to decide with accuracy in what cases each remedy should be tried ; which as yet has not been done, so that every cure obtained is only an additional source of confusion.

5. That the reputation of injections has been injured by the want of any certain rules as to the relative value of the different substances employed, and the strength requisite in different cases ; thus leading to the indiscriminate application of different substances in solutions of the same strength on the one hand, and on the other,

to the equally indiscriminate application of injections of the same strength to cases not equally fitted to bear them.

6. That the treatment has been made secondary to disputes about the nature, sources, and history of this disease, and to speculations, for they deserve no better title, of the most transcendental kind, about the action of medicines; whereas the cure of disease ought to precede all other considerations; for however great may be the value of science, the welfare of man is a still greater object.

7. That rash as such an opinion may seem, I do not fear to say, *that I doubt whether man will ever discover drugs superior in their power over this disease to those we already possess*, and that there is accordingly more to be hoped for by trying to improve the administration and association of medicines already known to us, than in seeking for new drugs.

I have spoken plainly on this topic. The trite generalities, the incessant repetitions, the falling back upon authorities and general principles, practised by some authors, may be very orthodox, but they do not satisfy our mental cravings; they do not give us what we want. Writers now and then express themselves so very guardedly, that it is as difficult to arrive at a certain knowledge of what their opinions really are as it is to make out those of a greek chorus.

Proposed Plan of Treatment.—After this rather uncomplimentary piece of preliminary discussion the reader will naturally inquire whether I have anything better to offer in its stead. I reply that I must leave that point to his decision, and beg to submit for examination, first of all a plan of *abortive treatment*, and to demonstrate the results it seems to offer. To do this properly I must first take the liberty of dividing all cases of gonorrhœa into two classes; viz., those which admit, and those which do not admit, of such a plan.

Abortive Treatment.—Those, then, which seem most adapted for it are—

1. Cases where the patients present themselves before great pain and running have set in.
2. Patients who have had gonorrhœa previously, and in whom the present attack does not appear to be very severe.
3. Those cases where the patient is desirous of an immediate cure at any price, and would rather go through anything for a day or two than have a long illness.

And before going into the details I must digress for a few minutes

to combat an opinion which seems very prevalent, and which is, that M. Ricord is constantly in the habit of using an abortive treatment of a similar kind ; or, in other words, of precluding all measures with a strong injection of nitrate of silver. This may be an incorrect assumption, as I have no written authority for it, but I know I have repeatedly heard it stated, both in private and public, without contradiction. Now nothing could be wider of the mark. M. Ricord's abortive treatment, as laid down in his "*Traité Pratique*,"¹ consists of rest, low diet, and where there is pain thirty or forty leeches to the perinæum, followed by copaiba or cubebs and *mild* injections of nitrate of silver ; and he expressly confines his recommendation of a strong solution of this salt to those cases which begin "without pain, without any sign of inflammation." It was Debeney and Carmichael who first introduced the practice of trying to cut short gonorrhœa by giving a strong injection of nitrate of silver. By means of leeches used in this way and cubebs, he sometimes cures the disease in three or four days, and generally in fifteen to twenty. When the disease begins without pain, he gives drastic purgatives, sometimes with astringent injections.

Before taking a single step it is indispensably necessary to ascertain whether the patient can rest for the entire day after, and if not whether he is disposed to suffer considerable inconvenience. If he be unable or unwilling to do either, it is best at once to lay aside all thoughts of an abortive cure and refer the case to the second class.

But if this co-operation on his part can be obtained, the abortive treatment may at once be commenced. The patient should make water, and the surgeon then injects him with a solution of nitrate of silver containing five grains to an ounce of distilled water. The syringe used should be that spoken of in the section on syringes. The tube of the syringe ought to be at least an inch and a half long, so that the whole of the specific seat of the gonorrhœa is acted upon, and should consist of platinum or silver electro-gilded, as otherwise the salt soon corrodes the soldering.

By limiting the strength of the solution to five grains we avoid the severe pain which is caused by the strong solutions of this salt, and by retaining the injection in the urethra for several minutes we can, in almost every case, attain equally as powerful an effect as by using a more concentrated solution for a shorter space of

¹ p. 707.

time. Should it fail to occasion either burning or smarting, it may be withdrawn and a solution of ten grains to an ounce employed instead.

The deep burning pain which now ensues is widely different from that produced by the salts of zinc, and is often accompanied by flushes of heat which fairly thrill through the frame. It is, however, generally soon relieved by bathing the penis with hot water, and a hot bath will for the most part effectually remove what the warm water has left undone.

The next step is to prescribe a dose of calomel, at least four grains, followed by seidlitz powders, citrate of magnesia, or draughts of salts and senna every two hours until several loose stools are procured. The bowels should be completely scoured out, and no food allowed except a little warm tea or gruel, to assist the action of the medicines. The citrate of magnesia is unquestionably the most agreeable, and I fancy it is quite as efficacious as the others.

After every stool the patient should inject with a solution of sulphate of zinc from three to five grains in the ounce. The injection is to be kept in contact with the mucous membrane, till a slight sense of burning is induced, when it may at once be withdrawn. The penis should be bathed each time with water as hot as it can be borne; and the greater the heat the more complete the relief, not only to the pain produced by injecting, but also to the scalding, weight, &c.

Dr. Niddrie advises injecting in much the same way every half-hour, and seems to have had great success. I have never carried the system quite so far as this, but I have repeatedly known patients give themselves six or seven injections in a day with good results.

The next day the discharge is generally thin and very small in quantity, the symptoms of inflammation have disappeared, and the cure is mostly completed in a day or two by the use of the same means; the patient using the injection every time he makes water, and gradually raising the strength of it till it reaches ten grains to an ounce. Mild aperients and low diet may also be continued. When this plan fails, the case may be referred to the second class, for I believe that abortive treatment, to succeed at all, must succeed at once.

The reader must, however, bear in mind that, as I have already said, but few cases comparatively admit of this treatment. I believe

those who have tried it and have looked into the results are agreed on this point. Dr. Bumstead says,¹ "Taking the usual run of cases as met with in practice, probably not one out of ten is seen at a sufficiently early period to admit of the abortive treatment;" and Dr. Durkee considers² that the number of cases in which it can be employed must necessarily be very small, and that if the discharge have lasted more than a day and a night the time for making trial of it has passed.

Ordinary Treatment.—Every other case of gonorrhœa, every case in which the abortive treatment has failed, or in which it cannot be applied, and every case accompanied by excessive pain and irritability of the urethra, or of long standing, and attended by fixed pain on the under surface of this canal, may be placed in the second class. It is to these that I wish to apply a new treatment, substituting for the means usually employed certain salts of potass with aperients and injections so combined, graduated and applied, as to act efficiently but without much pain, *over the whole of the diseased surface.*

After a great number of experiments I am disposed to think that in all but very severe cases, the acetate of potass, in combination with spirit of nitric ether, is one of the most potent internal remedies I have met with. The best proportions seem to be five drachms of acetate of potass with three drachms of spirit of nitre, and half an ounce of compound spirit of juniper, or two or three drachms of spirit of nutmeg, in a six-ounce mixture, employing as a vehicle almost anything the patient likes, camphor mixture and mint-water being perhaps among the best.³ In more severe cases the chlorate of potass may be added, and in those of unusual severity I should recommend beginning with it at once. As many failures attended my first attempts to discover an available form of prescription, I give one which I believe to be the most useful.⁴

¹ *Op. cit.*, p. 78.

² *Op. cit.*, p. 34.

³ R Potassæ acetatis ʒiv. (ʒv.)

Spir. ætheris nit. ʒiij.

— juniper. comp. ʒss.

Aq. menth. pip. ad ʒvj. m.

Capiat coch. amp. duo ter quotidie.

⁴ R Potassæ chloratis ʒij.

Aquæ destill. bull. ʒv. m.

et agita bene donec solutio ft. dein adde

Along with these medicines I would always recommed a free use of one or other of the pills given below,¹ the second formula being used when the bowels are only acted upon with difficulty. They should, I think, always be given to such an extent as to induce two or three loose stools daily.

When one of these solutions is taken regularly, supposing it is suited to the case, an alteration in the discharge is soon noticed; indeed, within forty-eight hours it is often materially diminished, becoming at the same time thinner, less coloured, and more mucous. This effect seems to be produced with equal rapidity in cases of long standing and recent ones, in women and in men, so that one might be tempted to look upon potass as one of the true antiphlogistics in inflammations of this kind.

The weight felt about the testes, also the scalding and pain on making water, grow milder under its influence, and usually in a week or ten days, often much less, the symptoms are so far subdued that it is very difficult to persuade patients that the same care is necessary as at the first. Speaking at hazard, it may be assumed that at this time three patients out of four bring on a relapse by some imprudence; however, it is seldom necessary to do more than to resume the old treatment.

These medicines I have now used for some years without seeing any case resist their influence, except—1. when there was stricture; 2. a tight, irritable state of the urethra; and 3. when the disease was of long standing and strong injections had been used, the patient all the while suffering from a fixed pain in the under part of the urethra, generally near the frœnum, but sometimes obscure as to its true seat. Even many of these cases were materially

Potassæ acetatis ʒij.
Liquoris potassæ ʒij.
Spir. myristecæ ʒss.
Mist. camph. ad ʒvj. ℥.

Capiat coch. amp. duo bis quotidie.

¹ ℞ Pil. colocynth. comp. ʒss.
— hydrargyri ʒss.

Ext. hyoscyami ʒj. ℥ ft. pil. xij.

Sumat j. vel ij. horâ decub.

℞ Pil. aloes et assafœtid. gr. L.

Hydrargyri subchlor. gr. vj.

Podophylli resinæ gr. ij.

Olei cinnam. m. j. ℥ ft. pil. xij.

Sumat ij. horâ decub.

benefited, but it was necessary also to have recourse to further measures.

Their use has been attended with much less chordee, and has not been followed by irritable bladder or swelled testicle in more than a few instances out of all the cases I have treated these last ten years, whereas, under the old plans, these annoying complications were very frequent.

It is surprising how rapidly these medicines act upon the gonorrhœa; patients have frequently noticed a remarkable change within from thirty-six to forty-eight hours, and, so far as I know, every surgeon who has given them a fair trial has admitted their power.¹

At one time I thought of giving the opinions recorded by those authors who have spoken favourably of this plan, not for the sake of bolstering up a system, because I would far rather it stood or fell by its own merits or faults, but simply that any hesitating reader might have chapter and verse to warrant him in making a trial. Further reflection, however, convinced me that this might be considered bad taste; I therefore restrict myself to saying that such evidence exists, and that is all I can say.

So long as the heat in the penis and scalding trouble the patient, so long should he resort to the frequent use of hot water in the way mentioned in speaking of the abortive treatment.

In most cases this treatment will not succeed unless it be seconded by injections. In order to make the action of these as perfect as possible, care must be taken—1. To select a solution of such a strength as to act on the mucous membrane. 2. *To apply it over the whole of the diseased surface.* 3. To see that it is producing no injury.

Although I have such a very high opinion of the nitrate of silver, still I do not think it is a good plan to trust the patients with it, for they are apt, in their anxiety to hasten the cure, to make over-free use of it, and induce a state of matters very difficult to set right again; generally indicated by a sanious discharge, fixed pain in the under surface of the urethra, and sometimes even an aphthous state of the mucous membrane. Besides this, it stains the patient's hands and linen, the floor, carpet, &c. It requires a complete and rather expensive apparatus, so that, upon the whole, it is best for the surgeon to use it himself.

The stains spoken of may be removed from colourless materials

¹ Langston Parker's *Modern Treatment of Syphilis*. 1860, p. 67.

without any injury, but it is very difficult to efface them without discharging colours, especially delicate ones. The shortest way is simply to apply a solution of cyanide of potassium. A great outcry was made at one time about the disagreeable results which were said to have followed the use of this salt for such a purpose. The accounts were somewhat vague, and I could not make out whether they arose from neglecting to wash off the cyanide, or whether they arose at all, and only ought to have done so. I never saw anything of the kind ensue.

The nitrate of silver should be used every day till the disease is almost gone, and then every second day. The safest plan is to begin with a solution of half a grain or a grain to an ounce, according as the patient is known, or seems, to be very sensitive as to pain or not, and raise it gradually to a strength of not less than five or more than ten grains to an ounce. There is one golden rule for deciding how much is to be done at a time. *A slight feeling of heat for a quarter of an hour or twenty minutes after giving an injection is all that is requisite.*

When this injection has, from some idiosyncrasy, produced a greater amount of pain than was expected; when the patient has been using too strong injections previous to his first visit; when there is reason to suspect that organic stricture is coming on; when there is an aphthous state of the urethra, or discharge of blood, or bloody serum from this channel, it is better in all cases to suspend injections, or to use them very sparingly, till these symptoms subside, when they may safely be resumed. Whenever too it is observed that distending the urethra by retaining the injection gives pain, this should be at once discontinued, and the fluid should be simply allowed to trickle from behind forwards over the inflamed part.

In conjunction with the nitrate of silver, the sulphate of zinc in conjunction with the chloride, may be used by the patient himself, commencing with one to two grains of the former and a quarter to half a grain of the latter in an ounce of water,¹ gradually increasing

¹ The following is a favourite prescription of mine :—

℞ Zinci sulphatis gr. ij. (gr. iv.)

— chloridi gr. ss (gr. j.)

Spir. camph. m. xx.

Mist. acaciæ ʒss.

Aquæ rosæ ad ʒij. m.

the strength of the solution, so as just to keep up the same amount of action as at first, and no more.

As with the other injections, this should never be carried to the extent of inducing pain; the utmost that is required is a slight sense of heat for ten or fifteen minutes. But if it is to be of any service, this degree of action must be attained, however strong a solution may be required. In some cases of gonorrhœa in women the vagina is so insensible as to bear injections of extraordinary strength. I have often used a solution of a drachm of the sulphate to an ounce with perfect impunity.

The patient should always make water before injecting, and with a little perseverance he will generally be able, after an effort or two, to evacuate some fluid from the bladder. When this precaution is taken, we avoid not only the hazard of the injection being washed out prematurely by the stream of urine, but also of its being prevented by the purulent discharge from coming in contact with the mucous membrane. Besides, this practice conduces greatly to the patient's comfort, as the passing of the urine over a recently injected surface is often very disagreeable.

The addition of ten or fifteen minims of spirit of camphor to each ounce of the solution has often appeared to increase the efficacy of its action. How it acts I will not venture to say; I only know that its action is generally extremely beneficial, which is to my thinking of infinitely greater consequence. When the chloride is prescribed, a little mucilage should be added, to prevent flocculence in the solution.

Many surgeons think it necessary¹ to change one injection which is doing no good for another, on the chance that it may be of service, "ringing the changes on them frequently," as one author puts it. My observations lead me to doubt most strongly the advisability of such a step, and to surmise, that if the injections just mentioned will not cure the disease, no remedy of this kind will.

However important it may be to regulate exactly the strength of an injection, it is equally indispensable that the fluid should come into contact with the *whole* of the diseased surface, and that a proper quantity should be injected. To effect this the syringe must be furnished with a pipe like that already described; *for unless this precaution be taken, injections may be used FOR MONTHS without ever reaching the seat of the discharge.*

¹ Johnson, *Op. cit.*, p. 96.

 *Syringes*.—All the syringes I have seen are far too long in the barrel, and hence somewhat unmanageable. It is not every person that can stretch his hand so as to reach the knob of the piston, and at the same time grasp the cylinder firmly. The consequence is that the instrument is awkwardly held, and often dropped and broken; moreover, the piston often fits badly to the cylinder, so that a great deal of the fluid escapes backwards; and if this be obviated, the patient injects far too great a quantity, thus causing unnecessary pain and distension of the canal, to which perhaps much of the mischief said to have been caused by injections might with reason be attributed.

In order to obviate these defects, I had some syringes made¹ of a totally different construction. The cylinder and piston are not above half the ordinary length, so that a much greater control over the instrument is obtained. The cylinder, when the piston is in, contains about two drachms of fluid, so as to allow for loss and yet leave a sufficient quantity. The pipe is made of silver, two inches long, extremely smooth, and of the diameter of a No. 6 catheter. The cylinder should always be of glass, even where expense is not an object and more costly material might be considered an advantage, for the patient can then see that it is properly charged with fluid and not air, as I have often known occur with pewter syringes; and in order that no fluid may escape backwards, the piston should be overlaid with worsted or wash-leather, so that it only works very stiffly at first.

With this syringe the patient can inject over the whole of the diseased surface. The penis is grasped at the glans, and drawn into a straight line, the syringe introduced, and the piston is then driven sharply home. As the fluid is forced into the urethra the syringe should be withdrawn, in order that no part of the canal may be immoderately distended; the glans should be kept firmly in contact with the pipe till it is withdrawn, and then compressed at the meatus till the injection produces the desired effect of inducing a decided feeling of warmth. In some cases accompanied by a very unusual tenderness of the urethra, it is a good plan to dip the syringe in oil for the first day or two.

Dr. Bumstead recommends,² that while the injection is in the

¹ Made by Messrs. Walters & Co., of 16, Moorgate Street, and exhibited before the Medical Society of London, May 28, 1853.

² *Op. cit.*, p. 76.

urethra, "a finger of the disengaged hand should be run along the under surface of the penis from behind forwards, so as to distend the portion of the canal occupied by the injection and insure the thorough application of the fluid to the whole mucous surface."

It is all-important that the surgeon should satisfy himself whether the patient understands how to use the injection ; no directions will ever take the place of this precaution, the want of which has thrown more discredit on injections than even such sequelæ as stricture and orchitis : I have constantly heard patients, especially hospital patients, say they knew how to inject themselves, and make a very lamentable exhibition when they came to show off their skill. The fluid slipped back between the piston and barrel, or flowed out of the urethra as fast as it flowed in, or never flowed in at all, &c.

I trust it is now needless to say that it is quite unnecessary to compress the urethra behind the scrotum in order to prevent the injection from passing too often into the canal. It is a mystery to me how such a fear as that an injection could get into the bladder, or if it got there, could do the least harm, ever originated ; and it is one of the melancholy proofs of the anxiety with which men of the greatest abilities and information cling to traditions and preconceived theories, which five minutes' use of their own senses would overthrow. Howard tells¹ his readers that the syringe should never have a long tube. Sir Charles Bell actually used leather shields to prevent more than the tip of the syringe entering the urethra ;² and Sir Astley Cooper recommended a similar precaution, though neither he, strong as he was, nor any one else, could force an injection to the neck of the bladder with the common syringe. The difficulty is to get it in far enough.

A correspondent of the *Medical Circular*, speaking of this paragraph, said that, with a common pewter syringe, he had passed an injection into the bladder more than a hundred times. I certainly never tried to force fluid into this viscus, and therefore I ought not, perhaps, to have denied that others may have succeeded in doing so. I have, however, often seen patients employ a good deal of force, and yet fail, and I have used almost daily, for years past, a very long syringe, reaching to the membranous part of the urethra ; but although the injections given with it are for maladies in which the urethra is much less irritable than in gonorrhœa, yet I generally

¹ *Op. cit.*, vol. iii. p. 138.

² *Institutes of Surgery*, vol. i. p. 291.

find that every drop of the injection is expelled so soon as the pressure is taken off.

I have frequently seen a mild injection kept in the canal a minute or two, and then thrown out, sometimes suddenly, at other times slowly. At first I thought these were instances of injections reaching the bladder, but have long doubted it, and fancy the whole affair results from sudden contraction of a segment of the canal; for if an injection enter the bladder and be expelled, *the urine comes with it*. I must say, however, that the writer in question urged his objections against this view in a very fair and temperate spirit. I find however that one gentleman quite capable of judging supports the position I have taken up. "It is," says Dr. Bumstead,¹ absolutely impossible to inject the bladder, however great the amount of force employed, by means of a syringe merely introduced within the meatus;" and what holds good of injecting in this way, is quite applicable when syringes with a tube two inches long are employed.

Dr. Bumstead speaks highly of the syringes made by the American Hard Rubber Company. In these instruments the diameter of the cylinder is in all parts alike, the piston fits with great accuracy, and the material employed is not acted on by any of the substances usually prescribed for injections.

The surgeon should instruct the patient as to the best method of preventing the discharge from marking his linen. All oiled-silk bags, thick wrappings, &c., heat the penis too much and dispose to chordee. The simplest and lightest application I know of is the following:—When the prepuce is short, a piece of thick lint half an inch long and a third of an inch broad, or a layer of cotton wool, is placed over the orifice of the urethra; the end of a strip of bandage, a foot long and an inch broad, is then laid on the under surface of the penis, passed over the lint to the upper surface of the penis opposite to where it was first applied, turned on itself, and carried twice round. It may then be secured by a piece of worsted, or a very thin ring of galvanized india-rubber. An old towel or napkin affords excellent material for a bandage, and the lint should be changed every time the patient makes water. When the prepuce is long there is no need for any bandage; the skin is simply drawn back, the cotton or lint placed underneath it, and it is then drawn forward again. Should the discharge be very profuse, a good plan

¹ *Op. cit.*, p. 83.

is to tie an old silk handkerchief round the waist and let it hang down in front.

It may be safely laid down as a rule, from which we should never suffer ourselves to depart, that the action of the treatment should be daily gauged, if I may so express myself; that is, *we should never rest satisfied unless daily progress is made towards a cure.*

This is easy enough in most instances, but in more refractory forms of the disorder we are often baffled in our pursuit. Here we must look to attain our object, not by an incessant and aimless change of treatment, under the supposition that the urethra or the system is accustomed to the remedy, that this will no longer act upon the disease and that another will now have a better effect than if used at first, *but by measures expressly adapted to the case in hand.* When really efficacious means have failed, we may generally rest assured that there is some complication—some faulty point which requires to be ferreted out, at whatever expenditure of time and trouble. To leave the disease to wear itself out,—to recommend change of air with this view, is virtually to abandon the case and confess our inability to cope with it.

If the stomach be deranged and the tongue foul, the use of nitric acid and bark, or tincture of cinnamon and gentian with dilute sulphuric acid, will often relieve these symptoms and hasten the cure; where the bowels or liver are sluggish, mild doses of calomel, or blue pill and rhubarb, may be used. Mr. Johnson says¹ he has cured gonorrhœa with sarsaparilla and iodide of potassium after all the specifics had been used in vain, and that in such cases he has also more than once prescribed with benefit three grains of blue pill and one of ipecacuanha every night, followed by an aperient mixture in the morning, accompanied or succeeded by injections. Whatever the complications may be, they must be treated as if they occurred along with any other disease. The surgeon must use his own discretion, and at the same time bear in mind that the possibility of good arising out of these measures should not exonerate him from the necessity of at once taking further steps. They form but one branch of inquiry—*there may be a long-neglected local mischief.*

When an obstinate case is brought to the surgeon, and it is found that no impression is made upon it by this treatment, fairly kept up for two or three weeks;—when in a recent case, after the same

¹ *Op. cit.*, p. 91.

space of time, the disease does not seem to be giving way ;—when, after putting on the semblance of a cure, the disease steadily returns, and even grows worse ;—when there is a fixed pain on erection,—*the urethra should at once be sounded*, to ascertain with certainty that there is no stricture either formed or commencing. Should this unfortunately prove to be the case, it is scarcely necessary to say that the treatment of the gonorrhœa will have to be given up, at once certainly, and most probably for good, as generally what cures stricture cures also the gonorrhœa.

When the case is complicated with acute inflammation of any of the structures surrounding the urethra, such as the cellular tissue around the membranous portion, the prostate, &c., a totally different treatment is requisite ; and the reader is referred for further details to the chapter on complications. But if, on careful examination, no such complication can be detected, then the case may be removed from the ordinary category and considered as gleet, respecting the special treatment of which, also, full directions will be given.

Patients naturally think that when the discharge has once ceased they are quite safe, and can do as they like. This is a great mistake. The running, after having entirely disappeared, frequently comes back, sometimes in three or four, sometimes in seven or eight days. It has been observed to return at the expiration of a month. This I have not seen, but I feel assured relapses at shorter dates are so frequent, that I think *treatment ought always to be continued, more or less actively, for quite eight days after the last drop of discharge has shown itself*.

Treatment of Gonorrhœa in Women.—Discharges, whether gonorrhœal or leucorrhœal, from the mouth and neck of the womb and vagina, seem equally amenable to this treatment: those persons, however, who are in a low, cachectic state, are often more benefited by the use of the liquor potassæ, in half-drachm doses, combined with some tonic bitter tincture.

How necessary it is to inquire strictly as to the state of the bowels in such cases every man's experience will inform him. Many women so habitually neglect this function that it is surprising they do not suffer more. In such cases purging is generally borne very well indeed, and the pills mentioned previously, of colocynth and hyoscyamus, may be used nearly every night. If the patient should happen to be in a state of great prostration, or liable to suffer severely from giving mercury in any form, the extract of chamomile

may be substituted for the blue pill. And, in my opinion, the worse the patient bears aperients the more does she need them. A patient who suffers severely from the use of a mild pill has a much less chance of recovering under the use of mild remedies than a healthier person; she is in such a state of prostration that tonics will not alone rouse the flagging nutrition and assimilation of the frame. However puzzling this statement may appear, I can confidently offer it, and I think it is just in very bad cases that the surgeon will see the beneficial effects of purgatives in the most marked degree.

Dr. Durkee thinks a combination of cantharides and cubebs¹ as suitable and efficient a remedy as any in arresting acute vaginal blennorrhagia. Dr. Tanner seems to think² little more is requisite in the way of internal treatment than mild aperients. I can simply adhere to what I have said.

A regular crusade should be begun against that baneful habit of staying so much indoors which some women indulge in. Half these chronic discharges would never be heard of if women would go out every day; in fact, it is out of the question that either mind or body can be in a healthy state under a system of slow poisoning with bad air.

Injections.—In respect to injections a much greater latitude may be given than in men; for often, in the commencement, nothing beyond a stream of warm water can be borne by some women, and in others very strong injections are soon tolerated. It is perhaps better, therefore, to begin with very mild measures.

Becquerel and Rodier speak very highly of tannin, and their opinion seems founded on very careful observation. For ordinary cases I have found nothing superior to sulphate of zinc. Very profuse discharges may and do sometimes require stronger measures, and then the decoction of oak-bark may be used with the best effects. In all cases of this kind an immediate search should be made to see if there is any local complication, such as a cauliflower excrescence, polypus, ulceration of the os uteri, &c., and the

¹ This is the formula he recommends:—

℞ Tincturæ lyttæ,
 ——— cubebæ, aa. ℥ij.
 Aquæ camphoræ ℥iv.
 Morphię sulphatis gr. iv. ℥.

Dose one drachm three times a day, in a gill of rice-water or toast-water.

² *The Practice of Medicine*, vol. i. p. 313.

condition of the health sedulously seen to. It is comparatively rare for a woman in really good health to have anything like severe discharge from the organs of generation, except as the result of direct infection.

It is particularly requisite that the patient should thoroughly understand how to inject herself, which should always be done in the recumbent position with a pillow under the hips. A powerful syringe, with a long flexible tube furnished with a blunt end, is the best instrument I know of.

In acute blennorrhagia, Dr. Durkee finds warm water one of the best injections. It should be employed several times daily. Later on tincture of iodine is extremely valuable: a single application is frequently sufficient to arrest the discharge. Nitric acid in infusion of red cinchona, twenty minims to ten ounces, is also useful in all forms and varieties of the complaint after the acute symptoms have subsided, and in chronic vaginitis a decoction of the inner bark of the common white pine forms a very valuable injection. M. Ricord tells us¹ that by means of plugging and injections, sixty out of a hundred cases were cured in from twenty days to two months. He observed a certain amount of action from ergot of rye in the uterine form.

The pain in the loins is, generally, speedily allayed by rest, hot fomentations, and sedatives. Change of air is highly advisable when the cure is complete, or towards the close of treatment.

Duvernay's glands are said to be very liable to become diseased in the progress of virulent gonorrhœa.² Tiedemann found the excreting ducts obliterated in the body of a woman who had suffered from inflammation of the mucous membrane of the vagina; the lobules and glands were dilated to the size of small cells. Of the tendency to abscess in the labia majora there can be no doubt. Like all other complications of the same kind, the vigorous use of tartar emetic and hot bathing, as recommended in the treatment of perinæal abscess, is, so far as my experience goes, the only treatment to be at all relied upon. When once the abscess points, I believe authors are agreed that it should be opened, and that if allowed to burst the case may prove very obstinate.³

Ovaritis sometimes complicates gonorrhœa in women. Dr. Tanner

¹ *Traité Pratique*, p. 684.

² *British and Foreign Medical Review*, vol. xvi. p. 56.

³ Durkee, *Op. cit.*, p. 181.

says¹ it is doubtful whether the fact is due to the disease or to its treatment by astringent injections, copaiba, &c. I incline most strongly to the opinion that it is owing to the extension of the disease to those irritable bodies, and feel inclined rather to doubt the power of copaiba to induce it, especially as I have given this drug for bronchitis, and have never known it, when so administered, bring on the least trace of such a symptom. Ovaritis in such cases requires rest, hot bathing, mild mercurials,² and low diet. In very severe cases the chlorate of potass mixture, recommended at page 96, may be given. Dr. Tanner says that, as a rule, a mixture containing full doses of iodide of potassium with chlorate of potass will be found much more efficient in acute ovaritis than any mercurial preparation. I should think such a combination very valuable, especially when united with a sedative at bedtime, especially as I have noticed the best effects from the chlorate given in the way recommended. Still, I think the addition of a mild mercurial is not to be despised. In respect to fomentations, I may remark that, to be of service, the water must be hot, not warm.

I have never seen ovaritis in an acute form from this disease. Mr. de Méric quotes³ a case from Mercier. The patient was suddenly cut off by typhoid fever. Post-mortem examination showed that the gonorrhœal inflammation had extended to the uterus and along the Fallopian tubes, the fimbriated extremity of the left tube being destroyed, and the canal obliterated. Mr. de Méric also gives three carefully recorded cases from his own practice. In the first the patient was a woman thirty-two years of age, infected with gonorrhœa by her husband. She was feverish, and the pain was severe enough to confine her to bed. The disorder yielded pretty quickly to fomentations, a gentle purgative, an antimonial mixture,

¹ *Op. cit.*, vol. ii. p. 356.

² ℞ Hydrargyri c. cretâ gr. v.
Pulv. cinnam. comp. gr. ij. ℥ ft. pulv.

To be taken at bedtime, accompanied by ten to fifteen minims of Battley's sedative in camphor mixture. Or the following pill may be substituted for the two :—

℞ Pilulæ hydrargyri gr. x.
Morphiæ hydrochlor. gr. iss.
Pulveris opii gr. iij. ℥ ft. pil. vj.

Capiat unam horâ decub.

³ *On Gonorrhœal Ovaritis.* By Victor de Méric, Esq. *Lancet*, 1862, vol. i. p. 628.

low diet, rest, and counter-irritation. In the second case the patient was also infected by her husband. The skin was hot and the pulse hard; there was severe pain in the left iliac region, and a profuse vaginal discharge. Fomentations, followed by large linseed poultices to the part, and warm poppy-water injections into the vagina, gave relief. Rest and cooling medicines were also ordered, and subsequently injections with counter-irritation over the ovary by means of blisters. In the third case there was high inflammation of the vulva and vagina, and the discharge, which was accompanied by considerable hæmorrhage, was very profuse. This patient, moreover, suffered from pain about the right iliac region, running up to the crest of the ilium, which seemed to be of a rheumatic nature and of a most distressing character. Rest, poppy-water fomentations and injections, warm hip-baths, gentle purgatives, antimonials, subsequently narcotic frictions over the seat of pain, injections of alum and zinc, and full doses of opium were employed; but the symptoms yielded very slowly, a full month elapsing before there was any great improvement; whereas in the first case the patient was able to resume her household duties in about three weeks; and in the second, although the discharge had not ceased at the end of a similar time, the pain had yielded previously.

Mr. de Méric calls attention to the fact, that in all these cases the ovaritis arose in the early stage of gonorrhœa, indeed within a very few days after it commenced. He considers that this circumstance, and the absence of any hard deposit in the ovary like that in the epididymis after orchitis, militate against the analogy which has been thought to exist between the swelled testicle of gonorrhœa and gonorrhœal ovaritis. I do not think any weight can well be assigned to the latter; different tissues are in this respect differently affected by the same inflammation.

When the symptoms lead us to believe that the inflammation has extended to the womb, no remedy so quickly brings relief as a good sedative. Whatever be the merits of antiphlogistic treatment, however extensively it may have been sanctioned, I am disposed, from observation, to say that *three or four doses of opium are more likely to arrest inflammation and pain than all the depressing medicines that could be found.*

Were I asked what I considered the *sine quâ non* of treatment in these cases, and even in obstinate vaginal gonorrhœa after pain has ceased, I should say the application of the nitrate of silver to the

vagina and os uteri ; and now that—thanks to the progress of common sense—the speculum can be used without its being necessary to have a consultation of three physicians (!), its aid should at once be called in. It is introduced, well oiled, as high as it will go, and then, all discharge being first carefully wiped away by means of a piece of lint firmly tied to a stout stilet, a stick of nitrate of silver is applied to the os uteri, the speculum is withdrawn, and the nitrate, quickly rotated, is brought into contact with the whole of the vagina, till the labia are approached, when it is at once withdrawn. Some very alarming accounts have been given of the dangers and suffering which must necessarily arise from such a source, but they are refuted on ample testimony,¹ and like so many of these prejudices, which have ever been the bane of surgery, are simply due to a passion for jumping at conclusions without any facts for a warrant.

For a time at least, it seems as if the property of conveying the infection was extinguished in the discharge by the nitrate, most probably solely by the chemical action of the salt. I do not set much store on the case where a gentleman, after throwing an injection of the nitrate of silver into the vagina, applied the discharge to his eye and urethra without effect,² because this has been done with impunity when the nitrate was not used, and hence the proof is not conclusive ; but I certainly have known, in a great number of cases, that connexion has taken place after using the nitrate while the vagina was in a most unhealthy state, for I speak of cases where I have applied the nitrate myself, and yet no infection has ensued.

Many years ago Sir J. Simpson introduced pessaries, which were inserted into the vagina.³ They were composed of zinc, lead, &c., white wax and lard. Each weighed about a quarter of an ounce, and was coated by dipping it into an ointment of wax and resin kept liquid by heat. I give below ⁴ two formulæ for these pessaries,

¹ Dr. Henry Taylor, *Medical Gazette*, vol. xxi. p. 63 ; Mr. Bell, Mr. Thomson, Dr. Hannay, *Medical Gazette*, vol. xx. p. 185 ; *British and Foreign Medical Review*, vol. iv. p. 258 ; Dr. G. Mayne and Dr. Egan, *Lancet*, 1848, vol. ii. ; and numerous others.

² *Medical Gazette*, vol. xxix. p. 365.

³ *Edinburgh Monthly Journal*, 1848, p. 886.

⁴ R. Zinci oxyd. ʒj.

Ceræ albæ ʒj.

Axung. ʒvj. misce et divide in pessos quatuor.

which have been a good deal used in one form or other for chronic vaginitis by some practitioners.

Some of the french surgeons cauterize the urethra in the female when it is the seat of purulent discharge, and give no specifics at all. The results are spoken of as most encouraging, and there is not a single argument worth consideration to oppose to so excellent a practice. Dr. Bumstead also injects the urethra when the case is obstinate.

In reference to the treatment of discharges from the womb itself I believe it is now generally admitted, that any direct applications to the interior of this organ, at any rate in a liquid form, are apt to be followed by nervous symptoms of an alarming nature, which, though they mostly pass off soon without any material results either one way or the other, are yet of such severity that they often prevent a repetition of the treatment. Fortunately, however, if counter-irritation be applied to the groins, we can reduce the disorder to zero, and then a very moderate use of the nitrate to the os uteri will suffice. I have generally at once taken refuge in blistering, and have found women quite as amenable to its action as men. A blister about half the size of a man's hand is applied above or below either groin, and at the lapse of three or four days the other side is blistered. If the affair be complicated by any ulceration of the mouth of the womb, there is, to my thinking, no remedy like the caustic soda, which can be easily applied by means of the speculum; the slightest touch is enough. The secretion from the ulcer should be first of all removed by means of a piece of lint. Some authors, it must be admitted, go more boldly to work. Dr. Bumstead, for instance, cauterizes the interior of the womb, and regards even the breaking off of a portion of the nitrate as an accident that need not give us any alarm, whereas Mr. Johnson, whose experience seems to have been remarkably unfortunate in such matters, has seen the application prove fatal.¹

Of course, in chronic affections of this kind, all derangement of the health must be sedulously cared for. The general treatment is much the same as for obstinate discharges from the vagina. The ruinous practice of stopping within doors from one week's end to another should at once be given up. As to tonics, I have lost all

R Acet. plumb. ʒss.

Ceræ albæ ʒiss.

Axung. ʒvj. m.

¹ *Op. cit.*, p. 350.

faith in them as regards their power of curing the purulent discharge, but the state of the bowels and stomach demands the greatest attention: my experience is that nearly every case of this kind is benefited sooner or later by a free use of aperients, and I like to keep up their action till a decided impression is made upon the case. The blistering may also be continued, and has been, in my practice, in almost every case, of far more service than the cold hip-bath, with the effects of which I cannot say I am at all satisfied. Tincture of steel, or some mild preparation of potass combined with tincture of cinnamon and calumba, can be given as circumstances require, and when the patient is in low spirits ammonia may be combined with ether, or the ammoniated tincture of valerian may be given in some bitter infusion.¹

When excessive menstruation is present, I believe the exhausting drain will almost always be arrested by the use of oxide of silver, as recommended by Sir James Eyre, or the infusion of digitalis in the doses advised by Mr. Howship Dickinson,² remedies which I believe have never failed in my hands. The former must, however, be used with great discretion, and not continued for any great length of time, as I have shown³ that the use of it may be followed by permanent discoloration of the skin. I have no experience of the chronic inflammation of the erectile tissue of the vagina described by Mr. Johnson; indeed, he has only seen one case, and that proved very obstinate.

Diet.—As to the diet best suited to gonorrhœa during the acute stage, whether in the male or female, there is, I believe, now but one opinion, namely, that it should be as light as possible, and that beer, wine, and ardent spirits should, as far as is practicable, be

¹ R. Tinct. ferri sesquichloridi ℥ij.

Sumat minim. xxx. bis quotidie.

It is best taken before meals, and diluted with as much water as the patient's stomach can well bear.

R. Potassæ bicarb. ℥ij.

Tinct. cinnam. co. ℥iv.

Infus. calumb. ad ℥vj. ℥.

Capiat coch. amp. duo bis quotidie.

R. Tinct. valerianæ ammon. ℥iv.

Infusi cascarillæ ℥vss. ℥.

Capiat coch. amp. duo bis terve quotidie.

² *Med. Chir. Trans.*, 1856.

³ *Journal of Cutaneous Medicine*, vol. ii. p. 42.

prohibited. Now and then a little sherry-and-water, or gin-and-water, may be allowed as the *ultima Thule* of indulgence.

But though a rigorous exclusion of such articles of diet as are only calculated to do injury may be justly considered one of the most essential points of treatment, it is at the same time advisable not to curb the patient in too strongly, lest he should turn restive, and break through all restraints ; especially if he happen to be one of those erratic mortals who seek to escape from such restrictions by any loophole. The more simple and easy to observe the directions are, the more readily will they be followed out both in spirit and letter. Moreover, the greater number of cases do not require such strict dieting ; and instances where patients have recovered from severe gonorrhœa while actually overstepping all limits, have not a little tended to beget a spirit of scepticism, not only among them but also among medical men, as to their value in cases which really require restriction.

I have myself no great faith in vexatious regulations of any kind ; I always fear they will prove too onerous to be practicable ; indeed, I rather incline to the side of the Ettrick Shepherd, who gave it as his opinion, that “there’s something varra auld-wife-ish in writing buiks to teach folk how to eat their victuals.” Even the mildest system must occasionally be relaxed, and now and then a good chop and a pint of claret will do a weakly man more good than any starving.

The surgeon, then, I think, will do wisely in interdicting all spirits (except now and then a very little hollands or gin), strong malt liquors, pork, beef, curries, *et similia*¹—in admitting as little meat and wine as possible, and in recommending tea, fish, arrowroot, tapioca, &c. But it will not do to compromise too much ; and if the patient will not submit to moderate restriction, the blame rests with him and not with the surgeon. The progress of science may one day reveal to us some substance capable of exercising more complete control over inflammations of the mucous membranes, something as potent, perhaps, as tartar emetic in inflammations of the cellular tissue ; then, indeed, we may free our patients from this burdensome watching ; but *till then* we must combat the disease with such remedies as we possess—and one of these is certainly a moderately low diet,

If it be necessary to enforce these rules at the commencement, it

¹ Mr. Johnson says fruits and vegetable acids should be abstained from. I have not observed anything particular from either.

is equally necessary to observe them to the end ; for a gleet which is just dying out is, so long as the microscope shows pus in the secretion, easily converted into a gonorrhœa by a sudden return to stimulating food, and therefore the safest rule is to go on as at the very beginning till the discharge has entirely ceased for some days. I do not mean that the patient should starve himself to the very last hour, indeed, he should never reduce his strength by too low a diet ; but I do assert that he ought not to indulge in stimulants, and not even revert to that excessive consumption of meat and beer which is so much the rule of life in England.

As to the diet for women little further need be said. I believe it cannot be too light and plain ; and as to the use of stout, jellies, soup, and food of a similar nature, constantly suggested by some over-kind friend or relative, it cannot be too strongly deprecated. The persistent use of what would try a ploughman's digestion is a step in the wrong direction, while of jelly we may be permitted to doubt whether it really contains any nourishing matter capable of assimilation beyond the wine used in making it. Besides, it is quite a mistake to think that excessive feeding is ever requisite in such cases.

In the chapter on scalding, I have stated my belief of the utter uselessness of *diet drinks*, and their inadequacy to relieve, even if they do not aggravate, scalding. The inference to be drawn from the arguments there used may be applied here. If the patient be very thirsty, the best diluent is water.

Smoking.—Men often ask whether smoking is injurious. I should have said that in moderation it could not be, and even in excess I have never traced any relapse or aggravation of the symptoms, though it makes the patient low and nervous. Dr. Bumstead, however, thinks¹ it is hurtful. "I believe," he says, "that either smoking or chewing, especially in excess, relaxes the genital organs, and tends to keep up a urethral discharge."

I now proceed to examine the complications of gonorrhœa. As some of these, when judiciously handled at any rate, do not interfere with the treatment of the parent disease, while others must be overcome before we can hope to effect a cure, I thought it would be best, in a work devoted in great part to therapeutics, to adopt a purely arbitrary classification, and separate those symptoms into two

¹ *Op. cit.*, p. 83.

groups: one comprising those which may be taken in hand at the same time, that is to say, complications which do not interfere with treatment; and another containing those which at an early period acquire such an importance as to require the particular attention of the surgeon, and which, in consequence, really do interfere with treatment. Such an arrangement is, I at once admit, highly unscientific, but I know of no better.

CHAPTER IV.

TREATMENT OF THOSE COMPLICATIONS WHICH DO NOT INTERFERE
WITH THE CURE OF GONORRHOEA.

1. SCALDING, 116 :—Remedies usually advised, 116. 1. Anodynes, 117 ; 2. Demulcents, 117 ; 3. Diuretics, 118 ; 4. Alkalies, 118 ; Animal Chemistry, 122 ; Probable Explanation and Treatment, 127. 2. CHORDEE, 127 :—Divisions and Pathology, 127. Treatment usually adopted, 132. Proposed Plan of Treatment, 134. 3. SYMPATHETIC BUBO, 136. 4. IRRITABLE BLADDER, 136. 5. ORCHITIS, 137 :—Results of, 137. Pathology, 138. Causes, 142. Table VIII.—Statistics of Orchitis, 144. Treatment usually adopted, 155. Sedatives, 158. Division of the Tunica albuginea, 159. Proposed Plan of Treatment, 161. Blistering the Scrotum, 163. Strapping the Testicle, 164. Subsequent Treatment, 164. 6. PHYMOSIS AND PARAPHYMOSIS, 165. 7. BALANITIS, 167. 8. INFLAMMATORY SWELLING OF THE PENIS, 168. 9. INFLAMMATION OF THE SPONGY AND CAVERNOUS BODIES, 169.

1. SCALDING :—*Remedies usually advised.*—After carefully reading every work and paper to which I could obtain access, I have not been able to obtain any information as to the best method of treating this and some other symptoms, which proved when reduced to practice of value. Numerous remedies, it is true, are indicated, but their effects are spoken of so vaguely, that I am very much tempted to doubt if some of the authors had done more than simply repeat what they had read. In order therefore to ascertain, as far as I could, their precise action, I first of all divided them into the four following classes :—1. Anodynes—as laudanum, morphia, belladonna, &c. ; 2. Demulcents—as linseed-tea, barley-water, gum arabic ; 3. Diuretics—as nitrate of potass, sweet spirit of nitre ; 4. Alkaline remedies—as soda, potass, and magnesia.

With a view of avoiding every source of fallacy, these four classes were tried successively on great numbers of patients ; every symptom connected with the advance or decline of the scalding in each par-

ticular case was registered in the blank forms already spoken of; and the patients were for the most part examined every morning. At the same time nothing was omitted that seemed likely to hasten the cure, so that, as far as they go, the results obtained may be fairly viewed as a summing up of the action of these remedies on the symptom in question. The results were as follows :—

1. *Anodynes*.—The effects of anodynes were most unsatisfactory. They were used in the form of

Laudanum.—In some cases, where there was severe pain from other causes, this remedy was pushed to the extent of a hundred drops in a day; yet even in such large quantities it only produced temporary relief of the scalding; and in doses of this magnitude, even if it removed the symptom it was given for, the constipation and headache it brings on sooner or later would be sufficient objections to its use. *Morphia* in small doses was inefficient, and in large quantities objectionable, for the same reasons as opium. *Dover's powder* yielded the same results. In aching, however, of the urethra, perinæum, and testicles, a moderate dose of opium or morphia is often productive of the best results.

Hyoscyamus alone, or combined with salines, appeared in some cases to hasten the disappearance of scalding when injections were used; but on trying it singly it was found to produce no effect, so that the first impression must have been illusory. Applied externally it had no very marked action, and made a filthy mess—an inconvenience to which patients suffering under these complaints object most seriously. *Veratrin* and *atropin* applied in ointment produced torpor of the part, but no permanent relief of the scalding.

2. *Demulcents* exerted but very slight effect, though the patients, in some instances, drank as much as a quart of thick linseed-tea in a day. These remedies have been recommended by many writers, although not one of them seems to have ever examined their properties in such a manner as can alone justify a man in speaking positively about a point of this kind. From numerous observations, I am disposed to doubt whether they possess any of the virtues attributed to them, and whether they are not simply a relic of the old drenching system—a pure waste of time, labour, and patience; water, especially if pure,¹ will, I believe, effect the same purpose

¹ “From some recent observations of Professor Liebig, it appears probable that the purer the water the more freely is it absorbed into the blood and eliminated by the kidneys.”—*On Urinary Deposits*. By Golding Bird. Fifth edition, p. 56.

much more cheaply and conveniently! As to believing the old explanation that they sheathe the urine, and thus prevent its acidity from acting on the inflamed mucous membrane, we might as well adapt to the circumstances of the case Cullen's mechanical doctrine, that "in tabes venenata one cause of emaciation is produced by an absorption of oil from the cells of the cellular membrane into the blood, for the purpose of lubricating the acrimonious spiculæ of the poisonous substance." Absurd as this may sound, it is just as philosophical as a doctrine which asks us to believe that the mucilage, whether of the acacia-tree or the flax-plant, passes unchanged through the capillaries of the stomach and the epithelial structure of the kidneys; and it is a melancholy proof of the readiness with which men are sucked into the whirlpool of dogmatism about matters they know so little of, that teachers like Cullen should propagate such assumptions.

3. *Diuretics* seemed to have some slight effect, and the solution of *nitrate of potass* in barley-water, half an ounce to a pint, appeared to relieve the scalding in many cases, just as *spirit of nitre*, gin-and-water, and tea do, namely, by producing an increased secretion of water from the kidneys. It had no power of materially benefiting this symptom so long as the diseased state of the urinary passage remained unabated. These remedies, however, are perhaps the most efficacious that have as yet been tried, and are perfectly harmless in anything like moderation. The patient should not use more than half an ounce a day of the nitrate of potass, as it is apt to induce sickness in larger quantities, and, except in cases of great thirst or a taste for such kinds of drink, it can be dispensed with altogether.

4. *Alkalies*.—Of these, *the carbonates of soda, potass, and magnesia*, and the *liquor potassæ* were tried, both alone and combined with some of the other remedies. I was induced to use these from almost always finding the urine acid in gonorrhœa, especially as I had been repeatedly told that they were the best remedies for this symptom, and I was naturally enough rather anxious to find in some of these medicines a remedy against a symptom of which patients complain a good deal, and which, if not very important, is annoying; but the attempt was as unsuccessful as those made with the demulcents and sedatives. The following results were obtained from the observations made respecting their action:—

1. The urine became alkaline in some cases, but the acidity returned even when the alkaline remedies were continued.

2. This change was not accompanied by a relative change in the scalding.

3. This change ensued in some cases where no antacid remedies were used.

4. The scalding was relieved without the acidity of the urine being affected.

5. When the patients were seen but once a week, these remedies were used during periods varying from two or three weeks to as many months, without in some cases relieving the scalding, which, however, began to disappear so soon as the condition of the urethra improved.

6. In some cases, in the latter part of the acute stage, alkalies were of service when combined with other means, as injections; but of less value in the early part of this stage, in which diuretics gave more relief.

7. In the scalding which sometimes very suddenly attacks those recovering from gonorrhœa, alkalies were often productive of positive harm, and tended to exasperate it.

8. Again; though the urine was acid in this stage (the decline), nitric acid was apparently often productive of relief. I say *apparently, because this scalding will sometimes come and go in forty-eight hours; and therefore it is extremely difficult to say what it is that carries it off.*

9. That the presence of scalding need not delay the cure of gonorrhœa for an hour, and that its removal does not in any way promote or retard the influence of treatment, the question being one which simply affects the comfort of the patient.

After stating the results of my own observations, I think it only just to say that Mr. Weeden Cooke has come to very different conclusions. He tells us¹ that scalding is the result of the acid urine passing over the highly inflamed surface of the urethra, and that this symptom should be remedied by the administration of alkaline carbonates, with the view of neutralizing the acidity of the urine, *and thus removing the principal cause of the continuance of the inflammation.*

It is often very difficult to make the urine alkaline, though this *may be* accomplished by overwhelming doses of alkalies. Thus Wagner² found that two drachms of carbonate of soda rendered it

¹ *Lancet*, 1860, vol. i. p. 90.

² *Handbuch der Physiologie*, B. 2, art. *Harn*.

alkaline in three-quarters of an hour, which, however, could be only a transient state unless the action were maintained by fresh supplies. Indeed, the alkaline reaction in this case only lasted three days, while two drachms of acetate of potass only made the urine alkaline for sixteen hours. According to my own observations, neither small nor large doses effect this change in many cases so readily and easily as might have been expected.

The following short cases will, I hope, tend to substantiate all I have stated.

Thomas R—— took ʒj. of sulph. of soda daily in barley-water. The first morning the urine was acid, the scalding gone; but, on careful examination, it was found to have been nearly gone the day preceding, and it returned again.

Thomas J—— took, Aug. 1, ʒj. of sulph. of soda. On the 2nd (16 hours after), the urine was found alkaline, the scalding had gone; its disappearance was traced to the use of a warm bath. On the 3rd it had returned, and a warm bath again relieved it.

George P—— took ʒj. of carb. of soda and ʒj. of phosphate of soda in barley-water. He did not experience much benefit from them, the scalding having, in fact, gone from taking a warm bath. Eighteen hours after, the urine was acid, and, on standing, deposited a thick flour-like sediment; the scalding returned.

Charles H—— took ʒj. of the phosphate of soda in barley-water. Next morning the scalding was worse; the urine not examined.

George T—— took ʒj. of nitrate of potass and ʒss. of pulv. ipecac. c. in barley-water. Next day the urine was neutral, and the scalding not so severe; he repeated the dose, and the day after the urine was strongly acid, and the scalding as severe as ever.

Henry B—— had had scalding for fourteen days. By taking ʒivss. of nitrate of potass and ʒiss. of pulv. antim., in eight days he was relieved, the disease having given way at the same time.

James B—— took between the 30th of May and the 1st of July, ʒiss. of carb. of soda and ʒj. of pulv. jalap, in small doses three times a day; the scalding gradually diminished, the disease going at the same time. During the first fourteen days he had no diminution of the scalding.

Thomas R—— took ʒj. of nitrate of potass and gr. xxiv. of pulv. antim. in six days. The scalding, which was going away, diminished under the use of this remedy.

Henry H—— has, July 2nd, acid urine and scalding. To take liquor potassæ ʒss. ter die.

July 9th.—The urine acid ; scalding still continues. To take the dilute nitric acid in decoct. of pareira brava.

July 16th.—The scalding gone, the urine still acid.

Samuel E——, July 9th, while taking liquor potass., was suddenly attacked by scalding ; urine acid, sp. gr. 1028.

J. H. W., April 16th, has scalding from gonorrhœa. To take a scruple of nitrate of potass and ʒss. of gum Arabic thrice a day, with Dover's powder every night and injections thrice a day.

20th.—The scalding much relieved, and in a few days disappeared.

Thomas R——, July 23rd, had had scalding from gonorrhœa two months. To take carb. of soda, gr. viij., and opium gr. $\frac{1}{4}$ twice a day.

25th.—The bowels confined ; scalding much the same. Carb. of soda gr. xij. and pulv. jalap. gr. xij. twice a day ; injection three times a day.

Aug. 1st.—Relieved ; to go on.

8th.—The scalding has disappeared. Here the alkali was clearly of some use, as he had been using the same injection for two months, with mild aperients.

Two patients, with a slight clap of long standing and some scalding, were put, one on the soda and opium powder, the other on the soda and jalap. At the end of nine days they were examined again, having in that time taken each ʒss. of the alkali. The patient who had taken opium and soda had lost the scalding, and with it the discharge. In the other, who had, however, taken some beer, it continued unabated.

Charles C—— had had scalding from gonorrhœa in a very severe form for some days. He was ordered a mild saline purgative, his bowels being confined, and to be injected three times a day. The scalding disappeared in a few days, and did not return.

G. W., Esq., had very severe scalding from gonorrhœa. He took, July 7, one drachm of soda in water and was injected. When seen on the morning of the 8th, the scalding had diminished and the urine was alkaline. On the evening of the same day he took a drachm of the carbonate and was again injected.

July 9th.—The urine is acid ; the scalding has diminished.

Joseph M—— had scalding, for which he was ordered a combination of soda with jalap powder. After thirty-five days' continuance of this, in the course of which time he had taken four

ounces and a half of carbonate of soda, the scalding was still present, though slight.

Charles L—— has been for some days using nitrate of potass for gonorrhœa and scalding. He began, May 10, to take carbonate of soda, ten grains three times a day. He was also injected.

13th.—The scalding is better, the urine neutral. To go on.

15th.—The scalding lessens, the urine is neutral. To continue the alkali and injection.

16th.—Urine acid, the scalding giving way; the discharge has diminished to a gleet. Inject again and continue the soda.

17th.—He has caught a cold; the scalding has returned as bad as ever.

I could fill pages with such notes, but it seems needless to pursue further. It appears to me that enough has been said to show that none of these substances can really be depended on for the removal of the scalding. I will only stop to add that benzoic acid was tried, with a view of converting the uric into hippuric acid, and that, like the rest, it had no material effect. In all these cases the urine selected for examination was either that passed on rising, or the first voided after breakfast; most usually the latter.

It was while examining these points that I remarked that those patients who took a warm bath every day, a remedy in which I have great faith as a source of comfort, suffered much less from scalding than those who did not use it. Struck by the fact, I followed it up, and subsequently examined with great care the effects of abstinence, water-drinking, &c. on the urine. The observations made were far too extensive for insertion here, and therefore I only give the results in as compressed a form as possible. They were,—

1. The action of the warm bath proved much more potent than that of any other remedy, therapeutic or hygienic; but that it only lasted an indefinite time.

2. That it was powerfully seconded by great moderation in the use of meat and a proper kind of diet, and that the best palliatives for scalding are water and mild diuretics, such as tea.

Animal Chemistry.—As it is most desirable that all statements relative to such a conjectural art as medicine should rest on the broadest possible basis, I shall now proceed to examine what light organic chemistry throws upon the subject. One chemist tells us that “we can, by a judicious choice of food, bring the urine into any

state that can be wished for," a piece of information which, however correct it may be in theory, would offer great difficulties to any one trying to reduce it to practice; for it means, in reality, that by "a judicious choice of food" we can cure every complaint inseparably connected with disturbance of the urine. Indeed, though great progress has been made in the diagnosis of diseases of the kidneys and in the pathology of changes in the urine, the benefit which the treatment of gonorrhœa has as yet received from these researches is, like Antonio's means, "in supposition."

The first point inquired into in my observations was, whether scalding depends upon the presence of any particular ingredient in the urine, because if this could be detected some remedy might be found; but this I could not learn. However, I may have overlooked the right source, as organic chemistry, like many other branches of lore, is steadily getting into a state of plethora such as Washington Irving foreboded of all writing. It is acquiring such appalling dimensions that at no very distant date it will require a lifetime to wade through the mere catalogue of works pertaining to the subject. Within the last fifteen or twenty years alone the contributions have been so vast, that any person who is not a pure chemist and nothing else, finds himself, when once entangled in such a complicated matter, in the dilemma of a traveller who has fairly lost his way in some trackless waste.

However, I will try to make the best of the difficulty, and begin by giving the only specific information I have been able to meet with. It is taken from the carefully-prepared work of M. Alfred Becquerel,¹ who says, "The existence of a simple blennorrhagia, whether acute or chronic, only produces in the urine a small quantity of muco-pus, rarely enough in quantity to render the urine alkaline. When the running is very great, it sometimes happens that the urine passed in the morning, on rising, contains more muco-pus than that passed at other periods of the day, that there is little albumen in it, and that it is less acid than usual." As this statement throws little light on the special subject of research, let us take the general state of the urine, and examine if any of its component parts will offer a clue to the enigma.

The urine being assumed to consist of water, extractive matter, salts, acids, and urea, I propose to take them *seriatim*, and see which

¹ *Séméiotique des Urines*. Par Alfred Becquerel. Paris, 1841, p. 475.

can, with the greatest probability, be regarded as the cause of scalding, or, in other words, to see if the urine can be a cause of this symptom. The first ingredient may at once be set aside; the extractive matter cannot be admitted as a cause, seeing that it is generally considered to be refuse tissue, or the colouring matter of the blood or urine, chemists being agreed about this, though at variance as to which of the three it is. The salts are so small in quantity, many of them so inert, and some so frequently taken in large quantities without inducing scalding, that they may also be left out of the question.

The acids consist generally of lithic and lactic acids; the lithic acid produces scalding in other diseases when large quantities of it are thrown off, and so far as an ingredient in the urine can be, it is probably one cause of scalding in this complaint, and we ought to be able to counteract it, though we cannot entirely prevent its appearing, as it will show itself even when no food is taken. Lassaigne detected it in the urine of a maniac who had fasted fourteen days, and Wagner observed that it was found in larger quantity after fasting than when vegetable diet or food freed from carbonaceous diet was used.

It is however doubtful if pure lithic acid exist in a free state in the urine. Becquerel says it does not, and it seems probable that it combines with the carbonate of ammonia, formed from the urea by the addition of two atoms of water, and thus forms lithate of ammonia. Prout's opinion¹ is that this salt (lithate of ammonia) is evolved even when no food is taken into the stomach, and hence it is easy to suppose how speedily it is supplied by food rich in its constituent elements, that is to say animal food, and decreased by diet containing no nitrogen, as indeed Lehmann has shown; but usually the normal quantity, not above a third or a fourth of a grain to an ounce, is, I fancy, too small to give acidity, thus produced, a pathological value.

The further we trace this subject, the more does the conviction force itself upon the mind that we are chasing a will-o'-the-wisp. The more we call abstract science to our aid, the deeper we sink into the slough.

“ Multa petentibus,
Multa desunt.”

¹ Prout *On Urinary Diseases*. London, 1840, p. 81.

The investigation of the lactic and hippuric acids does as little towards solving the enigma as the foregoing bootless attempts; the presence of the former being almost as much a moot point as that of lithic acid, and the reality of the latter being a conclusion or inference rather than an established fact. As to the lactic acid, chemists have stated its proportions so differently that no positive opinion can be formed; Berzelius considering that it amounts, along with the lactates, to as much as 17.14 parts in a thousand, while other chemists say this estimate is far too high, and Turner goes so far as to tell us that what Berzelius took to be lactates and lactic acid is nothing of the kind, but consists chiefly of organic matters (kreatine and kreatinine), and further on informs us that "Liebig has proved by experiments on a very large scale, that normal urine, whether fresh or putrid, contains no lactic acid;" Dr. Golding Bird, too, seems¹ clearly of this view. Its appearance in ague, during the sweating stage, and in rheumatism, though asserted by Dr. Prout in the most unqualified manner, is foreign to this part of the matter, so that I think we must give up lactic acid as a source of acidity. Against these two sceptics as to the presence of the acid in the urine we may array a host of true believers, numbering among them Prout, Becquerel, and Wagner, who testify their conviction of its existence in the most unhesitating manner.

Dr. Golding Bird considers² it probable that the uric acid, just as it is separated from the blood, comes in contact with the double phosphate of soda and ammonia evolving phosphoric acid, which thus produces the *natural acid reaction of urine*.

Liebig says that urine always contains hippuric acid in quantity equal to that of uric acid, and that both these acids are more soluble in a solution of phosphate of soda than in water; that this solution has an acid reaction, and to this he attributes the acidity of the urine. Moreover, Prout has detected benzoic acid in the urine, the source of which, it is thought, could only be hippuric acid. I am, however, strongly disposed to think Liebig has over-estimated the quantity of hippuric acid, and that it is not always, or even often, present in large amount, unless, as Dr. Golding Bird remarks, after benzoic or cinnamic acid has been taken.

We have now only the urea to notice; and the extremely slight action of a weak solution of carbonate of ammonia on an equally

¹ *Op. cit.*, p. 45.

² *Ibid.*, p. 95.

sensitive membrane, that of the tongue and fauces, would fairly lead to the assumption that a substance nearly identical with carbonate of ammonia, and rarely, if ever, existing in excess in the urine, is not so likely to produce scalding as even the ingredients already spoken of. The best mode of solving the question would be for some chemist to inject a solution of these substances into his own urethra.

On the whole, then, I think we may conclude that organic chemistry offers little towards the solution of the question we have in hand. It has not yet been so perfected that by prescribing a particular diet we can avert all disturbance of this important function, or that by any simple means we can always remove the noxious ingredient, as the slightest imprudence may upset the most elaborate system of treatment. But such a height of knowledge, though distant, is not unattainable; the contributions of individuals to so great a work, small as they are of themselves, are yet the necessary material for some master spirit to work on. Each discoverer may effect in his own sphere a slight though absolutely necessary revolution in thought and science—a minute stroke on the ever-beating pendulum of progress, and the crude observations rejected to-day may at some distant date be welded into form by a future Newton or Hunter.

It may be said that all this is battling with shadows, that it is so minute as to be puerile; but the only way of arriving at truth is by verifying, observing, and treasuring up facts, however trivial they may seem at first sight. In the grandest of all sciences, astronomy, nothing is thought unworthy of record, and the mighty results obtained in it are solely owing to the vast care with which everything seen is noted down and kept. An instance recorded by Sir John Herschel must, I fancy, interest every lover of truth. The great astronomer, speaking of James Bradley, the incomparable James Bradley as Bessel most truly called him, for, according to Newton, he was the best astronomer in Europe, and his name must for ever remain memorable for its connexion with the discovery of nutation and of aberration, the first positive proof of the earth's motion, tells us that in 1718 this renowned observer, then slowly climbing up the steep of fame, and little dreaming of the time when Sir Robert Walpole was to fight his cause in the House of Commons, and the people were to curse him for stealing eleven days of life from them by changing the style, had noted down

the line of junction of two stars in the Virgin. Now this note, rescued from oblivion by Professor Rigaud, served *more than a century afterwards* to verify the orbit of these stars, and to show that Newton's law extended its action to these distant regions. A fact pregnant with instruction, for though it has nothing to do with the subject of the work, it has a most momentous bearing on the vast value of carefully *writing* down each day's lesson while studying the great book of disease.

Probable Explanation and Treatment.—What then can we glean from these disjointed observations? Simply, I fear, the conviction that empirical practice must guide us till chemistry has made further progress; and on this assumption I shall conclude by stating what deductions I think may be drawn from the materials brought together.

1. We have good reason to suppose that in gonorrhœa there is augmented action and more rapid development of epithelium; that this augmented action (or inflammation) soon casts off the flattened scales which form the outer surface of the epithelial covering in a state of health, and exposes the yet tender and unflattened cells, gifted perhaps with a much greater power of endosmosis than those which are firm and compressed, to the action of the urine. This is very probably the reason why the canal is so swollen in severe gonorrhœa; and it may happen that when a block of such cells is suddenly detached, a sore place ensues in the membrane, or the unsupported vessels give way and bleeding ensues.

2. That the scalding is owing, not so much to the action of the acids of the urine or their salts on this abnormally tender membrane, as to this abnormal state itself.

3. That the ardor urinæ is possibly, so far as it is dependent on the presence of an acid at all, due to the phosphoric acid in the urine, though it may in some cases and to some extent be aggravated by the presence of lithic acid, as an excess of this salt will produce the symptom mentioned in certain disorders, as cold, influenza, rheumatism, gout, &c.

4. That the best remedy for scalding is the free use of the hot bath, and hot bathing to the penis and bladder; moderate abstinence, and the use of no drink but water, tea, and very mild diuretics: while at the same time we must steadily act upon the disease, and look chiefly for success to subduing it.

2. CHORDEE:—*Divisions and Pathology.*—Chordee is the first link

in that chain of sympathetic irritations set up by gonorrhœa, which from their resemblance to inflammatory phenomena have been treated antiphlogistically by many practitioners—I allude to swelled testicle, irritable bladder, &c. Probably the affections of the glands, denominated sympathetic bubo and gonorrhœal mumps and rheumatism, the two former of which bear a strong resemblance to orchitis, are closely allied but more distant phases of this chain of actions. Violent pain, spasm, indeed *all the symptoms of the first phase of inflammation, unable to pass into the suppurative stage*, are characteristic marks of these affections; the analogues, perhaps, of the cough and soreness which attend the acme and decay of some disorders of the mucous membranes, such as cold and influenza.

Chordee has been divided by common consent into inflammatory and spasmodic; but while the origin of the latter has been silently conceded to muscular contraction or orgasm of the erectile tissue, that of the former has been rather freely contested.

Mr. Hunter says:—"When the inflammation is not confined merely to the surface of the urethra and its glands, but goes deeper, and attacks the reticular membrane, it produces in it extravasation of coagulable lymph as in the adhesive inflammation, which, uniting the cells together, destroys the power of distension of the corpus spongiosum urethræ, and makes it unequal in this respect to the corpora cavernosa penis, and therefore a curve on that side takes place in the time of erection."

Mr. Nisbett says also, that it "depends on the extravasation of coagulable lymph into the cells of the corpus spongiosum urethræ." Zoll gives the same account.

Sir Charles Bell says: "The Chordee is caused by erection when the membrane of the urethra is already inflamed, and has consequently lost its elasticity: being powerfully stretched, it cracks, and you have hæmorrhage. It is obvious that if you do not subdue this you lay the foundation of stricture."

Robert adds to this inflammation of the glands of the urethra, so that, except the skin, nearly all the structures composing the penis have been considered as involved in this symptom.

Mr. Wallace says, after alluding to the explanation of this symptom by supposing an effusion of coagulable lymph into the cells of the corpus spongiosum, "This explanation is, however, seldom, perhaps, if ever, correct; for as soon as the inflammation and irritability of the urethra and the disposition to these painful erections have

subsided, the penis ceases to be preternaturally curved during priapism; and this could hardly happen if the spongy cells had been agglutinated by lymph, for such agglutination would be most probably persistent, at least for some time after inflammation, &c., had subsided. How, then, is the unnatural curve of the penis which attends chordee to be explained? I answer, that it is owing to the spongy body losing, from inflammation, its extensibility, and that the corpora cavernosa are not affected in this way, the proof being that the curve takes place in the direction in which the want of extensibility of the corpus spongiosum would act on the corpora cavernosa."

Dr. Durkee considers that there is infiltration of plastic lymph into the cells, "whereby the canal loses its elasticity, and cannot expand in due proportion with the extension of the erectile apparatus."

But the reader will ask, how can it lose this extensibility from inflammation, unless the cells be glued together by coagulable lymph?

Indeed, however ingenious and philosophical these explanations may be, and however strongly they may bear upon them the impress of truth, there is not one that can be admitted as absolutely proven; and in defence of this assertion I would ask—

1. Is there on record a single case in which it was shown, on post-mortem examination, that the corpus spongiosum was in the state supposed—that is, containing effused lymph?

2. Is there one which proves that this took place without effusion into the upper surface of the urethra, or the corpora cavernosa penis?

3. If Sir Charles Bell's explanation be admitted, how comes it that we can bend the glans penis downwards and thus relieve the chordee? If the mucous membrane had lost its elasticity, so that it could not be inclined upwards without pain, how could it be thus bent, not merely without inducing suffering but with positive relief to it?

4. Is not the cause of the erection itself a disputed point?

5. And finally, is it not the case that, when adhesive inflammation attacks the corpus spongiosum, very intractable and totally different symptoms and results, such as abscesses opening into the urethra and permanent adhesions, are met with?

But, admitting any one of these reasons to be true,—admitting

that the under part of the urethra has lost its elasticity, that lymph is effused into the corpus spongiosum, and not into the corpora cavernosa, so as to chain down the urethra—this would only prevent the extension of the penis. In ordinary erection, that part of the urethra which is the seat of chordee is carried upwards, nearly unaltered in direction, the greatest curvature taking place beyond the specific seat of gonorrhœa. Mere effusion of lymph could not bend the urethra.

Moreover, I have never been able by manipulation to detect the effusion of lymph in the living subject. The only alteration I have ever remarked was a certain hardness in the middle portion of the urethra ; but this was towards the close of the complaint, and *more likely to be a consequence than a cause of chordee*. Indeed, I feel sure that, without some strange neglect on the part either of the patient or surgeon, adhesive or suppurative inflammation of the spongy body could hardly take place.

On the other hand, there are certain facts which suggest the idea of its being due to muscular action.

The first is, that the erection of the penis is designed for the emission of semen, and is, therefore, one stage in an act of the animal economy, obviously performed by the mixed agency of voluntary and organic muscles.

The second, that painful erections, which are but one step removed from spasmodic chordee, can scarcely be caused by anything but the cause of healthy erections.

The third, that even the supporters of inflammatory chordee admit that there is a spasmodic chordee.

The fourth, that the form which the penis assumes in chordee is much more like that which it would take on if the urethra were acted upon by longitudinal muscular fibres seated on its under surface, than that resulting from a solid deposit of lymph, which could scarcely be always so regularly effused as to give the penis the same form in every case.

The fifth, that the observations made by Mr. Bauer and Sir Everard Home,¹ the investigations of M. Kölliker and others, and the discovery by Mr. Hancock of the prolongation of the muscular coat of the bladder over the urethra, prove, as far as such facts can, that this canal may be acted upon by spasm, and the

¹ *Practical Observations on Stricture.* 1821, p. 28.

specific seat of gonorrhœa is certainly comprised within the region in which this spasm might ensue.

Dissection of the penis reveals, in connection with this part, a cellular layer, uniting the corpus spongiosum to the corpora cavernosa above and the skin below. The corpus spongiosum, which appears thicker along the under than on the upper surface of the urethra, is invested by its own fibrous sheath and invests the urethra. It contains fibres which, when examined under the microscope, have a strong resemblance to those of inorganic muscle, and differ widely from those of the fibrous sheath of the corpus cavernosum: these fibres grow fewer and less characteristically marked as the corpus spongiosum expands to form the glans penis. I am not sufficiently versed in the use of the microscope to say with certainty whether they are muscular or not; but my friend the late Mr. S. F. Lane, of Hornsey, who kindly assisted me in these investigations, and who was quite competent to form an opinion, thought they bore a strong resemblance to muscular fibre. Even if no such reasons as these existed, the fact previously mentioned of the urethra easily expelling a long strip of calico shows that it possesses a muscular power, if not furnished with muscular fibre, which is most assuredly not absolutely necessary for such actions, as the anatomy of the smaller animals might show. In our material researches we are apt to forget that an animal is not necessarily a mere machine of bone, nerves, and muscle.

The sixth reason is, that several concomitant and similar complications of gonorrhœa, such as irritability of the bladder, swelled testicle, abscess of the perinæum, and sympathetic bubo, which are all so closely connected with chordee, are clearly, at all events in the early stages, much more like spasmodic action than inflammation. Irritability of the bladder is spasm, as evidently as anything can be; swelled testicle never reaches the suppurative stage; for though now and then abscess may follow orchitis, yet it is quite a different affair from pure suppurative inflammation, and is probably induced, like the swelling in sympathetic bubo, by the secretion of the gland, locked up by spasm of the efferent duct, acting in an unhealthy constitution like a foreign body.

Dr. Bumstead says,¹ "Milton's explanation is opposed by the fact that bending the penis so as to increase the curve of the arc,

¹ *Op. cit.*, p. 61.

affords partial ease to the pain of the chordee, and I am not convinced that the generally received opinion should thus be laid aside, though it is highly probable that spasmodic muscular action plays some part in the production of the frequent erections and chordee which take place in gonorrhœa."

Treatment usually adopted.—One might have thought that such obvious facts would have induced men to depart from a practice which was founded on the theory that they had a true inflammation to deal with; but we scarcely find a single writer who does not inculcate antiphlogistic treatment in some form or other, as will be evident from the most cursory survey of their statements. I cannot here give in detail everything that has been written on the subject, or even enumerate the various plans, and must therefore confine myself to a few selected from the best-known authors.

For a long series of years the staple remedies have been sedatives, bleeding, and applications to the part, which at any rate were called, and intended to be, soothing. How far they merited the title is a point I leave to be decided by those who made the *experimentum crucis* under the old *régime*, when it was not at all unusual for a patient to lose half a pint of blood at a time from bleeding after chordee. The treatment of the older surgeons had two features to recommend it, straightforwardness and energy; bleeding from the arm, lavements, and leeches to the urethra, two or three times repeated, recommended by Lagneau and others, were a style of treatment calculated to give the antiphlogistic doctrine a fair chance at any rate. I wonder how the patients liked such energy!

M. Lagneau¹ used to prescribe "for the inflamed chordee bleeding from the arm, hot bathing to the perinæum, lavements, eighteen or twenty leeches to the canal of the urethra, two or three times repeated, and when the pain was severe, gr. i. of the watery extract of opium, and gr. ii. of camphor," which he recommends giving in the evening. He winds up this energetic treatment by a solemn warning not to plunge the penis into cold water, as it may be, and has been, followed by a metastasis of the complaint of the bladder.

Richter² recommends that the patient sleep on a hair mattress, and very cool, or else on a canopy, and do not turn on his back. Eisenmann,³ that the parts should be exposed to the influence of

¹ Art. *Traitement de la Blennorrhagie chez l'Homme*, vol. i. p. 65.

² Richter's *Chirurgische Bibliothek*, b. 4, J. 491, &c.

³ *Der Tripper in allen seinen Formen*. Erlangen. 1839.

narcotic vapours ; or that infusion of camomile or cherry-laurel water be injected or dropped into the urethra. He found sedatives of no avail. He recommends the patient to make water more frequently than necessary, because a distended bladder irritates the vesiculæ seminales and the neighbouring parts. He objects, also, to dipping the penis in cold water, and then recommends soothing injections, or poultices ; opium being less useful. Peyrilhe recommended ammonia and injections of soap lye. Iodine, the empyreumatic oil of tartar, and blue ointment, have also been praised. Mr. Hunter says,¹ "he has known twenty drops of the tinctura thebaica take it [painful erection] away for a whole night, and that the cicuta has likewise some powers in this way." For the chordee he recommends opium joined with camphor, praises local bleeding with the free use of hot vapour to the parts ; poultices with camphor ; while the effused lymph which remains may be removed by mercurial ointment in friction. He has seen cicuta of service. Mr. Wallace recommends calomel and hippo, with opium and camphor. Modern treatment, as a rule, seems to be almost a continuance of that of Hunter and Wallace. M. Ricord² recommends gr. iiss. of camphor, and gr. ss. of opium, in a pill, of which two or three may be taken every night. He also suggests the employment of the extract of lettuce in doses of eight to twelve grains with an equal weight of camphor. But the bulk is objectionable ; these quantities make from four to six large pills, or else a bolus, and most persons object to such large doses of solids.

What views Mr. Acton and Mr. Langston Parker entertain, I have not been able to make out. Mr. Johnson says, "opium, in some form, can rarely be dispensed with ;" he thinks the "Dover's powder is as good a preparation as any," and "was never thoroughly convinced that the camphor had much to do with any benefits obtained. However, on such matters surgeons have their whims." Dr. Bumstead gives lupulin and camphor. Mr. Weeden Cooke thinks both opium and camphor disturb the stomach. Durkee strongly recommends lupulin ; he considers it far preferable to camphor, as it does not disagree with the stomach. Camphor, when prescribed, should, he thinks, be taken in sweetened milk.

Here, then, we find once more irreconcilable difference of views

¹ *On the Venereal.* 1810, p. 95.

² *Traité Pratique des Maladies Vénériennes.*

about the most simple facts, the same ever-recurring conflict of opinion. I suppose it is a natural and therefore inevitable result of the different constitution of the human brain, Nature having designed that men should no more exactly think alike than that they should exactly resemble each other in features. Hence, were a perfect system of medicine established to-morrow, it would at once be assailed more or less actively on all sides till it had been overthrown. Nor is this tendency in any way peculiar to any given state of medicine—to any particular era. Possibly it may become more developed with greater cultivation of medicine. Lord Bacon well observes, that “empirics and old women are more happy many times in their cures than learned physicians, because they are more religious in holding their medicines;” and I am inclined to think that multiplicity here proves something in favour of his assertion, or, at any rate, that if learned physicians can nowadays treat chordee better than empirics, the system is still subject to that fatal defect which in Bacon’s day often reduced their skill to the level of that of old women, and which is still such a source of weakness—a constant morbid desire to try new remedies and even different preparations of the same remedy without sufficient grounds.

Proposed Plan of Treatment.—Having now given the general outlines of treatment as we find it laid down in works devoted to the subject, I must call attention to the fact that the possibility of allaying it merely by the use of antispasmodics does not seem to have been entertained. It is, however, precisely this part of the subject which has most of all occupied my attention; and I trust I have substituted a simple, agreeable, and thoroughly reliable remedy for these various complicated methods. I will not stop to point out the inutility of antiphlogistic treatment, as any one versed in the disease must have noticed cases where chordee came on though the disease had been treated most heroically. Sedatives are objectionable unless there be pain in the testicle or perinæum, as they disorder the stomach, and produce headache and languor, with constipation of the bowels; a state of matters often followed by exacerbation of the disorder; while the chordee is not so speedily checked as by a remedy which acts on the spasm, and often returns as soon as sedatives are no longer given.

After having tried almost every antispasmodic, including ether, chloroform, and sumbul, I can safely say that I have found nothing equal to camphor in the fluid form. In the solid state it does not

act so rapidly ; and, in fact, a remedy in a liquid form—as it must from its extremely fine state of division act more rapidly—is more suited for spasm. The spirit of camphor offers all the advantages sought for, and given in drachm doses is equally energetic and rapid in its action. I have also tried the essence of camphor, a patent medicine : it is a little more agreeable, and a great deal more expensive.

Chordee cannot be cured too quickly, and Boerhaave showed what a sound physician he was when he said that he who was most successful in preventing priapism will be most successful in the cure of the disease. As in many other cases, the chain of morbid action should be broken or checked at once, and this is much more effectually done by giving two or three full doses, at short intervals without the least remission, than by small quantities, however long continued and regularly taken. The surgeon may therefore safely adopt the following plan :—

Half a teaspoonful is to be taken at night in water before going to bed, and every time the patient wakes with the chordee, let him at once rise and repeat the dose. In mild cases, one dose for a night or two is generally enough : and even in more severe cases the spasm is usually very much alleviated by the third or fourth night. So long as the gonorrhœa remains very bad, which will not often be more than five or six nights, if the patient be reasonably attentive, he may take a dose before going to bed. This remedy also answers extremely well in the bearing-down pains to which women are sometimes subject in gonorrhœa ; but as these pains are generally worst in the daytime, the medicine may be given then : and here it is really a matter of convenience to use the essence of camphor, as it mixes well with any medicine they may happen to be taking.

In both cases, however, it must be given in full doses. A smaller quantity than half a teaspoonful of either essence or spirit is of little service ; generally a teaspoonful is required, and as this quantity is perfectly safe, it is best to insure success at once. In one or two instances it has produced slight sickness, probably from something having been previously taken which had disordered the stomach. This, however, has not occurred more than twice or thrice, and the sickness was of very little moment, so that I only allude to the fact, lest any one might be discouraged by the appearance of this symptom from giving so valuable a remedy as the camphor really is.

The patient should be directed to keep the camphor in a tightly-

corked bottle, and to have it at night by his bedside ready to take. It is best taken in plenty of cold water.

I believe few who have given camphor in this form a fair trial have come to a different conclusion from myself. Irrespective of communications I have received on the subject, I know from the prescriptions I have seen that it is now constantly used by many surgeons. Dr. Freeman Bumstead, of the United States, speaking of the different methods of treatment, says, "Of the above means of relieving chordee, I regard Mr. Milton's method of giving camphor, if it do not disagree with the stomach, and the administration of lupulin, as the best."¹ As to Mr. Weeden Cooke's objection that both opium and camphor disturb the brain and stomach, it does not at all accord with my experience that camphor without opium disturbs either, and I have given it largely in more than a thousand cases of spermatorrhœa, in *many* of which both brain and stomach were in a most disordered state. In a few rare instances slight and very transient sickness occurred, and that was all.

Bromide of potassium seems to have been very serviceable in the hands of some observers, especially in obstinate priapism following gonorrhœa. Dr. Soresina gave it with great success in a case² which had resisted every remedy for eight months. I have not tried it in this form, but from what I observed of its action in chordee, I should not feel inclined to prefer it to camphor.

3. SYMPATHETIC BUBO.—It is not necessary to dwell on this symptom, which rarely attains such severity as to justify any interruption in the treatment. Hot bathing will generally relieve it so quickly, that the surgeon need scarcely trouble himself to prescribe any local remedies. I therefore leave it to pass to another more severe complication.

4. IRRITABLE BLADDER.—I am afraid of being charged with exaggeration for saying, that if the treatment recommended for gonorrhœa in the earlier part of this work be enforced, irritable bladder will rarely, if ever, occur to such an extent as to cause the patient any material inconvenience. Such, however, is the fact.

But it frequently happens that we do not see the patient till irritability of the bladder has set in, and then the surgeon will often

¹ *New York Journal of Medicine.*

² *Appendice sifilitica della Gazzett. Med. Lombard.* Ago. 1862.

exhaust all his resources in vain, while on the other hand he *may* relieve the patient with the first remedy he selects. I have tried every form of sedative and antispasmodic, including hydrocyanic acid, valerian, steel, bismuth, sumbul, and galbanum, without finding any remedy upon which I could rely, so that I have been compelled to return to the preparations of opium; not that they are certain remedies, but that, *cæteris paribus*, they are the best.

There are also sundry remedies which I have not tried, such as laudanum frictions, lavements containing Sydenham's laudanum, recommended by M. Ricord,¹ antiphlogistic treatment and the free use of leeches, advised by Mr. Skey and other writers, suppositories of opium, &c. Indeed, it is very difficult to procure a fair trial of these means, for the simple reason that the greater part of patients in private life will not submit to such treatment for a slight and passing annoyance.²

In the irritable bladder which results from extension of the inflammation of gonorrhœa Sir Henry Thompson advises³ the use of the triticum repens or couch grass, as superior in certain cases even to the buchu. It is given in the form of infusion, an ounce of the underground stem to a pint of boiling water: he advises that the stem should be gathered in spring before the leaves appear, and dried slowly without heat. Though by no means certain in its action, it is yet clearly very efficacious in severe cases of inflammation. It is also mild, and by no means unpleasant, so that a pint of the infusion may be given in the course of the day. I am not aware what success it has had, as I believe there has been no further mention of the subject.

5. ORCHITIS.—*Results*.—Amongst the results of orchitis are enumerated death, neuralgia, tuberculous deposit, carcinoma, abscess, suppuration in the sac of the vaginal tunic,⁴ wasting of the testis, and impotence. Mr. Syme is, I think, the only author who mentions death as a consequence of this affection, so that it must be very rare. I quite concur in what Rokitansky says as to neuralgia being a rare result. I have often seen a good deal of weary

¹ *Traité Pratique*, p. 724.

² See also Simon, *Clinical Lectures*, *Lancet*, 1850, p. 289; Curling *On the Testis*; Brodie's *Lectures on Diseases of the Urinary Organs*; Syme's *Contributions to the Pathology and Practice of Surgery*; Henry Thompson, *Lancet*, 1854, vol. i. p. 356; &c.

³ *Lancet*, 1861, vol. ii. p. 345.

⁴ Johnson, *Op. cit.*, p. 193.

aching and pain in the testicles follow gonorrhœa, and still more frequently spermatorrhœa, but I never saw orchitis end in what I should call genuine neuralgia of the testis. The connection of the two is, indeed, in no way established: and as to carcinoma, though the doctrine is not rejected by M. Ricord, we may safely class it with the prejudices of a bygone age. If such an occurrence had been at all common, we ought to have had some proofs of it before now. The absorbent vessels of the penis and scrotum, we are told, may become inflamed on such occasions. I have not seen this result, and should not anticipate any difficulty from it if it did occur.

The real results to dread are obliteration of larger or smaller portions of the seminal tubes, owing to deposit of fibrine; effusion of serum; hardening of the epididymis; wasting of the testicle, and suppuration in it or the scrotum.

That hardening of the epididymis, especially if it affect both testicles, may lead to impotence, is a general and apparently well-founded opinion; while Curling, Civiale, and others think that suppuration of the testicle and deposit of fibrine among the convolutions of the epididymis go on to a considerable extent without interfering with the functions of the gland.

There can be little doubt that they are right in assuming that impotence does not follow so long as the disease is only confined to one gland, or limited to mere hardening. But this hardening is also apt to be accompanied or followed by contraction of the sole channel for the expulsion of the semen. Mr. Holmes Coote told me that he had often found induration accompanied by obstruction of the epididymis. M. Gosselin's observations, and those of M. Marcé and M. Charles Robin, confirm this view, and my own are quite in accordance with it. Indeed, when a delicate mucous membrane is converted into a rigid contracted tube, we can hardly expect that it will execute its normal functions.

Pathology.—This affection has been supposed to arise from metastasis, erratic disposition of the gonorrhœal inflammation, sympathy, and continuous spreading of the disease along the urethra. Nearly all modern authors admit the two last varieties. But the doctrine of sympathy rests on mere conviction; it is unsupported by either analogy or proof. After a careful search, I have only been able to dig out one little morsel of evidence in its favour,—and that is an isolated case of the same form of action in

the ear¹—even it is imperfect. Moreover, we do not see anything of the kind in other affections of the mucous membranes, and it is not in accordance with any of the three forms of sympathy described by Hunter, unless we strain the point so far as to include it in the class which this great surgeon called the “remote.” Even those who admit this view are obliged to confess that *sometimes* the inflammation spreads along the urethra; a surmise proved by the cases which Cooper, Ricord, Gay, and others have placed upon record. And is not this extension of the inflammation always the case? Pain in the perinæum and tenderness in the vas deferens very frequently, spasmodic stricture and great irritability of the bladder not unfrequently, precede swelling of the testicle, and orchitis often follows from irritation of these parts, as when it occurs from stricture or stone.

It is not at all uncommon for gonorrhœa, even in cases unaccompanied by orchitis, to extend at least five or six inches down the urethra and even quite to the bladder. It is true that the history of the case may reveal nothing which points to this conclusion; sensation is often so dull in the posterior portion of the spongy part that in many persons, after a bougie has passed the first two inches or so they cannot tell within an inch where the point is; but a very simple experiment will often show, that though the sensation may reveal nothing, the inflammation has reached as far as I have said. The surgeon has only, in a few bad cases of obstinate gonorrhœa or gleet, to syringe out the urethra with cold water up to the posterior end of the so-called specific seat of the disease, and then direct the patient to make water; in a certain proportion of these cases long shreds of muco-pus will be expelled with the urine. Again, if a bougie be passed down the urethra for two or three inches, withdrawn, wiped clean, and passed down to the membranous or prostatic portion of the urethra, a shred or two of the kind spoken of will often be found adhering to it when withdrawn the second time. In obstinate gleet the bougie, when passing over the posterior portion of the urethra, often encounters tender spots; with the removal of this tenderness the gleet ceases. Injecting over the posterior part of the urethra will often cure gleets which injections of every kind, applied only to the anterior part of the same canal, have totally failed to touch. Lastly, Dr.

¹ Toynbee, *Medical Times and Gazette*, May 14, 1853.

Bumstead tells us¹ that "after the disease has lasted several weeks we may evacuate the whole of the spongy portion by pressure from behind forwards in front of the scrotum, and then when no further discharge can be made to appear, we can still produce it by the exercise of similar pressure on the perinæum." In short, we may see in all the phenomena of orchitis only a difference of situation, always unity of disease. We see the disease passing along continuous and through contiguous structures, just as in other parts; we see phenomena explicable by Hunter's beautiful law, but nothing which tells us that the two extreme points of the membrane are inflamed, and the tract between them sound. The probability is that the sympathetic form described by Ricord, Curling, Egan, and others, is simply a mild form of extension of the inflammation; those parts which intervene being, from their low organization, incapable of active disease of this kind; it being well known to surgeons that the portion of the urethra between the specific seat of gonorrhœa and the membranous tract is much less sensitive than these regions.

The older surgeons knew this as well as modern writers. Sir Astley Cooper examined the body of a man executed at the Old Bailey while suffering under gonorrhœa, and found that the inflammation was greatest in the first three inches of the urethra, but that the lining membrane was inflamed up to the membranous portion.² Indeed, this great surgeon described orchitis as beginning with irritation of the membranous or prostatic portion of the canal, and tenderness of the spermatic cord.³ Mr. Hunter alludes to similar facts. Bell and Civiale point out the affection of the cord. Johnson gives an analysis of fifty-nine cases, in twelve of which the symptoms of urethritis were entirely gone before the orchitis came on; so that in one-fifth of the entire number there was no sympathy.

An opinion has long, if not extensively, prevailed that Mr. Hunter considered that gonorrhœa was limited to the first inch and a half or two inches of the urethra: it is, however, erroneous. He cer-

¹ *Op. cit.*, p. 63.

² I have only twice examined a gonorrhœal urethra after sudden death. Both patients committed suicide. It was difficult to say exactly where the inflammation, which was principally shown by a punctiform reddened state of the membrane, really stopped; but it could not be said to extend beyond three and a half inches in one case and three in the other.

³ *On the Structure and Diseases of the Testis*, p. 8.

tainly looked upon this part as its specific seat,—a doctrine taught long before the appearance of his great work;¹ but he never expressed the view that the inflammation was confined to this narrow sphere. On the contrary, he distinctly speaks² of the inflammation spreading beyond the specific seat and says that it “does sometimes run all along the urethra to the bladder.”

Most authors seem to have overlooked the bearing on this point of the fact that inflammation of the testicle rarely occurs in the first week or two of gonorrhœa, when these symptoms are most severe, and most likely to occasion sympathy, while it never ensues till a sufficient interval has elapsed to allow of such an active disorder spreading backwards over so short a space.

Dr. Bumstead says most authorities admit that swelled testicle may be excited through sympathy alone, and that the subsidence of the swelling in one testicle and its subsequent appearance in the other, as occasionally happens, render this view probable. It is not often that I find myself in direct opposition to this careful observer, but I do here. My reply is, firstly, that authorities are very often wrong, and secondly, that inflammation may clearly reach both testicles by the same road as it reaches one.

Balanitis is said by Ricord never to give rise to orchitis. I have seen one instance of it from this source; the patient, however, admitted that he had practised masturbation. The case was a very bad one; the prepuce was of a violet colour, and so swollen that an accurate examination could not be made. The patient wore a most unhealthy appearance. In forty-eight hours after commencing attendance for balanitis, swelled testicle came on; no trace of gonorrhœa was detected during the time I saw him.

While in this affection we have every sign of active inflammation, pain, heat, redness, &c., it has actually been doubted by some authors whether the testicle is really inflamed. The epididymis is to be considered the head-quarters of the disease, which is to be named accordingly; and we are to look upon the affection of the testicle as a mere subordinate affair, for no other reason, that I can learn, than because the pain and swelling begin at the epididymis.

¹ Neville: *A Description of the Virulent Gonorrhœa*. 1754.

² *A Treatise on the Venereal Disease*. 1786, p. 85. Cockburn, too, in the fourth edition of his work on gonorrhœa, published in 1728, if not in his earlier productions, expresses (p. 271) his conviction that the inflammation extends to the neck of the bladder.

But this seems simply due to the inflammation having in its progress again reached a susceptible point. From the tone in which this doctrine is urged by some writers, it might be looked upon as a modern discovery. Howard, however, disputed it,¹ and Hunter refuted it² long ago.

It is certainly quite probable that the epididymis is the part most severely affected and that the body of the testicle is not often highly inflamed, but the extreme tenderness of the gland, the great prostration, and other symptoms, render it, I think, almost certain that, in a very severe case, the whole organ is invaded.

A good deal has been said as to the part which irritation and inflammation of the ejaculatory ducts and the epididymis play in the pathology of this affection, but I see nothing that warrants any positive conclusion. Their mere occlusion to such an extent would not suffice to produce any of the phenomena of inflammation, as we may see by examining those cases in which the constriction comes on gradually. Some surgeons have doubted altogether if there was any spasmodic closure of the duct; and Sir Astley Cooper, whose views are entitled to the greatest respect, seems decidedly opposed to the opinion.

Causes.—With respect to the action of injections in producing orchitis, I must refer the reader to the section on injections. As to the influence of specifics, I can scarcely be expected to give an unprejudiced opinion, as I use these medicines so little. I must leave the task to others, and the sooner some one undertakes it the better. Mr. Johnson blames cubebs, copaiba, and injections indiscriminately. Mr. Curling defends the two former and grants the demerits of injections used improperly. Broughton defends cubebs; Sir B. Brodie, cubebs and injections. Swediaur admits irritating and astringent injections as causes; Acton defends injections; Wallace and Robert take up the cudgels in favour of all the three; Hunter and Sir Astley Cooper thought irritating injections might induce swelled testicle; Egan admits the injudicious, but not the judicious, use of injections as the *origo mali*. Dr. Frazer, a most careful observer, says he has never seen any reason to connect the occurrence of orchitis with injections; Dr. Durkee thinks³ strong injections frequently produce orchitis, but that those of moderate

¹ *Op. cit.*, vol. i. p. 215.

² *Works of John Hunter*. 1835, vol. ii. p. 180.

³ *Op. cit.*, p. 83.

strength do not. Ricord, taking his stand on statistics, declares that he found only one orchitic patient in twenty had been taking gonorrhœal remedies; Chelius gives cubebs when orchitis is present; and Mr. Skey, who gives two or three of these specifics together, has evidently little fear of them. Now if any person can draw a conclusion from these rather opposite views, I should be glad to know what solution of the difficulty he has to offer.

The influence of cold, wet weather has also been advanced as a cause of orchitis.¹ Being anxious to investigate this point, and considering that the experience of one person could not suffice to determine it, I examined the entries in the casualty and out-patients' books in three hospitals, two of which are amongst the largest in London.² The years 1852 and 1853 were selected, simply because they coincided with the period at which some other observations were made. The number of cases obtained will, it is hoped, be large enough to prevent the deductions being vitiated by accidental causes. Some of them are necessarily imperfect, and occasionally entries were met with which rendered it doubtful if they referred to cases of genuine orchitis, but in our present state of knowledge the same objections might be raised against all statistics of this kind.

In making these researches I was most kindly and courteously assisted by the authorities, to whom I applied for leave to search the case books, &c., as well as by the assistant surgeons and house surgeons; indeed without their aid I could not possibly have drawn up these tables. Dr. Farr, too, very courteously gave me every facility for searching the returns of the Registrar-General preserved at Somerset House.

The returns in the third, fourth, and fifth columns, it will be observed, contain the numbers of cases of orchitis occurring at each hospital; that in the sixth column, the total in all the hospitals for the week. The reason for arranging the number of cases according to the weeks, and for beginning with the 4th of January instead of the 1st, is, that the hospital returns might tally with those of the Registrar-General.

¹ Acton, *Op. cit.*, p. 198.

² St. Bartholomew's, St. Thomas's, and the Metropolitan Free.

TABLE IX.

Statistics of Orchitis.

1852. Week ending	Date.	St. Bartholomew's Hospital.	St. Thomas's Hos- pital.	Metropolitan Free Hospital.	Total Number.	Mean highest Temperature in the Week.	Mean lowest Temperature in the Week.	General Direction of Wind.	Sum of Rainfall in inches.
Jan. 10 ...	4	2	...	...	8	46°0	34°7	S.W.	0'12
	5	...	1	...					
	8	...	1	...					
	9	2	...	...					
Jan. 17 ...	10	...	...	2	9	51°8	41°5	S.W.	1'76
	12	2	1	...					
	13	1	...	...					
	14	...	2	1					
Jan. 24 ...	15	1	...	...	1	45°2	35°9	S.W.	0'44
	21	1	...	...					
Jan. 31 ...	26	...	1	...	5	49°0	36°1	S.W.	0'54
	27	1	1	...					
	28	1	...	...					
	31	1	...	...					
Feb. 7 ...	2	2	...	...	5	53°2	41°9	W.S.W.	0'32
	3	1	...	...					
	5	...	...	1					
	7	...	1	...					
Feb. 14 ...	9	3	...	1	10	46°4	33°3	N. and S., S.E.	0'22
	10	2	1	...					
	12	2	...	...					
	13	...	1	...					
Feb. 21 ...	16	1	1	...	4	46°1	33°8	W. and N.	0'03
	19	...	2	...					
Feb. 28 ...	23	2	...	...	5	45°1	32°7	N.E.	0'16
	26	2	1	...					
March 6...	1	1	...	...	3	45°6	28°3	N. and E.	0'02
	3	...	1	...					
	6	1	...	...					
March 13	8	...	1	...	9	49°9	32°3	N.E.	0'00
	10	2	1	...					
	12	1	...	1					
	13	1	1	1					
March 20	16	1	...	...	4	48°7	33°2	N.E.	0'00
	17	3	...	...					
	18	...	...	...					
	20	...	...	...					
March 27	22	1	...	...	6	56°4	32°4	S.E. and N.E.	0'00
	23	...	1	...					
	24	1	1	...					
	25	1	...	...					
	26	1	...	...					

1852. Week ending	Date.	St. Bartholomew's Hospital.	St. Thomas's Hos- pital.	Metropolitan Free Hospital.	Total Number.	Mean highest Temperature in the Week.	Mean lowest Temperature in the Week.	General Direction of Wind.	Sum of Rainfall in inches.
April 3 ...	1	...	3	...	4	52.7	34.5	E., N., E.	0.12
	2	...	1	...					
April 10...	8	2	...	...	2	56.3	33.3	E. and N.E.	0.00
April 17...	12	3	...	1	5	60.0	33.4	E. and N.E.	0.00
	14	...	...	1					
April 24...	19	3	...	...	5	57.9	34.9	N.E. and E.	0.00
	21	...	1	...					
	23	1	...	...					
May 1 ...	26	2	...	...	3	60.8	38.0	(1)	0.52
	29	...	1	...					
May 8 ...	4	2	...	...	4	60.1	35.0	N.E. and S.W.	0.00
	6	...	1	...					
	8	1	...	...					
May 15 ...	11	...	1	...	2	63.6	45.7	S.W.	0.30
	13	...	1	...					
May 22 ...	16	...	1	...	7	66.3	47.3	(2)	0.84
	17	1	1	1					
	19	1	...	...					
	21	...	...	2					
May 29 ...	24	...	1	1	8	58.7	46.3	N.	0.87
	25	...	1	1					
	28	2	...	...					
	29	2	...	...					
June 5 ...	31	1	...	...	5	63.7	43.4	S.W. and S.	0.20
	1	2	...	...					
June 12 ...	5	1	...	1	1	62.8	49.6	S.E. and S.W.	2.63
	7	1	...	...					
June 19 ...	14	1	...	...	4	66.4	49.0	S.W. and S.S.E.	1.09
	15	...	1	...					
	17	...	...	1					
	19	1	...	...					
June 26 ...	21	1	1	...	4	69.5	50.4	S. and S.W.	0.54
	22	1	...	...					
	24	1	...	...					
July 3 ...	28	...	1	...	2	10.7	52.0	S.W.	0.09
	30	...	1	...					
July 10 ...	5	1	...	...	1	86.2	57.3	S.E.	0.00
July 19 ...	12	4	...	...	6	81.9	57.3	N.E.	0.27
	13	1	...	...					
	15	1	...	...					
July 24 ...	19	...	1	...	2	79.3	54.7	(4)	0.01
	22	...	1	...					

(1) Generally calm; most prevalent direction E. and N.

(2) E. and N. prevailing.

(3) The correctness of these entries is doubtful.

(4) Variable; S. and W. prevailing.

1852. Week ending	Date.	St. Bartholomew's Hospital.	St. Thomas's Hos- pital.	Metropolitan Free Hospital.	Total Number.	Mean highest Temperature in the Week.	Mean lowest Temperature in the Week.	General Direction of Wind.	Sum of Rainfall in inches.
July 31 ...	26	..	...	I	7	78.5	55.6	N.E. and N.	2.04
	27	3	...	...					
	29	2	...	...					
	31	I	...	...					
August 7	3	5	...	...	8	74.4	53.4	S.	1.01
	4	I	I	...					
	5	I	...	...					
August 14	9	I	...	...	4	70.2	52.7	S.W.	4.48
	10	I	...	...					
	11	I	...	I					
August 21	16	2	...	...	5	70.9	56.6	(I)	1.91
	18	I	...	...					
	19	I	I	...					
August 28	27	...	I	...	2	75.3	57.1	N., N.E., and S.W.	0.10
	28	I	...	...					
	30	...	...	I					
Sept. 4 ...	31	I	...	...	6	73.9	51.9	S.W. and S.E.	0.00
	2	I	...	...					
	3	2	I	...					
Sept. 11...	6	...	...	I	9	69.2	55.9	N.	1.40
	8	2	I	...					
	9	I	...	...					
	10	2	...	...					
Sept. 18...	11	2	...	...	3	64.5	45.8	(2)	0.85
	14	I	...	...					
	15	I	...	...					
Sept. 25...	16	...	I	...	4	64.0	46.5	S.W.	0.00
	20	...	I	...					
	23	I	I	...					
	24	I	...	...					
Oct. 2 ...	27	2	...	I	14	61.8	43.4	N.E. and S.W.	1.31
	29	I	...	...					
	30	3	...	(3)					
	1	I	...	...					
Oct. 9 ...	2	4	I	...	8	53.4	41.3	S.W. and N.W.	1.09
	4	3	I	...					
	5	2	...	...					
	6	2	...	...					
Oct. 16 ...	11	I	...	...	4	55.7	41.2	N.E.	0.03
	12	I	...	...					
	15	...	I	...					
	16	I	...	...					
Oct. 23 ...	18	2	...	...					
	19	I	...	...					

(1) Variable ; much calm ; N. and W. prevailing.

(2) Calm ; W. prevailing.

(3) One of these is said to have occurred from stricture.

1852. Week ending	Date.	St. Bartholomew's Hospital.	St. Thomas's Hos- pital.	Metropolitan Free Hospital.	Total Number.	Mean highest Temperature in the Week.	Mean lowest Temperature in the Week.	General Direction of Wind.	Sum of Rainfall in inches.
Oct. 23 ...	20	1	...	...	12	59·6	39·9	N.E. and S.W.	0·42
	21	4	...	...					
	22	2	...	1					
	23	1	...	...					
	25	3	...	...					
Oct. 30 ...	26	2	...	1	13	52·0	40·5	S.W. and N.W.	2·01
	28	3	...	...					
	29	2	1	...					
	30	...	1	...					
	1	2	...	...					
Nov. 6 ...	2	2	...	2	10?	60·7	48·0	S.W.	0·84
	3	...	1	...					
	4	1	(1)	...					
	5	1		...					
	6	1		...					
Nov. 13 ...	8	1	1	...	9	49·2	43·0	S.W. and N.E.	1·30
	10	2	...	...					
	11	3	...	...					
	12	1	...	...					
	13	1	...	...					
Nov. 20 ...	15	2	...	...	9	55·0	45·1	S.W.	1·77
	16	2	...	...					
	17	3	1	...					
	19	...	1	...					
	21	2	...	...					
Nov. 27 ...	22	1	...	1	8	51·0	40·6	N. and S.W.	1·46
	24	2	...	...					
	25	1	...	...					
	27	1	...	...					
	29	1	...	1					
Dec. 4 ...	30	...	1	...	14	47·0	37·5	S.W.	0·33
	1	1	2	...					
	3	2	1	1					
	4	3	2	...					
	5	6	...	...					
Dec. 11 ...	6	...	1	...	17	53·1	46·3	S.W.	0·61
	7	2	...	1					
	8	3	...	...					
	11	3	1	...					
	14	3	1	...					
Dec. 18 ...	15	1	...	...	8	53·1	43·8	S. and S.W.	0·59
	16	...	1	...					
	17	...	...	1					

(1) These entries are uncertain; the MS. by my amanuensis not being very reliable in this part.

1852. Week ending	Date.	St. Bartholomew's Hospital.	St. Thomas's Hos- pital.	Metropolitan Free Hospital.	Total Number.	Mean highest Temperature in the Week.	Mean lowest Temperature in the Week.	General Direction of Wind.	Sum of Rainfall in inches.
Dec. 18 ...	18	1	...	...	2	(1)	40'5	(2)	0'05
Dec. 25 ...	20	1	...	...		51'9			
	21	...	1	...					
1853.	27	1	...	...	8	51'7	41'8	S.W.	0'43
	28	2	...	...					
Jan. 1 ...	29	2	...	...					
	30	1	...	...					
	31	1	...	...					
	1	1	...	...	14	51'2	39'1	S.W.	0'71
	2	1	...	...					
	3	3	...	...					
Jan. 8 ...	4	3	1	1					
	5	3	...	...					
	6	...	1	...	13	50'5	39'8	S.W.	0'45
	7	1	...	...					
	10	1	...	...					
Jan. 15 ...	12	1	...	1					
	13	1	2	...					
	14	...	1	...	8	47'2	36'1	N.W. and S.W.	0'59
	15	2	4	...					
	17	2	...	...					
Jan. 22 ...	18	1	1	...					
	19	2	...	...					
	20	1	...	...	8	41'7	34'6	N.E.	0'007
	22	1	...	...					
	24	2	...	...					
	25	...	1	...					
Jan. 29 ...	26	...	1	...					
	27	2	...	...	7	42'3	32'0	(3)	0'20
	28	1	...	...					
	29	...	1	...					
	31	2	...	...					
Feb. 5 ...	2	1	...	...					
	4	1	1	...	9	39'5	31'5	S.E. and N.N.E.	0'06
	5	1	...	1					
	7	1	...	...					
	8	2	...	...					
Feb. 12 ...	9	3	...	...					
	11	1	...	1					
	12	1	...	...					

(1) For these last five weeks, no electricity shown by any instruments. For the next three weeks no record given, the electrical apparatus having been injured by a gale, which I regret, as the sudden rise might have been compared with the results.

(2) Much calm ; S. and W. prevailing.

(3) Much calm ; N. and E. prevailing.

1853. Week ending	Date.	St. Bartholomew's Hospital.	St. Thomas's Hos- pital.	Metropolitan Free Hospital.	Total Number.	Mean highest Temperature in the Week.	Mean lowest Temperature in the Week.	General Direction of Wind.	Sum of Rainfall in inches.
Feb. 19 ...	14	2	1	...	13	35.5	26.1	N.	0.33
	15	2	1	1					
	16	2	...	...					
	18	1	2	...					
	19	1	...	...					
Feb. 26 ...	21	1	1	2	17	39.8	28.0	N.	0.39
	22	2	...	...					
	23	...	1	1					
	24	1	...	...					
	25	3	4	...					
March 5...	26	...	1	...	11	42.8 (2)	29.7	(1)	0.68
	28	2	...	...					
	1	1	1	...					
	2	1	...	2					
	3	1	1	...					
March 12	4	1	...	...	4	53.8	37.1	(3)	0.17
	5	1	...	...					
	8	2	...	...					
	9	...	...	1					
	10	...	1	...					
March 19	13	2	...	...	9	44.7	31.0	N.E.	0.51
	14	...	1	...					
	15	...	1	...					
	17	3	...	...					
	18	...	1	...					
March 26	19	1	...	...	5	41.7	26.0	N.E.	0.10
	21	...	1	...					
	22	1	1	1					
	26	...	2	...					
	28	...	3	...					
April 2 ...	29	1	2	...	13	53.5	34.3	Variable	0.44
	30	1	...	...					
	31	...	1	1					
	1	...	1	...					
	2	2	1	...					
April 9 ...	4	1	2	...	9	55.9	43.3	W.	0.44
	5	...	1	...					
	6	...	1	...					
	7	2	1	...					
	9	...	1	...					
April 16...	11	3	3	...	11	52.9	38.0	N.E. and N.W.	0.02
	12	...	1	...					
	13	...	...	...					
	14	1	2	...					
	16	...	1	...					

(1) Variable ; from all points of the compass.

(2) Electricity was only shown once this week and once the week before. The week before that there was none.

(3) Almost always calm.

1853. Week ending	Date.	St. Bartholomew's Hospital.	St. Thomas's Hos- pital.	Metropolitan Free Hospital.	Total Number.	Mean highest Temperature in the Week.	Mean lowest Temperature in the Week.	General Direction of Wind.	Sum of Rainfall in inches.
April 23...	18	4	1	...	(1)	54.5	41.3	Variable	0.90
	19	...	1	...					
	20	1	...	...					
	21	2	...	...					
April 30...	23	2	...	...	(2)	51.7	36.0	Variable	1.32
	25	1	...	...					
	27	...	...	1					
	28	1	...	...					
May 7 ...	29	1	...	...	9	57.2	41.4	E., S.E., and N.E.	0.84
	2	1	...	1					
	4	...	1	1					
	5	4	...	...					
May 14 ...	6	...	...	1	8	56.0	37.1	Variable	0.37
	9	2	...	...					
	11	...	1	1					
	12	1	1	...					
May 21 ...	13	...	1	...	8	67.1	43.8	N.E.	0.00
	14	...	1	...					
	16	3	...	...					
	19	1	2	...					
May 28 ...	20	2	...	...	9	72.6	46.4	N.E.	0.13
	23	1	1	...					
	24	1	1	...					
	25	...	...	2					
June 4 ...	26	1	1	...	8	62.1	46.1	N.	0.42
	28	...	1	...					
	31	1	...	1					
	2	...	2	...					
June 11 ...	3	...	2	...	12	73.3	49.2	S.W. and S.E.	0.24
	4	1	...	1					
	6	2	1	...					
	7	1	...	1					
June 18 ...	8	1	1	...	7	69.3	51.2	N. and S.W.	1.30
	9	1	...	...					
	10	1	3	...					
	14	2	1	...					
June 25 ...	16	2	...	...	11	67.7	48.9	Variable	0.55
	18	2	...	...					
	20	...	...	2					
	23	3	1	...					
July 2 ...	24	1	2	...	11	67.7	48.9	Variable	0.55
	25	1	1	...					
	27	...	2	...					

(1) Up to this time, ever since the last note, the electrical apparatus was under-going repair.

(2) Electricity strong, negative and positive, during four days.

1853. Week ending	Date.	St. Bartholomew's Hospital.	St. Thomas's Hos- pital.	Metropolitan Free Hospital.	Total Number.	Mean highest Temperature in the Week.	Mean lowest Temperature in the Week.	General Direction of Wind.	Sum of Rainfall in inches.
July 2 ...	28	3 (1)	...	...	16 (2)	68·3	53·2	S. W.	0·89
	29	2	...	...					
	30	2	1	...					
	1	3	...	2					
	2	...	1	...					
July 9 ...	4	4	2	1	22	75·2	55·6	S. W. and S.	0·88
	5	...	1	1					
	6	1	2	1					
	7	...	3	...					
	8	...	2	...					
July 16 ...	9	2	1	1	9	68·3	52·2	S. W.	3·14
	11	1	1	...					
	12	...	1	...					
	15	...	2	...					
	16	4	...	...					
July 23 ...	18	1	3	1	14	69·6 (3)	53·2	S. W.	0·29
	19	1	2	1					
	20	1	...	...					
	21	1	...	1					
	22	...	...	1					
July 30 ...	23	1	...	...	9	70·2	54·8	S. W.	1·39
	25	1	1	...					
	27	2	...	1					
	29	2	1	...					
	30	...	1	...					
August 6	1	1	2	...	11 (4)	73·3	52·3	S. W. and calm	0·01
	2	2	2	...					
	4	1	...	...					
	5	...	1	...					
	6	...	2	...					
August 13	8	2	1	...	8	73·5	51·4	(5)	0·00
	9	1	...	...					
	10	1	...	...					
	11	...	1	...					
	12	...	1	...					
	13	1	...	...					

(1) One of these from stricture.

(2) Positive and negative electricity, with strong tension, has been shown during the week, at times when rain fell. The next week the electrometer, as was commonly the case of late, was out of repair till the last day (9th), when it showed negative and very active.

(3) No electricity for three days; three days positive and weak; one day negative and active.

(4) Electricity mostly positive, and tension weak or moderate.

(5) Principally E.

1853. Week ending	Date.	St. Bartholomew's Hospital.	St. Thomas's Hos- pital.	Metropolitan Free Hospital.	Total Number.	Mean highest Temperature in the Week.	Mean lowest Temperature in the Week.	General Direction of Wind.	Sum of Rainfall in inches.
August 20	15	1	...	...	6	70.4	53.8	N. and S.W.	0.59
	16	1	1	...					
	17	2	...	...					
	20	1	...	...					
August 27	21	1	...	...	6	67.8	51.3	S.W. and N.	1.50
	22	...	1	...					
	23	...	...	3					
	27	...	...	1					
Sept. 3 ...	29	2	...	...	4	(1) 65.6	48.4	S.W.	1.03
	30	2	(2)	...					
	5	...	2	...					
Sept. 10...	6	1	...	1	15	65.9	49.6	N.	0.22
	7	1	1	...					
	9	4	1	1					
	10	3	...	...					
Sept. 17...	12	2	...	...	9	67.7	48.7	(4)	0.57
	13	...	1	...					
	14	1	1	...					
	15	1	...	...					
	16	...	1	1					
	17	...	1	...					
Sept. 24...	19	1	1	...	8	65.9	44.9	W.	0.19
	20	1	...	...					
	21	...	1	...					
	22	...	1	...					
	23	...	...	1					
	24	1	...	1					
Oct. 1 ...	26	3	1	...	11	62.1	44.1	S.W.	0.69
	27	2	...	...					
	28	...	1	1					
	29	...	1	...					
Oct. 8 ...	1	2	...	...	10	56.3	41.3	Calm	1.03
	3	2	2	...					
	4	1	...	1					
	5	1	...	...					
	7	1	...	...					
Oct. 15 ...	8	1	1	...	(6)				
	10	1	3	...					

(1) Both this week and last the electricity was much more active, both positive and negative. Tension strong or moderate.

(2) These are called "swelled testicle" in the book.

(3) Electricity always positive; tension mostly moderate, sometimes very strong.

(4) Much calm; E. rather prevailing.

(5) With the exception of a small amount of positive electricity at 3 a.m. on Saturday, none was shown throughout the week.

(6) No electricity was shown during the preceding week, or during the first days of this week, after which the apparatus is again reported "under repair."

1853. Week ending	Date.	St. Bartholomew's Hospital.	St. Thomas's Hos- pital.	Metropolitan Free Hospital.	Total Number.	Mean highest Temperature in the Week.	Mean lowest Temperature in the Week.	General Direction of Wind.	Sum of Rainfall in inches.
Oct. 15 ...	11	1	...	2	13	60.9	45.2	Calm and N.E.	0.94
	13	1	...	...					
	14	2	1	1					
	15	1	...	...					
Oct. 22 ...	17	1	...	1	8	57.3	41.7	S.W.	1.10
	18	...	2	...					
	19	1	...	...					
	20	1	...	...					
Oct. 29 ...	22	1	1	...	10	62.9	49.4		1.46
	24	3	...	...					
	25	1	...	...					
	27	1	1	...					
Nov. 5 ...	28	...	...	1	17	56.1	42.8	S.E.	0.03
	29	2	1	...					
	31	1	...	...					
	1	2	2	...					
Nov. 12 ...	2	2	...	...	15	52.7	39.2	Calm	0.06
	3	4	1	...					
	4	2	...	...					
	5	1	2	...					
Nov. 19 ...	7	...	2	1	10	48.8	31.8	Calm and variable	0.00
	10	3	2	...					
	11	3	1	...					
	12	1	2	...					
Nov. 26 ...	13	1	...	...	7	43.9	30.8	Calm	1.25
	14	2	...	...					
	15	...	1	1					
	16	1	...	1					
Dec. 3 ...	17	1	1	...	10	45.7	34.7	(2)	1.05
	18	1	...	...					
	22	2	...	...					
	23	1	1	...					
	24	...	1	...					
	25	...	1	...					
	26	...	1	...					
	28	...	2	...					
	29	...	1	...	10	45.7	34.7	(2)	1.05
	30	...	1	...					
	1	1	1	1					
	2	1	...	...					
	3	1	1	...					

(1) During four days of this week, and three days of the week preceding, the electrical apparatus was out of repair. On every other day, and during the whole of the week ending November 12, it showed positive electricity, the tension being strong towards the close of this time.

(2) Much calm ; E. prevailing.

1853. Week ending	Date.	St. Bartholomew's Hospital.	St. Thomas's Hos- pital.	Metropolitan Free Hospital.	Total Number.	Mean highest Temperature in the Week.	Mean lowest Temperature in the Week.	General Direction of Wind.	Sum of Rainfall in inches.
Dec. 10 ...	5	1	1	...	12	(1) 43·6	35·9		0·13
	6	1	1	...					
	7	3	2	1					
	9	1	...	1					
Dec. 17 ...	11	1	...	...	8	(2) 37·8	27·6	N.E.	0·12
	12	2	1	1					
	13	...	1	...					
	14	1	...	...					
Dec. 24 ...	16	...	1	...	10	35·9	29·8	N.E.	0·10
	18	1	...	...					
	19	1	1	...					
	20	...	2	...					
Dec. 31 ...	21	...	1	1	10	35·1	23·6		0·16
	22	...	1	...					
	24	...	2	...					
	26	1	...	...					
	27	...	2	1					
	28	...	1	...					
	29	1	...	...					
	30	1	2	...					
	31	...	1	...					

The entire number of cases then, obtained in 1852 was 300 ; and for 1853, 509. On consulting the table for 1852, it will be found that there was a slight but steady rise up to the end of the third quarter of the year, when the proportion increased so rapidly that in October there were nearly twice as many cases as in the highest of the preceding months. The greatest number in any one week occurred in the first week of November, and the next greatest number in December. From October, the number again declined till the end of the year. The minimum of cases ensued in June, July, April, and January.

In 1853 the maximum was attained in July,—which, it will be seen, yields 60 cases ; next to this stand December and October, which give 51. The lowest number is met with in March, May, June, and August, which possess an average of less than 32 ; while January, April, and November show about half as much again. Along with this table the reader will find one of the weather for those two years,

(1) Positive and tension very strong during last three weeks ; declines this week.

(2) Electricity positive and strong.

and will thus have an opportunity of forming his opinion *from facts*.

Whether changes in the electric state of the air have anything to do with the prevalence of orchitis, is more than I know. I certainly suspect they have, far more so at any rate than heat or cold, the influence of which in producing disorders is, to my thinking, quite over-rated. In the present instance it will be seen that, during the greater part of the first eight months of 1852, the number of cases is exceedingly small. Now during far the greater part of this time, week after week, the electricity is reported as *positive* with *moderate tension*, the number of days on which *negative electricity* was shown *being very few indeed*. In the second week of September, the number of cases is greater than had been noted for a long time, and the electricity is reported *negative* and *very active*. Immediately after this there is a fall in the number, and the electricity is again marked *positive* and *active*. Then, after a slight wavering, a great increase in the number of cases will be found for many weeks after, and from this time till Christmas the reports give "no electricity at all." But here, unfortunately, the clue of the investigation is lost, for the electrical apparatus was so damaged by a gale of wind that a long time elapsed before it could be set to work again.

An opinion that gonorrhœa is more liable to relapse at certain times of the year than at others, has been advanced by some authors; M. Robert says that the spring seems greatly to favour relapses, and I have fancied I detected something of the tendency myself during the prevalence of cold, dry, east winds. The question, however, is difficult to settle till we have much better data. If the mere revolution of seasons influenced the number of cases, we might expect a regularly recurring increase in spring, and of this I have not as yet seen any proof worth notice.

Treatment usually adopted.—We are generally recommended to treat this affection by antiphlogistics. The plan of combating it by emetics, so greatly patronized by many of the older writers, has apparently died a natural death in England, except, perhaps, at King's College, where, according to Mr. Smith, its ghost still lingers; a relic of faith in this treatment may, however, also be traced in the nauseating doses of antimony prescribed by some writers. Dr. Bumstead still gives emetics till free vomiting has been excited, and Dr. Durkee prescribes antimony in combination with colchicum and sulphate of magnesia.

The recommendation to use antiphlogistic means is only consistent with the theory of those who look upon orchitis as a violent local inflammation,¹ though they admit it occurs most frequently in gouty, irritable, weak, cachectic persons, and who consider that inflammation is not to be exorcised but by measures which still further reduce the patient's health: those who hold such a view ought to stand by the axiom that we can only banish the intrusive demon *secundum artem*. But I am inclined to suspect that the system now lives only by sufferance, and that no one of its supporters, if put to the test, could prove it to be called for. Bleeding owes its tenure of existence to a long and most respectable descent; to ancestral prestige in fact. Leeches, calomel, antimony, salines, &c., often leave the pain unrelieved for eight or ten days, and so long as this lasts the inflammation is not subdued.² Still less can we assume that it is even quelled by these means, seeing that if the patient remain in bed and restrict himself in respect to diet, he will be cured just as quickly. *Leeches indeed can only diminish to a fractional extent the quantity of blood driven towards any inflamed part*, whereas the object of the surgeon should be, *not to abstract blood, but to check the action which impels it in an abnormal direction*. The congestion of this fluid offers a check to the process; by relieving this arrest we set it going again *pleno rivo*. As to the inconveniences said to result occasionally from the use of leeches, such as erysipelas, I believe them to be all fables; and I am compelled to state, that the diametrically opposite evidence on this point in two of the latest works published on these diseases, in England, leads me, and indeed would lead any one else, to surmise that conjecture, respect for authority, and conviction, have had more to do with the matter than observation and analysis.

As to the minor points of treatment, such as puncture of the scrotal veins, cupping on the loins, &c., the reader must judge

¹ Ferguson's *Practical Surgery*. 1852, p. 759.

² Mr. Johnson, who lays the patient up, leeches, and gives calomel, opium, and antimony, occasionally adding salines and colchicum, says, "It is a very severe attack indeed which, *in less than a week of this treatment*, has not lapsed into a milder form." And again: "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.*"

for himself. I have had little experience of them, and that little leads to the belief that they are entirely useless, although not harmless, as one patient died from a vein in the scrotum being opened; a catastrophe which perhaps induced the surgeon to alter his views on the subject.¹ Puncturing of the scrotum on M. Velpeau's method seems to have been almost as unfortunate. M. Demarquay saw² wasting of the testicle in three cases where it was trusted to; and M. Montanier observed serious bleeding after it. My experience of tartar emetic, calomel, and other items of antiphlogistic treatment, is not more favourable, or, in plain terms, I believe them to be perfectly useless. Tartar emetic is a most potent remedy in controlling inflammation of the cellular tissue,³ but has little influence over those of mucous membranes, and *in orchitis I have generally found that it produced no change whatever.* It occasionally checks the formation of abscess in the scrotum, but I am not aware of any other good that results from using it.

The problem of the treatment of inflammation would perhaps advance more rapidly towards a solution *were the tissue in which it begins adopted as a guide and ground of distinction.* Circumscribed inflammation of the cellular tissue seems precisely the same complaint, whether seated in the lungs or groin, yet while the value of tartar emetic is admitted in pneumonia it is ignored in bubo. Ophthalmia may be very fairly compared to gonorrhœa; yet many surgeons who do not hesitate to check a purulent inflammation in this delicate organ by the free use of nitrate of silver, recoil from its employment in a far less sensitive part, the urethra. Untaught by experience, the surgeon sees peritonitis cured by opium, hot fomentations, and blue ointment, which scarcely mitigate in the least degree the progress of gonorrhœa or abscess; he sees another inflammation, erysipelas, subdued by wine, bark, and ammonia; a third, eczema, cured by an acid solution of iron; a fourth, rosacea, relieved by tonics and alkalies; and then treats the next case of inflammation, in whatever part of the body he meets with it, by calomel, leeches, and antimony.

The time however is perhaps coming when surgeons will have to admit that each form of inflammation must be met by its peculiar antidotes, however heretical this opinion may seem to those who look upon

¹ Johnson, *Op. cit.*, p. 204.

² *Bull. de Thérap.*, tome 55, p. 550.

³ *Medico-Chirurgical Review*, 1844, vol. i. p. 541.

disease as a palpable something that can be drained off or destroyed, as some element is eliminated in a chemical process ; who talk of it as though they could measure it off by rule and compass : so much heat, cold lotions ; so much redness, leeches, calomel, and opium ; for double the quantity, bleeding, and so on.

I suppose we or our descendants will some day be treated to a dissolving view of those doctrines ; but in the mean time, as arguments will never work conviction, I will take the liberty of putting the rather awkward question—whether any of those who recommend leeches, &c., have ever taken the pains to ascertain if there are justifiable grounds for putting patients to such expense and weakening their health, for these are two almost unfailing results of antiphlogistic treatment. Except Mr. Curling, all those authors who fix a time at all, *give a week* as necessary to subdue the more severe symptoms of orchitis, and thirty or thirty-five days as the requisite period for a cure. Now as any case of orchitis *will get well as fast as this if the patient only remain in bed*, it becomes more than doubtful whether the treatment recommended on such respectable authority really has the slightest influence upon it.

Sedatives.—The greatest improvement in the treatment of orchitis was made by Mr. John Gay, who showed that this affection could be cured in half the usual time by simply using large doses of hyoscyamus, a sharp purgative, and suspension of the testicles. On analyzing a report drawn up by Mr. T. C. Jackson¹ of several cases treated in this way, I found that on an average the pain was relieved *in less than five days*, while the patients were discharged cured *in from three to seventeen days, or an average of seven days and a half*,—a rather striking contrast to the results of antiphlogistic treatment.

As none of the writers on these subjects ever mention this plan, one might be tempted to think that it was one of those untried novelties which the journals are always bringing forth, or that Mr. Gay had kept it to himself. On the contrary, it was published many years ago,² and all reasonable publicity was given to it. Yet, though we have had the Académie de Médecine by the ears, respecting the extremely interesting though rather useless question as to whether monkeys and cats can be infected with syphilis, no one has found time to examine a point which affects the health and comfort of thousands. Indeed, with the exception of a note in

¹ *Lancet*, 1848, vol. ii. p. 338.

² *Ibid.*, 1844, vol. i. p. 602.

Mr. Acton's work,¹ recording an unfavourable experience of the method, almost the only notice taken of it was an attempt to deprive Mr. Gay of the credit of originality; and more than once I observed that the subject was mentioned without Mr. Gay's name being even noticed; an omission which I cannot help saying should not, I think, have occurred. *But the truth is, the merit of the discovery belongs to Mr. Gay, and to him alone.* None of the old authors ever had the most remote idea of mastering the disorder by means of sedatives, although even as far back as the time of Astruc their value as adjuncts was known.

Mr. Payne, of Wallingford, states² that in orchitis he paints the scrotum with solution of iodine, one drachm to three ounces of spirit. On one occasion he painted the whole of one side of the scrotum every day with a strong tincture of iodine. The cure of the orchitis was so rapid in this instance, that by the fifth day the patient was quite well and able to resume his employment. Generally Mr. Payne finds four or five applications enough.

Division of the Tunica albuginea.—Mr. Henry Smith³ divides the tunica albuginea freely in severe cases of orchitis, for which variety principally he reserves the operation. He makes a deep and free incision through the tunic, with the effect of letting out several drachms of blood and serum. Nothing else is done beyond prescribing a little "white mixture" (a saline aperient, I presume, containing magnesia) and the ordinary lead lotion of the hospital. He was led to adopt the practice from having opened a testicle under the impression that suppuration had occurred in it, whereas it was only inflamed. The relief was, however, so great, that Mr. Smith was induced to try opening the tunica in the next severe case that presented itself,—and did it with the most gratifying results.

Mr. Smith describes the effect as highly satisfactory. The relief to the pain is so decided that the patient feels it has given way before he leaves the room, and the change for the better which takes place within the first forty-eight hours is so great as to attract general notice. This he justly attributes, not to the loss of blood, but to the removal of the constriction exerted by the fibrous envelope. He has never seen the operation followed by any

¹ *Practical Treatise*, 1851.

² *Lancet*, 1863, vol. i. p. 131.

³ *On the Treatment of Acute Orchitis.* *Lancet*, 1864, vol. ii. p. 149.

disagreeable symptoms but twice. In one case, puncture of the testicle in a middle-aged man brought on rapid effusion of serum into the tunica vaginalis; but this was speedily relieved. In the other case the incision was made much deeper than necessary, the point of the knife being carried nearly to the back of the organ. The only results, however, were a little faintness and the loss of about ten ounces of blood. The relief given in this case was more speedy and effectual than usual.

The practice in a milder form has been long in vogue in Paris; it was recommended long ago by Jean Louis Petit, was extensively adopted by the late M. Vidal de Cassis, and received the high sanction of M. Ricord; but Mr. Smith tells us that it was quite new to him, and that he was his own teacher. It is instructive to find a writer, who for the most part sedulously avoids saying anything that can give pain, telling us, as Mr. Smith does in this paper, how ready his friends and pupils were, in this matter, to hamper his observations by prophesying all sorts of ills as the results of such rashness. "Of course," he says, "several of my friends and pupils have urged objections against this plan of treatment, and suggested serious results in the form of suppuration of the organ, impairment of its function, hernia testis and fistulous sinuses; but none of these have I witnessed." The "of course" in this paragraph, the regarding it as quite inevitable that some men must reason, not according to facts, but in conformity with their own prejudices, is highly suggestive.

Mr. Smith further tells us, that in the practice which comes under his cognizance swelled testicle is treated in the most heroic way, all the barbarities of the old school being combined with the worst features of modern treatment. Emetics, purgatives, leeches, strapping, are still in full play. For fear any of my readers may think I am here overstating the case, I will quote Mr. Smith's own words.

"We all know," he says, "what a terrible ordeal of violent remedies a patient with acute inflammation of the testicle has to undergo. In the first place, he is obliged to lie in bed for several days; a large number of leeches, or the constant application of ice, are necessary to relieve the pain; and at the same time the unfortunate wretch is compelled to undergo the process of *severe purging* and *continued nausea*, by repeated doses of salts and tartar emetic, before any decided mitigation of his symptoms ensues; and two or three days must elapse before he recovers from the depressing influence of these several remedies. Lastly, the unfortunate organ has to be submitted

to the tender mercies of a dresser, who, however skilful he may be, cannot help putting the owner of it to *severe* and *prolonged torture*, whilst he is obeying the injunctions of his superior to 'strap testicle.'” If this be the practice at King's College Hospital, a reform can scarcely be introduced too quickly.

Proposed Plan of Treatment.—The plan of treatment now to be described was worked out in the same manner as the other divisions of the subject ; that is, one remedy at a time was used till its value was ascertained.

The surgeon's first object is to arrest the *pain ; with this the inflammation stops*. Nothing effects this so well as sedatives ; and provided the dose is *only large enough*, the choice is not of so much moment. I prefer morphia myself. It may be given in doses of a quarter to half a grain two or three times a day ; in very severe cases three-quarters of a grain may be given once or twice in succession. To prescribe the twentieth of a grain is simply to trifle with the matter.

It is, however, almost as requisite to relieve the fagged and jaded feeling, and take into account the nausea and loss of appetite which usually wait on swelled testicle. The acetate of ammonia solution is somewhat useful in relieving this, and half an ounce or so may be given with each dose of the morphia. A light warm diet is still more so, starvation being useless as well as hurtful ; and the patient should therefore be allowed to make himself comfortable on a good basin of mutton or chicken broth, and a little arrowroot with a glass of old port in it—nay, I have known many patients so case-hardened as to be all the better next morning for a glass of good whisky and hot water over-night. If the morphia disagree with the patient, five grains of extract of white poppy may be given at bedtime along with an aperient pill, as the patient is none the worse for having his bowels gently open.

As to external applications, I have no faith in any except hot water to the scrotum ; and I should be glad if any person would tell me how it happens that Sir Benjamin Brodie and others, *who recommend cold in a general way, tell us that when the pain is great warm applications are to be preferred*. Does the reader really imagine that the same disorder can be benefited by hot and cold applications ? or does it not rather strike him that as the heat alone relieves the pain the cold is just about useless ?

If, however, he like to try, there is ample authority for doing so,

and no one to blame him for wasting time and money, which he will certainly do. Nearly everything, however, has been tried, from freezing the testicle to poultices, chloroform, and collodion, so that there is not much glory to be gained here. According to M. Bonnafont, the last-named remedy worked such marvels that in recent cases a cure took place in *two* days; but M. Ricord found that the application gave *excessive pain*, while the orchitis lasted *fifteen* or *twenty* days, as under ordinary treatment; and as M. Velpeau, M. Richet, and M. Venot came to the same conclusion, posterity will most likely take part with them against M. Bonnafont.

If the surgeon wish to try freezing the testicle, he had better make the first essay upon himself, as unless he be thoroughly acquainted with the action of cold upon such delicate organs, it is just possible that he may one day get himself into an awkward scrape. I never saw a testicle frozen, but I once saw an inflamed breast treated in this way. It turned almost black, and sloughed right out, the patient of course dying from the shock.

When the surgeon has been using injections, it will be as well to suspend the employment of them, not for fear of making the swelled testicle worse, but because this disorder renders many persons languid, weary, and averse to anything which occasions the least trouble. Some patients also still labour under the opinion that the injections bring on the swelling; and as the loss of three or four days is not of much moment, while absolute rest is a great boon to such patients, it is best to indulge them in it.

As to the monstrous proposal of attempting to remove orchitis by restoring the discharge, which to my amazement I heard upheld but a few years ago in the Medical Society of London, it is not merely useless in practice, but false even in theory; for swelling of the testicle does not check the discharge—nay, it often increases it, probably in much the same way as anything does which disturbs the health, such as a cold, or an attack of influenza, cold, dry, dusty winds, the over-free use of stimulants, &c.

I can safely say that I never saw an unequivocal instance of gonorrhœa arrested by swelled testicle coming on. The patient often thinks so, but one glance is generally enough to show that it is present; and when the two events really occur at the same time, they are simply a coincidence, not cause and result.

If any of my readers appeal to authority, and say that in a simple matter of fact like this it is impossible so many excellent

observers — numbering among them Brodie, Swediaur, Cooper, Larrey, Wallace, and many others—could have deceived themselves, I meet the objection, first, by asking them to use their own eyes and ears, and secondly, by referring them to Curling and Ricord, who, basing their conclusions on an almost fabulous number of cases, have decided against the old doctrine. M. Ricord¹ says that if arrest of the gonorrhœal discharge take place, it is not above once in two hundred times ; and Mr. Curling,² speaking of its suppression, says it is very questionable whether anything of the kind takes place in genuine orchitis.

Blistering the Scrotum.—When the swelling and pain continue very obstinate, the surgeon may, at the end of a few days, blister the scrotum. Very alarming pictures of the results to be expected have been drawn ; but as I have never met with them, although I believe I have employed more blisters in these cases than any surgeon living, and have even given them a fair trial in some of the worst subjects possible, I rather object to giving up the teachings of experience for the sake of conforming to theoretical objections. I have seen a blister check or limit an abscess of the scrotum when it was almost pointing, and hold such testimony of the action of cantharides to be better evidence than the fears of inexperience.

Several years ago, one of the physicians at the Infirmary of Bishopwearmouth ordered a blister to be applied to the epigastric region of a patient suffering under great pain in that part of his animal economy. The sequel will show that the famous story of the Newcastle pitman, who swallowed his clyster, and applied the blister where the injection should have gone, was not such a hoax after all ; for this patient, being told to put the blister upon the epigastric region, and thinking this was only a jocular term for the organs of generation, actually cut a hole in the blister, pulled the penis through, and carefully fastened the vesicant on the scrotum. Two days afterwards his landlady came to the infirmary to say that the man was dreadfully ill ; and, sure enough, when the surgeon went he was bad enough, having kept the blister on all this time ; but the serious symptoms which some authors profess to expect from three or four hours' blistering had not ensued at all !

Regarding the treatment of the blistered surface, I must refer my reader to the chapter on gleet, where he will find full directions.

¹ *Sur les Maladies Vénériennes*, p. 754.

² *On the Testis*, p. 751.

Strapping the Testicle.—For one particular reason I am desirous not to omit all notice of strapping the testicle, which Mr. Johnson compares to the ingenious rather than considerate plan put in force by the spanish buccaneers, who slung their prisoners by the testicles to the yard-arm to make them confess where their dollars were hidden. The particular reason is the present ominous silence about this plan, at one time so much praised by many authors. Perhaps it was found to be barbarous, dirty, and uncalled-for, which was my experience of it; perhaps it was thought that gangrene¹ is an awkward result, for which the surgeon is in some measure responsible. At any rate, we ought to know why it has so mysteriously fallen into abeyance.²

Subsequent Treatment.—So soon as ever the symptoms of active inflammation are checked, the surgeon may attempt to remove the induration and swelling. I know of no better means than iodide of potassium and liquor potassæ, which may be given separately or combined in any bitter aromatic tincture. A small quantity of mercury and chalk every second night will often assist the action of these remedies.³ I suppose it would now be fighting with a shadow to attack the doctrine that the use of iodide of potassium may lead to wasting of the testis; but it may be as well to observe that the credulity with which this doctrine was at once received, and the *ex cathedrâ* style in which it was taught for years *without one person being found to undertake the task of really looking into the subject*, ought, if experience could ever do so, to make men more cautious about adopting tenets on such evidence, or rather on no evidence at all.

Most of the cases treated in this way have been thoroughly

¹ *Medical Gazette*, vol. xli. p. 976.

² Mr. J. R. A. Douglas has devised what promises to be an improvement on the old plan of strapping. He employs small pyramidal india-rubber bags, which apply the pressure more certainly and continuously, while they do not excoriate. —*Lancet*, 1863, vol. ii. p. 556. The bags are made by Millikin & Lawley.

³ ℞ Potassii iodidi ʒj.

Potassæ liquoris ʒiij.

Syrupi flor. aurant. ʒiv.

Tinct. cinnam. co. ad ʒiv. ℥.

Capiat coch. min. ij. ter quotidie ex aquæ cyatho vin.

℞ Hydrargyri cum cretâ gr. xij.

Pulv. cinnam. compos. gr. viij. ℥.

et divide in pulv. vj. Sumat j. omni nocte.

cured ; indeed, so far as has been ascertained, success always followed a fair trial, and none of the patients suffered from a relapse ;—most encouraging results, when we consider how often authors have told us of the tendency this disorder has to return under any form of treatment.¹ I do not however say it is infallible ; I only say it has succeeded in my hands much better than any other.

I believe also that those cases of chronic orchitis, neuralgia of the testis, and fibrous deposit in this organ, which are brought on by gonorrhœa are much more manageable than has been supposed. Citrate of iron and quinine ; a moderate use of mercury and chalk ; good diet, with an extra glass of wine, stout, or pale ale ; plenty of fresh air ; and a free use of blisters, will generally effect a fair cure. They will of course in some cases only arrest the disease ; for no sensible person requires to be told that they cannot regenerate destroyed tissue. Still they open up such an encouraging view that I protest against removing the testicle until they have had a fair trial ; especially as the revelations of Romberg, Civiale, Curling, Brodie, and others, leave no doubt that the testicle has been excised in many cases where a judicious employment of curative means would most probably have rendered any operation superfluous. Besides, it is possible that arrest of the disease by treatment leaves the remaining testicle less liable to take on the same action. In the last case of this kind I attended, I had reduced the diseased gland nearly to its normal dimensions, when some one persuaded the patient to have it cut off—and certainly there was fibrinous deposit enough in it ; but three months afterwards, when I again saw the patient, I learned that the other testicle, *which up to the time of the operation had remained quite sound*, was now nearly as bad as that which had been removed.

When *fungus of the testicle* ensues, Mr. Syme's plan of paring the edges of the aperture, and then uniting them over the replaced protrusion, generally answers so well that it would be difficult to find a substitute ; and now that this method has received the sanction of many excellent surgeons, it is to be hoped that the old system of castrating patients bit by bit will be put down.

6. PHYMOSIS AND PARAPHYMOSIS.—The treatment of these complications may be summed up in a very few words. Phy-

¹ Johnson *On the Genito-Urinary Organs*, p. 194.

mosis seldom calls for more than suspension of the penis, which may be easily effected by any person possessed of the most ordinary mechanical skill. In the more severe cases, such as are occasionally seen when ineffective attempts have been made to check the disorder with specific medicines, and which never ensue when injections are properly employed, evaporating lotions containing ether and acetate of ammonia may be used: I have never seen a recent case which required more than these. The treatment may be continued just the same as if there were no phymosis, so soon as ever the prepuce can be drawn back far enough to admit the syringe. It is quite a mistake to imagine that this complication proves the presence of an amount of inflammation which would render the use of injections dangerous. In some long-standing cases it is necessary to act with decision, as I have seen nearly the whole prepuce ulcerated or adhering to the glans. The whole affair is however so simple as scarcely to require any rules at all, and I should not have done more than merely allude to it, had not such an unnecessary amount of words been expended on what every apprentice ought to be able to manage.¹

When division of the foreskin is necessary the director should be passed under it in the mesial line, and when the point will reach no farther, the skin is drawn well towards the root of the penis. The skin and mucous membrane are then cut clean through to the point. One necessary precaution is not to introduce the director into the urethra and slit up the glans. The reader may think this caution superfluous, but I have known a very good surgeon make the mistake. Mr. Johnson has also seen it happen.² Any warty growths found inside may be touched with a strong astringent, such as glucial acetic acid, &c.

Dr. Durkee tells us that phymosis will sometimes yield to gradual distension with a sponge tent, and a very ingenious friend of mine invented an expanding ring which he assured me never failed to remove the constriction. But I apprehend that such measures as these are, like circumcision, suited more for cases in which there is no gonorrhoea to complicate them. There is one complication which I shall advert to presently, in which I think it highly advisable to divide the prepuce at the least.

¹ A specimen of this wearisome verbiage will be found in that part of Hesselbach's *Handbuch der Chirurg. Pathol.* relating to this subject.

² *Op. cit.*, p. 136.

As to *paraphymosis* little need be said. The surgeon should carefully cleanse the penis, and then attempt the reduction of the strangulated part, in which with a little perseverance he will generally succeed. Some authors, Fricke among the number, profess to have never failed. I have not been so fortunate, and I have seen much better surgeons than myself make the attempt ineffectually.¹ This however is not of much importance, as in gonorrhœa, if properly treated, the strangulation, when not neglected, is never severe and rarely attains such severity as to require cutting of the constricting band. If it should the evil is easily met.²

Dr. Mason Good tells us that in this "variety, amputation of a larger or smaller portion of the penis may be necessary" (!).³ I must say this is a consolatory view to take of the matter, and the reader, if he ever suffer from paraphymosis, may thank Heaven that Dr. Good is not alive and likely to attend him. Why in the very worst cases it would be far better not to meddle with the affair, as when gangrene ensues the utmost that can happen is that the loose part of the prepuce is thrown off. Even this, I apprehend, must be extremely rare. Dr. Durkee⁴ speaks of it as a fact, "which the medical attendant sometimes witnesses." I have not myself seen it from gonorrhœa.

7. *BALANITIS* is one of the most easy complications to deal with, although some attempts have been made to bring it within the category of complaints requiring extraordinary means. M. Ricord advises cauterization, and if the patient be quite indifferent as to the amount of pain he may suffer, or perhaps rather prefer it, it will answer as well as mild lotions of sulphate of zinc in camphor mixture, four grains to an ounce, or sulphate of copper in rose-water of the same strength, syringed under the foreskin two or

¹ Rollet, p. 548.

² In the good old times of Musitanus, once a great authority in those matters, the doctors seem to have made sharp work with the swelling from paraphymosis. The plan was to "humble the crystalline [the swelling] with sublimate," and then touch the affected part with tincture of tobacco, which was "to be done when the patient is lying, lest the Violence of the Pain, because of the violent operation of the Tincture, should make him drop down in convulsions" !—Cockburn, *Op. cit.*, p. 246.

³ When gonorrhœa was considered to be syphilis, the removal of the organ seems to have been often a *dernier ressort*. "Amputation of the penis," says Cockburn (p. 224), "has been often the last remedy for the sharp matter of the gonorrhœa."

⁴ *Op. cit.*, p. 78.

three times daily, when this is tight, and applied, when the foreskin can be drawn back, by means of a strip of thin linen soaked in the solution used and laid between the prepuce and glans; but according to my experience no better.

Mr. Acton¹ speaks of gangrene as though it was not an unfrequent result of balanitis, and tells us, though it generally attacks the prepuce it may destroy the whole penis. Although for years I saw quite twice weekly scores of the worst class of cases in the Metropolitan and Royal Free Hospitals, I never observed an instance of this.

8. INFLAMMATORY SWELLING OF THE PENIS.—I should scarcely have been inclined to look upon this complication as a very serious affair, and have been disposed to think that rest in bed for a day or two, a sedative and the free use of spirit lotions, were all that is requisite. Some of the french surgeons, however, evidently view it as a symptom of sufficient importance to require the most heroic treatment.

The parts, says M. Melchior Robert in his ably and honestly written work, are to be enveloped in linen steeped in marsh-mallow water, elder-flower water, or any other emollient fluid. If there be no reaction, it is not necessary to do more than apply leeches to the groins or perinæum; but if the system be seriously affected, blood is to be taken once or twice from the arm. Constipation is to be removed by purgative salines, such as seidlitz powders, sulphate of soda and citrate of magnesia. As the patient may possibly have been taking the prescription given below,² a favourite one with M. Robert, his stomach will by this time be in a state scarcely calculated to bear large doses of these remedies. Along with these we may use warm baths, but not fomentations or cataplasms. The seat of the discharge is to be frequently cleansed with emollient lotions or injections, almost cold, to prevent painful erections. Pills and *enemata of camphor* may be given, and conversation or reading calculated to inspire lascivious ideas (!) is to be strictly excluded. In order to avert gangrene, solution of opium may be injected into the cavity between the glans and the prepuce. All this however and several other remedies to

¹ *Op. cit.*, p. 71.

² Cubèbe gr. 100. Alun 8. Extrait de ratanhia 4. Extrait thébaïque 0.25. Poudre de camphre 2. Poudre de carbonate de soude 2. Sirop de gomme ou miel Q. S. pour faire un opiat assez consistant.—*Nouveau Traité*, p. 148.

boot, such as decoction of mulberry-leaves, do not, it appears, always prevent part of the penis from being destroyed by gangrene.

I certainly should not think injecting opium was very likely to stay gangrene, but how this accident occurs at all is more than I can make out. I have seen and treated some rather bad cases of oedematous swelling of the penis, but I cannot call to mind such results as sphacelus, and should not feel very well satisfied if they occurred when under my care. Such a complication as erysipelas of the penis and scrotum, which must, I fancy, be very rare, should be met with large doses of tincture of the sesquichloride of iron every three hours, and the application of any innocuous fatty substance, such as suet or lard, applied melted, all over the affected part. When it attacks the dartos, free incision is recommended by some authors.¹

9. INFLAMMATION OF THE SPONGY AND CAVERNOUS BODIES.—The reader will find a very good and rather amusing account of these affections in Mr. Johnson's work on the genito-urinary organs. They are both intractable enough, but it can hardly be said that they interfere with the cure of gonorrhœa, as they rarely if ever show themselves except when the patient has thoroughly neglected his complaint, and indeed are rather results than complications. They are extremely uncommon, and inflammation of the cavernous bodies is perhaps the most rare of all the sequelæ of gonorrhœa. One gentleman, who consulted Mr. Johnson for it, suffered lancinating pains on erection, and his penis twisted like "a pig's curly tail." It resisted the most energetic treatment, and when last heard of the patient was little if any better.

Both complaints will require to be treated on the same principles—those laid down for the removal of chronic orchitis. When abscesses form from inflammation of the spongy body and are followed by urinary fistula, the acid nitrate of mercury or Bullin's blistering fluid may be applied; but if they do not succeed at once, I would waste no time, but forthwith apply a wire heated to a white heat, which I certainly think is, of all cauteries, *the least painful and most useful*.

¹ The merit of first noticing this affection, and suggesting incision for it, has been ascribed to Mr. Liston, but I believe it is due to Mr. Johnson.

CHAPTER V.

TREATMENT OF THOSE COMPLICATIONS WHICH INTERFERE WITH
THE CURE OF GONORRHŒA.

1. Fainting from the use of Injections, 170. 2. Great Natural or Induced Weakness, 172. 3. Tendency to Inflammation of the Lacunæ of the Urethra, 175. 4. Morbid Sensibility of the Urethra, 177. 5. Strong Tendency to Stricture, 177. 6. Balanitis occurring along with Phymosis and Stricture, 180. 7. Excessive Irritability of the Bladder, 180. 8. Excessive Irritability of the Rectum, 182. 9. Perinæal Abscess, 182. 10. Inflammation of the Prostate, 184. 11. Gonorrhœal Rheumatism, 185. 12. Gonorrhœal Ophthalmia, 194 :—Gonorrhœal Iritis, 195. Rheumatism of the Eyeball, 195. 13. Strong Tendency to Bleeding, 197.

WE now arrive at the consideration of those symptoms which are more calculated to fetter the surgeon's hands. From their extreme importance I have been led to illustrate them by a few carefully selected cases, for which I solicit the reader's most earnest attention, as these rebellious forms of disease have cast so much doubt upon the powers of medicine over this complaint.

Under this head I propose to place all those affections which directly or indirectly interfere with the exhibition of proper remedies. They consist of—

1. *Fainting from the use of Injections.*—In speaking of a strong tendency to faint from the use of injections, I allude, not to the mere sense of faintness felt on passing the tube of the syringe down the urethra for the first time, as that is quite a common affair, but to that form where the disposition is so strong and recurs so constantly as to constitute an idiosyncrasy. I have seen it in very strong men.

An acrobat who had contracted a discharge came under my care. He was a healthy, temperate man, a solid mass of bone and muscle. His energetic method of gaining his livelihood was practised "*sub*

Jove," and had developed his powerful frame to the highest pitch of health and strength it was capable of. Yet this man fainted so suddenly on my attempting to insert a short syringe into the urethra, that he fell like a stone. The insensibility was very prolonged, and he felt so ill after it that he refused to have any more injections.

A gentleman consulted me for gonorrhœa. He was a remarkably strong man, exceedingly well-made, and wore the appearance of being in very high health; he was fifty years of age, and told me that he had never taken a dose of physic since he was a child, and never remembered having experienced the feeling of being out of health. He had never had a cold, he said, or a headache. The introduction, however, of only the tip of the syringe produced such an effect upon him that he begged of me to withdraw it, as otherwise he should faint on the spot, and immediately after broke out into such a cold perspiration that I saw it would be useless to continue the attempt.

In my opinion the surgeon, unless he happen to know the constitution of his patient, should always be prepared for such a contingency. The plan in such cases is to give the injection to the patient in a sitting or lying posture. This will overcome the most obstinate fainting, as the following instance may show.

A very tall, delicate young gentleman applied to me with gonorrhœa. About eighteen months previously he had suffered from an attack, which with all possible care was not subdued with copaiba and salines in less than nine months; ever since then the urethra had remained extremely tender, and whenever he had a cold a drop of pus was seen at the meatus on rising. On inserting the syringe he immediately fainted, and so soon as ammonia was applied to his nostrils the contents of his stomach were discharged; but the impression made upon the disease was so evident that the patient willingly continued the injections, which were given sitting. At the end of eleven days the discharge was so far diminished that they were given only every second day, and then every third till the twenty-fifth, which was the last, no discharge having been seen for eight days. The faintness was present to the last.

Some months later, during an excursion in Austria, he again contracted the disorder; he was treated with specifics and derived almost as little benefit from them as before. Soon after his return to England he contracted a fresh infection, and six months sub-

sequently he had another attack. On both these occasions the complaint was removed within a week by means of injections, but the tendency to faint was still as strong as ever when beginning with them. After the last gonorrhœa I recommended the use of a gum-elastic bougie twice a week. To the very last day of using it he always averted his sight from the instrument, feeling sure that he would turn faint if he looked at it. This treatment I may observe answered the end in view: the patient, though he was soon as imprudent as ever, contracted no more gonorrhœas.

Amongst numberless instances I might point to this case as strong evidence of the superiority of injections over any other treatment. The patient was in easy circumstances, rested as much as he liked, consulted the first surgeons, and yet on one occasion his disorder when treated by medicines lasted nine months, and in another three, leaving each time the urethra very tender and irritable; whereas when met with injections one attack was cured in eleven days, one in four, and one in five. These cures too were more perfect; and that the disparity was not due to a decline in the virulence of the disorder is shown by the third outbreak lasting so much longer than the second.

2. *Great Natural or induced Weakness.*—By this is meant not great physical exhaustion, but that weak, irritable state of the system under which the stomach loathes the mildest and smallest doses of medicines of any class—a state of matters sometimes induced by inordinate quantities of copaiba. The patient is gloomy and weary; sometimes prostrated by sick headaches, at other times scarcely able to rise from mere lassitude. A cold confines him for a week; his bowels are costive, his tongue coated, his enjoyment of all comforts is lost. Active purgatives in the form of aloes, colocynth, and blue pill; effervescent mixtures with syrup of orange-peel; mild sedatives, and as soon as possible quinine in grain doses three times a day, generally prove quite effectual. Injections are indispensable; but as many of these patients suffer from *excessive* sensibility of the urethra, they may be made very weak at the outset, and not employed more than once a day till the bowels have been repeatedly purged, when they can be used as in other cases. A moderately tonic diet, with a fair allowance of meat, a little spirit or wine daily, total abstinence from porter, ale, stews, hashes, pastry, &c., will be found of great benefit.

As an instance of this complication in its most severe form I

may quote here the history of a case in which it appeared to have been chiefly induced by large doses of copaiba. The patient was a member of the medical profession, who placed himself under my care, after having made a most unsatisfactory attempt to treat his own case.

I found him low, weak, and dejected; he was suffering under enlarged prostate, with a painful bearing-down, as if the rectum were coming out, so that when walking he constantly felt an urgent desire to keep his hand pressed upon the anus. There was a moderate amount of discharge, with no great pain in making water or during erections. The tongue was brown, furred, tremulous, and indented by the teeth—the breath was foul—his face looked coarse and dusky—he said he had lost all his colour along with his appetite and strength. Great part of his sufferings he attributed to the amount of copaiba he had taken; and as according to his own estimate he had for some time past managed to get down five ounces a week, the supposition was very feasible. The use of these enormous doses was always followed by nausea and loose stools. To complicate the case still further, it appeared very doubtful from the patient's description whether there was not some stricture to be apprehended, as six years previously he had suffered under gonorrhœa, which, after having been duly treated with copaiba, slowly changed to a gleet, and this in its turn every now and then reappeared; so often indeed that I doubted if it had ever been cured. Latterly also there had been a good deal of dribbling after making water, and, the patient thought, some slight narrowing of the stream.

"All this," he said, "I could endure and hope to see cured. There is some visible cause for these sufferings, but I cannot understand why I have this dreadful irritability of temper and gloominess always hanging about me. I feel no pleasure in anything I do, and I am quite certain many of my patients have remarked my inattention."

On examination by the rectum, the prostate was found greatly enlarged, and a blister was ordered to be applied. A bougie was also passed, and a most irritable state of the urethra discovered; no stricture however was encountered. Within forty-eight hours after this operation the right testicle swelled in a most extraordinary way. The patient for several days could not allow me to touch it, and the attack was accompanied by such prostration that he was obliged to confine himself to his room. Morphia in large quantities was ordered

and relieved him so rapidly, that he said "he could hardly describe the comfort this dreamy, quiet state inspired, compared with his first night's suffering." Hot water to the scrotum so as almost to excoriate it—a well-fitted suspensory bandage—a brisk aperient, and a diet from which all cold, ascendent, heavy articles of food were rigidly excluded, soon relieved all the most severe symptoms.

At the end of a week I examined the testicle; and though this was the worst case of orchitis I ever saw, I was not prepared to find such evidences of active disease. The epididymis was greatly enlarged and of almost *cartilaginous* hardness, *as was also great part of the testicle*; and though all pain was gone, yet the patient still shrank instinctively from the slightest touch. I now asked him if he had ever strapped the testicle for orchitis; he candidly admitted that he had. Then I said, "How would you like to have your own testicle subjected to the process?" To which he simply and touchingly answered, "Not at all." I very strongly suspect that many advocates for strapping might, under similar circumstances, give much the same reply.

The discharge was now treated with mild injections of nitrate of silver, followed by the use of gum-elastic bougies every second day. Two blisters were applied to the perinæum and two to the penis. Iodide of potassium was given in doses of ten grains twice a day; calomel and black draught twice a week. A full meat diet was ordered, and a bottle of claret daily.

The discharge soon ceased entirely. The urethra became so healthy that the bougie could be passed with scarcely any discomfort. After the first three weeks the prostate gave him no further annoyance; and finally such a steady and rapid subsidence of the hardening of the testicle ensued, that when he paid me his last visit, about four months from the beginning, little more than a slight thickening remained to mark the seat of disease. His tongue became clear, moist, and firm—his appetite returned, and he soon gained flesh and strength. From having been unable to walk a mile without fatigue, he was now almost as well as he ever had been, and in better health than he had enjoyed for years. *He has never strapped a testicle from that day (!)*, and what is still worse, has on several occasions expressed his opinion about the process in a most disrespectful, and indeed contemptuous, manner.

For the most part the weakness induced by long-continued use of copaiba is easily remedied. The first step is, of course, to give

up the use of the balsam itself; after this almost any mild preparation of iron, such as the citrate, conjoined with some simple aperient, will soon remove the effects. Dr. Bumstead recommends¹ citrate of iron and quinine, the tincture of the chloride of iron and good food.

3. *Tendency to Inflammation of the Lacunæ of the Urethra.*—However hazardous the statement may seem, that inflammation of the lacunæ rarely—perhaps never—ensues under the use of the treatment recommended for simple gonorrhœa, provided this has had time to act before the lacunæ are involved, I believe I am warranted in making it; but whether it ensues or not, the treatment of the parent disorder may be safely pursued, even though the previous experience of the patient is that this complication will follow.

A surgeon, at that time a student, placed himself under the care of Sir Astley Cooper for gonorrhœa. The great surgeon ordered him an injection of nitrate of silver, five grains to an ounce. The inflammation and pain however became so unmanageable that he was soon laid up with orchitis and abscess of the lacunæ. The latter burst externally, leaving a fistulous opening, which healed in a few weeks, and a gleet which lasted ten months. Subsequently he had a second attack, which healed in four months by means of copaiba and injections: this time also the lacunæ suppurated. He contracted a third gonorrhœa, and treated it himself with small doses of copaiba and cubebs, which purged and nauseated him so much that he was quite prostrated. Dyspepsia and total loss of appetite came on, making him so irritable and weak that he could not mount his horse or attend properly to business; within a fortnight three of the lacunæ had run into suppuration and one had burst externally. He then consulted me. A mild saline aperient, with full doses of morphia at night, was ordered, along with sulphate of zinc injections; subsequently quinine and purgatives were given and blue ointment was directed to be rubbed over the lacunæ. He speedily improved; no more lacunæ suppurated; the discharge rapidly subsided, and in a few weeks gave way entirely.

But I have seen very troublesome results indeed where the case was treated differently, and I believe most of the cases recorded of suppurative inflammation in the cellular tissue of this part owe their origin to disease beginning in the lacunæ.

¹ *Op. cit.*, p. 97.

E. E., Esq., came under my care for gonorrhœa. He had been suffering under it for several weeks. A small abscess had formed on the right side of the penis, about two inches from the mouth of the urethra. The abscess was pointing, and burst within three days from my first seeing him. The urine began almost directly to pass through the opening, and continued to do so. It was difficult to imagine any reason why the patient should suffer in this way. He was a spare strongly-built man, of unusually active, temperate habits and extremely healthy. He had used no injections and seemed to have been treated principally with antiphlogistics and a few small doses of copaiba. While under my care injections of nitrate of silver, the solid nitrate of silver, blisters, &c., were all tried in vain. At last by applying the actual cautery and the acid nitrate of mercury to the interior of the fistula, I succeeded in reducing it to a very narrow passage, and, that done, I speedily brought down the urethral discharge to a mere gleet, but I could not completely cure either, and while contemplating further steps the patient was compelled to leave for a journey into Russia.

About a year after this, while still abroad, he again contracted a discharge, which seemed to have been treated in much the same way, except that copaiba was given more freely and along with it cubebs. As the case grew much worse he set out for England, but broke down before he got quite through Germany, and was laid up for a fortnight with great swelling of the penis, pain, and uneasiness of the organs generally. Directly he reached London he came to see me. The body of the penis was considerably swelled and persistently hard. In addition to the old sinus, through which the urine still passed, two new ones had formed at the junction of the lower surface of the penis and scrotum. From these radiated several passages backwards under the scrotum and forwards under the skin of the penis, and though the probe could not be introduced into the urethra, the dribbling through these sinuses every time the patient made water showed that there was a communication between them and the canal.

For several weeks I tried everything I could think of to heal these fistulæ. Dilatation of the openings, the application of the acid nitrate of mercury, of the actual cautery, and of a strong solution of cantharidin in glacial acetic acid, were repeatedly used, but to no purpose, while the gonorrhœa remained unaffected by blisters,

injections, and the use of the solid nitrate. The thickening and induration of the penis and scrotum got worse, and the sinuses evidently increased in extent; some of the skin, too, on the lower part of the penis was on the point of sloughing. At last, in a consultation with my friend Mr. T. Carr Jackson, it was decided to put the patient under chloroform and lay open the sinuses. This was done with the result of laying bare five fistulous openings into the urethra, and such a mesh of burrowing passages as has seldom, I fancy, been paralleled. Mr. Jackson said he had never seen anything like it. We were compelled to remove some of the skin of the penis, its vitality being so compromised that there was no chance of saving it. Some weeks after the patient again left England, at which time not one of the openings into the urethra had healed. He subsequently wrote however from East India to say that he was a great deal better.¹

4. *Morbid Sensibility of the Urethra.*—In excessive tenderness of the urethra, it is sometimes necessary to wait a day or two in order that the action of the potass may be set up, and to give a sedative every night, before beginning with injections. The first two or three of these may consist of warm water; the next of weak solution of nitrate of silver, beginning in some persons as low as one-tenth of a grain to an ounce; after this no further precaution is necessary. Where this extreme sensibility seems dependent upon rheumatism or gout, a grain of the extract of colchicum every night is often very serviceable.

In most cases after this difficulty is overcome, the injection may be increased in strength as with other patients; but on the other hand, there are many persons who can never bear injections stronger than two grains or two and a half to the ounce without suffering severe pain, *and it is never necessary to give severe pain.* If the patient is only seen when the gonorrhœa itself is declining in violence, I would recommend free bathing of the penis with hot water two or three times a day; the application of veratrin ointment, five grains to half an ounce, to the under surface of the urethra; and the daily use of a gum-elastic bougie.

5. *Strong Tendency to Stricture*—that is, where the canal begins to contract within the first week or fortnight after the first appear-

¹ Mr. Johnson had also a patient under his care who had gonorrhœa several times, and on almost all occasions the lacunæ suffered more or less.—*Op. cit.*, p. 183.

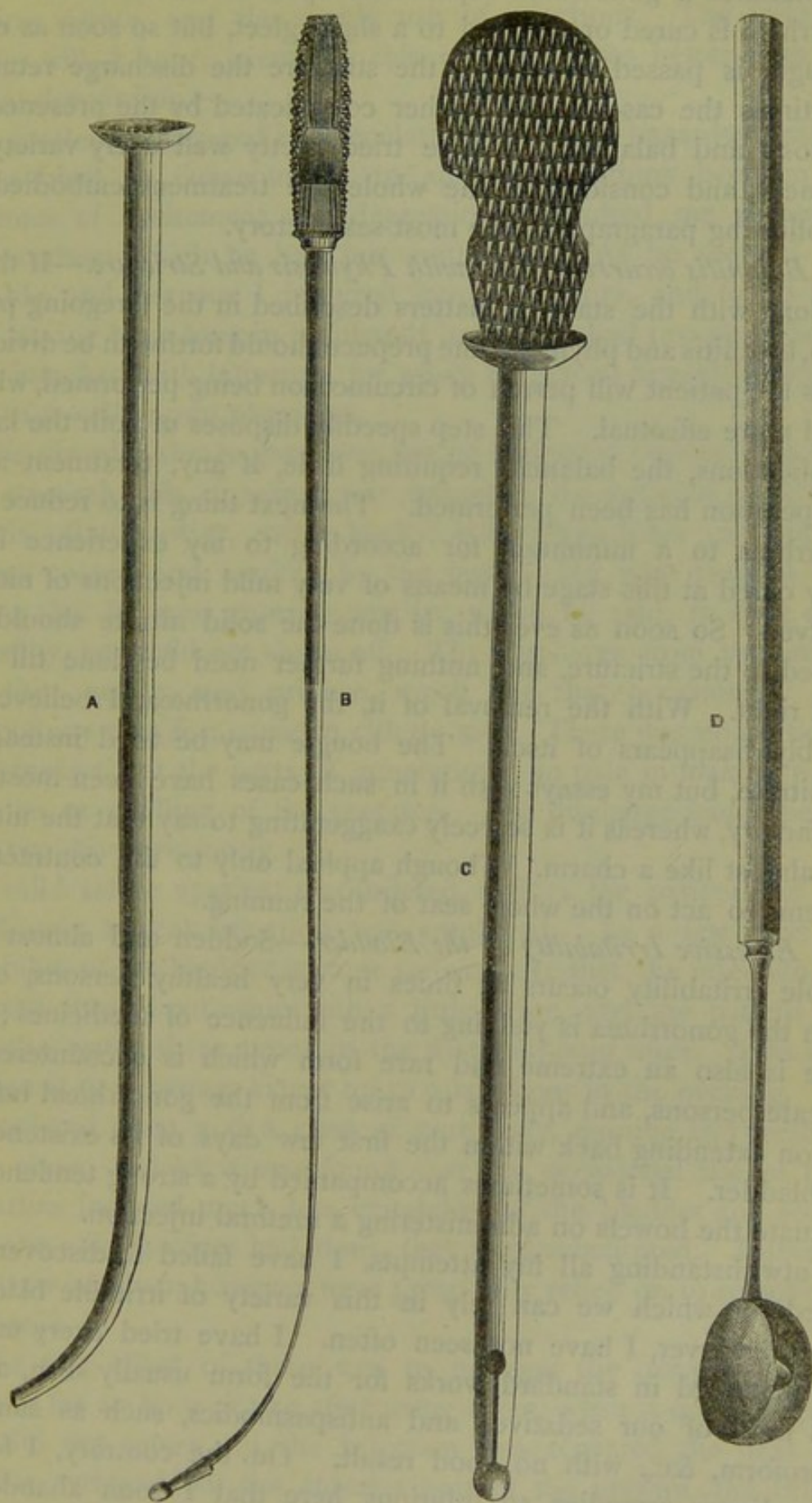
ance of gonorrhœa—though not very uncommon when this disorder is neglected, has only occurred in my experience three times in cases treated properly with potass and injections. In two of them it yielded quickly enough to the solid nitrate applied by means of the sheath and stilet, described in the following paragraph—an instrument which has also often stood me in good stead in those cases where isolated parts of the urethra remain tender and throw off shreds after the removal of old gleans. In the third case the patient, quite a lad, was suddenly despatched on business which enabled him to indulge in the pleasures of the table to any extent he liked. Not having enjoyed such a privilege before, he made the best use of it now—lived on game, salmon, champagne, punch, &c., and returned to London with the urethra closely stricured for about two inches—a state of matters which required about eight months to set right again.

The instrument¹ now spoken of consists (1) of a platinum or silver canula, *A*, shaped like a No. 9 catheter with the blunt end cut off, and a pea-headed stilet, *B*. It is passed down, with the stilet in, to any part of the urethra that seems very tender, and the stilet being withdrawn, a small flexible bougie, armed by dipping the tip into caustic fused in the ladle, *D*, is introduced through the canula and drawn lightly over the urethra for an inch or two. It is then drawn back within the stilet while the instrument is removed, so that only the part the surgeon wishes to cauterize is brought into contact with the nitrate. *C* represents a smaller instrument of the same kind, sheathed, to be used when the seat of morbid action is nearer the mouth of the urethra.

In five cases this affection could be traced to the use of chloride of zinc injections, and though I believe these may, under proper care and when made to follow the exhibition of potass, be used with impunity, my experience of their employment without such precaution is that they are always painful, and at times dangerous.

It is not without some hesitation that I make this statement, but I have now, I think, so distinctly traced several cases of stricture to over-injecting with chloride of zinc and bichloride of mercury, that I cannot understand how I have deceived myself if the view be false.

¹ The larger instrument is reduced one-half, the smaller one a fourth. The drawing of the ladle is of the actual size. The instruments are made by Messrs. Walters & Co., Moorgate Street.



Sometimes a gonorrhœa supervenes upon an old stricture. The gonorrhœa is cured or reduced to a slight gleet, but so soon as ever a bougie is passed to remove the stricture the discharge returns. Sometimes the case is still further complicated by the presence of phymosis and balanitis. I have tried pretty well every variety of treatment, and consider on the whole the treatment embodied in the following paragraph as the most satisfactory.

6. *Balanitis occurring along with Phymosis and Stricture.*—If there be, along with the state of matters described in the foregoing paragraph, balanitis and phymosis, the prepuce should forthwith be divided, unless the patient will permit of circumcision being performed, which is still more effectual. This step speedily disposes of both the latter complications, the balanitis requiring little, if any, treatment after the operation has been performed. The next thing is to reduce the gonorrhœa to a minimum, for according to my experience it is rarely cured at this stage by means of very mild injections of nitrate of silver. So soon as ever this is done the solid nitrate should be applied to the stricture, and nothing further need be done till this is set right. With the removal of it, the gonorrhœa, I believe, invariably disappears of itself. The bougie may be tried instead of the nitrate, but my essays with it in such cases have been most unsatisfactory, whereas it is scarcely exaggerating to say that the nitrate acts almost like a charm. Though applied only to the contraction, it seems to act on the whole seat of the running.

7. *Excessive Irritability of the Bladder.*—Sudden and almost irresistible irritability occurs at times in very healthy persons, often when the gonorrhœa is yielding to the influence of medicines; but there is also an extreme and rare form which is encountered in delicate persons, and appears to arise from the gonorrhœal inflammation extending back within the first few days of its existence to the bladder. It is sometimes accompanied by a strong tendency to evacuate the bowels on administering a urethral injection.

Notwithstanding all my attempts, I have failed to discover any remedy on which we can rely in this variety of irritable bladder, which, however, I have not seen often. I have tried every means recommended in standard works for the form usually seen, along with most of our sedatives and antispasmodics, such as sumbul, chloroform, &c., with no good result. On the contrary, I found the ordinary remedies so injurious here that I soon abandoned them in favour of *tonics*, using mild sedatives merely as an aid, an

antacid purgative, such as a dose of Henry's magnesia or the effervescing citrate, and the steady use of injections. The following history will, I hope, exemplify this class of cases better than any formal description :—

A gentleman engaged in speculations of a very hazardous nature, and subject in consequence to all the variations between the extremes of excitement and depression, consulted me respecting a gonorrhœa which he had just contracted. As he seemed very irritable and nervous I inquired into his history, and found that, after having been long in indifferent health, he had two years before been attacked with influenza, for which he placed himself under the care of a well-known physician.

The disorder slowly gave way, but he had never regained his flesh and strength ; his digestion was impaired, his appetite capricious, bowels often costive, urine loaded with phosphates and mucus, tongue coated and marked by the teeth. He was haunted by a feeling that he was growing smaller, which he said, in spite of its absurdity, he could not shake off. The discharge from the urethra was thin, yellow, and profuse, much like that occasionally seen without any manifest cause in elderly men. There was no particular uneasiness about the parts of generation ; no pain in making water, chordee, or swelling of the prepuce. The discharge had appeared only two days previously.

A mild saline aperient was ordered, and as the patient was very timid only a weak injection was employed. In a few days the irritability of the bladder became so excessive that the injection was instantly thrown out again with a little urine, and the patient had to make water three times in the first half-hour after. This state continued to a certain extent up to a late hour in the evening. He was ordered meat and a glass of port daily, quinine and sedatives were given, and as it was found that the occasional use of brisk cathartics induced much less irritability of the bladder and rectum than the mild aperient had done, they were substituted. Injections of nitrate of silver, however, were principally relied on to remove the discharge.

The first effect of these was to increase the irritability of the bladder for an hour or two after using them, when it quickly ceased and did not return till the injection was repeated the next day. Having syringed out the anterior part of the urethra, the tube of the long syringe was passed down, and when withdrawn pus was

found adhering to its point. This symptom, coupled with the extreme tenderness of the whole of the urethra, led me to believe that the gonorrhœal inflammation had extended backwards to the neck of the bladder, if not also to the cavity of this viscus. The long syringe was substituted, and the injection was gradually raised to the strength of ten grains to an ounce; an amount I have often found necessary whenever it was requisite to apply injections low down. This alteration had the desired effect; the discharge diminishing steadily, though it did not entirely disappear for six weeks. The irritability of the bladder grew gradually less, but to the very last the patient was always compelled to sit down immediately after an injection; and hence, as they were continued occasionally for some weeks after, it may be assumed that this irritability endured, in all, full ten weeks in a rather severe form. There was no relapse, the patient gained flesh and strength under the use of quinine, and married soon after.

8. *Excessive Irritability of the Rectum* seems principally due to the sudden and irregular distension of the urethra by the injection. I injected a gentleman with solution of nitrate of silver for a gleet which had been treated with chloride of zinc injection and copaiba; he was compelled to make a precipitate retreat to the water-closet. The next day I made the injection quite weak, although the first had occasioned no great pain; the irritability of the rectum was still as great. I then used the caustic plug described at page 89; this did not induce any irritability of the rectum, and four applications removed the discharge. It came back a little, and he never summoned up resolution again, saying that "for a mere drop of discharge it was not worth the trouble."

9. *Perineal Abscess*.—Of gonorrhœa accompanied by this complication I cannot give so favourable an account, not having found it so amenable to treatment as might have been expected. Fortunately enough it is rather rare.

It is laid down as a rule of treatment that leeches, antimony, calomel, and black draught should be exhibited for this affection. Those who have succeeded with these remedies in checking the progress of perineal abscess have had better fortune than has fallen to my share, as they have never appeared to me to exert any material influence over its course.

The only remedy from which I have ever found benefit arise is the potassio-tartrate of antimony in large doses, aided by the appli-

cation of water at nearly scalding heat to the perinæum, and sometimes the free application of the nitrate of silver to the surface.

In six cases out of eight in which I collected the history, and had an opportunity of tracing them to their close, a complete though slow cure of the abscess took place; the gonorrhœa, however, proved more difficult to subdue than in any other cases. In the seventh the patient, just as the abscess was a little improved, gave up the medicine in disgust, and soon returned with a larger and more painful swelling. This was also subdued by the use of the antimony; but though he attended regularly, the urethra long felt hard and tight at the seat of the abscess, and a gleety discharge remained which proved very intractable. On passing the bougie the canal did not appear much narrowed, but it was somewhat twisted and peculiarly hard and inelastic; there was also considerable dribbling after making water. More than a year after this I met him, when he informed me that he had had no return of the gleet, but the uneasy feeling of hardness was still there.

The eighth case was that of a gentleman in whom the abscess had been checked eighteen months previously by the heroic use of leeches, poultices, &c.; since that time the discharge had never diminished and was now thick and yellow. He had taken large quantities of medicine, principally copaiba and cubebs, but without any result, except that of increasing disgust for "all physicking." For three or four months he tried blisters, aperients, and injections with unwearied perseverance, but with no effect. I wanted to cauterize the urethra and use bougies, but he said he had suffered so much that he could not bear the idea of instruments. At last he permitted me to introduce a gum-elastic bougie; on reaching the seat of the abscess, the urethra was found excessively tender and irregular. Three years subsequently he again consulted me for two confirmed and very tight strictures of the urethra, one of which was only an inch and a half from the orifice. He had for some time always carried a small bougie, which he occasionally passed a little way down. The discharge had never ceased; his health seemed quite broken down, and he presented a melancholy picture of a constitution never very sound, now to all appearance ruined for want of resolution to undergo a mild operation. He still persisted in refusing to allow bougies to be used. Subsequently I attended him for complete retention of urine, and succeeded in passing a No. 2 catheter with the greatest difficulty, just as the symptoms

had become too serious to admit of further delay, and after I had resolved, if this failed, to pierce the bladder from the rectum. Although he knew in what jeopardy his life had been placed, and though strangely enough his brother died about this time from stricture, he seemed after his recovery to grow more indifferent than ever.

These cases, coupled with others which I could not watch so completely, quite impressed me with the conviction not only that perinæal abscess should be attacked with the utmost vigour, *but also that the treatment ought to be continued till the hardness has entirely disappeared.* Subsequent experience has enabled me to verify this opinion; and of late years I have always, so soon as the antimony had checked the inflammation, used the iodide of potass in combination with liquor potassæ till some effect was produced. The perinæum should be blistered as often as the patient will allow it, and during the intervals blue ointment combined with camphor may be rubbed in every night. The bougie is also to be passed twice a week, so soon as the state of the urethra will permit. If suppuration cannot be averted, the matter should be let out by a *small* puncture with an insect-needle.

10. *Inflammation of the Prostate.*—On this complication I need not dwell, as the case I have given in the section on “weakness” will exemplify the treatment better than description. It is one of the few complications, if not the sole one, in which leeches appear to be of service; in all other respects it may be treated the same as abscess in the perinæum. So soon as it is checked, the treatment of the gonorrhœa may be resumed.

A few years ago, when it was thought that the running in gonorrhœa is the natural cure of the disease and the effort of nature to throw off the virus, death from disease of the prostate was not at all uncommon,¹ a fact which it is just as well not to lose sight of entirely. A case of death from abscess of the prostate, following upon gonorrhœa, occurred some years ago at St. George's Hospital, under the care of Dr. Pitman.² The patient was a man of five-and-twenty, and had only been suffering a fortnight when he was admitted, eight days after which he died. The abscess was not detected during life. The autopsy revealed nothing beyond extensive suppuration in the gland, and profuse purulent discharge from the urethra.

¹ Howard, *Op. cit.*, vol. i. p. 218.

² *Lancet*, 1860, vol. i.

11. *Gonorrhœal Rheumatism*.—Of all the complications this is, I think, without exception, the most formidable and the least amenable to treatment. Whether a simultaneous affection of the eye and fibrous tissue depends upon a conjunction of two varieties of diathesis, or whether when one alone appears it owes its origin to a less-developed form of the same disease, I must—though my own convictions lean rather in favour of the latter view—leave to be determined by more able pathologists than myself. I refrain from discussing subjects upon which I can throw no light. What little I have to say will be found in the section on ophthalmia.

The question, however, of whether these disorders are constitutional effects of suppressed gonorrhœa, appears to me of so much importance, that I wish to examine it a little more fully. Having been led to adopt views differing widely from those generally received, I offer them with diffidence.

I have in different papers endeavoured to show that the organs of which the human frame is composed naturally divide themselves into four great classes:—1. Those of generative life; 2. Those of animal life; 3. Those of organic life; 4. Those which possibly represent some form of extinct life on the globe, and which at any rate play no ascertained part in the human economy—as the thymus, thyroid gland, &c.; that maladies commencing in one class have little tendency to pass to another set of structures, although one class may sympathize with another, and that this *sympathy* and this *slight tendency* obey some law which has yet to be worked out.

Thus in gonorrhœa—an affection of the organs of generation—such structures as the eye and skin, fibrous tissues, &c., sometimes, though rarely, become involved, those of organic life never; that which distinguishes man from other animals may sympathize, the structures which distinguish essentially the animal from the vegetable do not. When gonorrhœa first attacks a patient, the weariness, lumbar pains, &c., show a sympathy between the generative and the animal life. Rheumatism and ophthalmia are also evidences of the working of this form of sympathy. But if ill-health (an affection of the organic life) ensue, it is from the prolonged action of medicines and the mental irritation caused by the tedium of the disease. Or if one of the fourth class of structures, as the prostate, become involved in the extension of the gonorrhœal inflammation, it is mechanically, it is by the sympathy of contiguity only; the distant organs of this class, the thymus gland, spleen, &c., never suffer.

If these inductions be correct, the diseases attributed to suppressed gonorrhœa are simply due to the disturbance occasioned by gonorrhœa calling into play a latent tendency to disease. Indeed there is no such thing as a suppressed or repelled gonorrhœa, especially here where the discharge is almost always present. It may be temporarily kept in abeyance, as by cholera or fever; but what really suppresses, cures it.

Moreover, I have frequently seen gonorrhœal rheumatism where neither medicines nor injections had been used. So sudden is the outbreak of this terrible affliction, that the pain has sometimes begun within forty-eight hours after the coming on of the discharge, and I have even known patients uncertain as to which began first. It may appear as late as three months after the discharge has first shown itself. I have seen it attack the hip, loins, and great pectoral muscle, and Dr. Elliotson has seen it fasten on the jaw with great severity. Swediaur and Foucart have noticed it in the heel,¹ and Velpeau, Moffait, and others² have seen it bring on suppuration in the anklejoint.

The tenacity with which this rheumatic form of action continues in some persons is extraordinary. In the beginning of January, 1857, a young, healthy-looking man applied to me with chronic gonorrhœal rheumatism, which had incapacitated him for four successive winters from doing any work. It was principally seated in the sole of the foot, and the pain was so severe that he could not stand more than half an hour. If he attempted to exceed this time, a hot burning pain attacked every part on which the weight of the body rested, and this soon became so severe as to compel him to lie down. Even when resting the pain grew so excessive towards night that he could not wear a boot. He had wandered about from one surgeon to another, till at last, from sheer poverty, he was obliged to enter a hospital, where he remained eight weeks. He came out as bad as he went in. This seemed a strange state of matters; however, the iodide of potassium and strong blisters to the feet relieved him so rapidly that in five or six weeks he was able to do a little work; after this he left off attendance. I learned from time to time that he was steadily improving, but I never knew whether he was cured, though I was informed by his landlady that he could get through a fair day's work.

¹ *Quelques Considérations pour servir à l'Histoire de l'Arthrite Bléorrhagique.* Bordeaux, 1846.

² *Union Médicale*, 1851.

In this case the pains began three days after the appearance of the gonorrhœa, and resisted three separate salivations carried so far as to loosen the teeth. What else he had used he could not tell; but I gathered from his account that galvanism, cramps to the feet, and mustard-poultices had been tried.

In another case the patient, a labouring man under my care as out-patient, could not carry his hand to the back of his neck, and was almost incapacitated from doing any work; yet the first blister so relieved the shoulder in which the pain was principally seated, that he informed me the ointment (employed after the blister) had "soupled" the joint. At the end of ten days he could place his hand on the back of his neck, and a second blister so far improved him, that to my regret he left off his treatment and went to sea again.

In a third case the patient was attacked quite ten years previously, and was confined to his room the greater part of the first eighteen months, under the care of a surgeon who really seemed to have done almost everything that could be done. Amongst other things he took lemon-juice in such quantities that he used to buy the lemons in Covent Garden by the hundred. A long and most tedious recovery left him very lame, both in his hands and feet. About six years afterwards he contracted another discharge, for which he placed himself under my care, and immediately another attack of rheumatism fastened upon him. For weeks he could scarcely turn in his bed, and at the lapse of four years was little better than after his first attack. The persevering use of iodide of potassium and tartar emetic ointment were almost the only things that did him any good. This case then equals, if it does not exceed in severity, those related by Sir Benjamin Brodie, and which, I believe, first made known this abominable complaint.

In a fourth case, seeing within the first day or two that signs of rheumatism were showing themselves, I closely questioned the patient as to whether he had ever suffered from this complaint or not, and learning that he had, I begged of him to let me take the most energetic measures at once. Instead of this he went down into the country and thoroughly neglected it. Rheumatism of the most violent character at once assailed both thighs and both knee-joints, extending seemingly up the sheath of the spinal cord, as when I next saw him a few months after he could not stand steadily, and was almost paralyzed from the loins downwards. Even then nothing

could induce him to be prudent, and in this shattered state, a perfect wreck to all appearance, he contracted another discharge. The result was an immediate exacerbation of the rheumatism, which had remained bad all the time. The paralysis also rapidly gained ground from this time, and when I last saw him, *a very few weeks after the first appearance of the discharge just spoken of*, he was unable to get up even two stairs, and could not stand at all. All control over the rectum and nearly all over the bladder was lost.

In a fifth case the patient, a fine, strong, healthy, and very active man, who certainly would not have allowed any trifle to lay him up, was attacked with this rheumatism in the shoulder almost directly after the gonorrhœa showed itself, in such a violent form that he was four months confined to bed, though his surgeon, a gentleman at the head of the surgical department of a large hospital, showed every attention to the case.

Another patient, who had already suffered from periostitis in the tibia, had an attack of rheumatism from a slight discharge. It was subdued, but the treatment was broken off before anything like a complete cure was effected. Soon after the rheumatism appeared he had complained of an uneasy feeling in the site of the periostitis, and shortly afterwards this returned with such severity, that, after nearly losing his leg, he was glad to escape with two abscesses in the tibia and a serious illness of several months' duration.

I am ready to admit with Mr. Johnson that the immediate cause of this affection is buried in the deepest obscurity. It most certainly does not arise from the suppression of gonorrhœa, which, so far from undergoing any change, often grows worse, and continues for long after the rheumatism begins. Neither does it arise from the use of copaiba and cubebs; no argument beyond mere assertion has been brought forward in support of this view. It was amply refuted long ago; and indeed, *the power of these or any known drugs to cause rheumatism of any kind may be very safely denied*. In the cases I have seen, by far the greater number had not taken specifics; if they had, it would not have altered the bearing of the question, as most of those who come under any surgeon's care for gonorrhœa *without rheumatism* have also been taking these remedies. Besides the affection has appeared in many cases where was even no gonorrhœa, as from the use of the catheter. In one of M. Velpeau's cases arising from this cause pus formed in the ankle-joint, and M. Moffait gives a similar instance.

It may possibly arise from the same cause, but I doubt its identity with ordinary rheumatism. In my practice it has attacked the loins, head, heart, and hands far less frequently, and the foot far more frequently than the ordinary form. It seems also much less dependent upon the state of the weather. Ordinary rheumatism, too, when it does fasten on the frame with such severity as to last for years, is generally more severe at the outset than gonorrhœal rheumatism. It is not a common thing for the *very first* attack of rheumatism to lay strong men up for three or four months. It often shows itself in a patient who has neither had rheumatism before nor manifested any rheumatic tendency. Again, when it is cured it does not, according to my experience, return unless the patient should be again infected, when it frequently reappears, however thoroughly it may have been cured, and this after a long interval of perfect freedom from its attacks. It attacks the eye more frequently than ordinary rheumatism does. The premonitory symptoms are, according to Dr. Bumstead, less marked than in ordinary rheumatism, and there is less constitutional disturbance. It does not appear to be connected in any way with unusual sensibility of the urethra, though this cause has been advanced in consequence of its appearing less frequently in women, who, it is well known, are not so sensitive in these parts.

Mr. Johnson says he has generally found this affection in persons of a "gouty habit." If by this be meant persons who have previously had gout, I can only say that I have not observed the fact; if by "gouty habit" be meant a temperament disposed to gout irrespective of its having ever shown itself, a temperament so marked that an observant surgeon can predict its possessor will one day be gouty, I reply that I am quite ignorant of the signs which point out such a diathesis, and that I am rather incredulous on this head. Mr. Johnson tells us that it has all the features of rheumatic gout, but I know of no such disease. A patient may have gout and rheumatism at the same time, but that is a different matter.

Treatment.—In the acute stage, the hydrochlorate of ammonia should be given in half-drachm doses every two or three hours.¹ Should this fail, free use may be made of the *nitrate of potass*, which

¹ R Ammonii chloridi ʒiij.

Syrupi flor. aurant. ʒvj.

Aquæ menth. pip. ad ʒvj. m.

Capiat coch. amp. duo ex aquæ camphoræ cyatho vinar. tertiis horis.

can be given in scruple or half-drachm doses every three or four hours in guiacum mixture. Mr. Johnson says he has no doubt that guiacum acts here as an evacuant, because it induces free perspiration; but it may be observed that rheumatism is not unfrequent in hot weather, when perspiration is generally much more free than at times when this affection is less prevalent, and vapour baths which bring on profuse sweating often totally fail to relieve it. Should the patient be very low and the tongue coated, the infusion of serpentaria or cascarilla is, I think, preferable as a vehicle for the potass. If the reader be of the antiphlogistic school, he may for conscience-sake give a little antimony with each dose, though, so far as my experience goes, I should say it was useless.

At the same time the bowels should be kept freely open, and I know of no better remedies than a colchicum pill¹ followed by a dose of *calcined magnesia*. A teaspoonful of Henry's magnesia every morning is to my thinking the most efficacious medicine of the kind. The pain should be alleviated, and if the reader chance to know a better remedy than opium and morphia combined, or morphia in conjunction with acetate of ammonia,² I should be glad to hear of it, as, like all other sedatives I have tried, they are objectionable; for instance, it is difficult to give them in any form without bringing on constipation and torpidity of the liver. However, taking it all in all, I fancy they are the best. If the patient can manage to get the dose down, Dover's powder is not a bad form for giving opium. As to the theoretical objections often made by patients to the use of this valuable drug, they are simply absurd; there is no milder word for them. Dr. Bumstead strongly recommends cupping or leeches. I hold dry cupping to be an excellent means of giving relief, and

¹ ℞ Ext. colch. acet.,
Pil. hydrargyri, aa. gr. vj.
Ext. hyoscyam. gr. xii. ℥ ft. pil. vj.

Sumat unam horâ decub.

Should the pain be very severe, I would advise postponing the use of this pill until some relief has been obtained from the employment of the sedative.

² ℞ Morphiæ acetatis gr. j.
Opîi purif. gr. iv. ℥ et divide in pil. iv.

Capiat i. horâ decub. Or—

℞ Morphiæ acetatis gr. j.
Liq. ammon. acet. ℥ix.
Mist. camphoræ ad ℥iij. ℥.

Capiat partem tertiam horâ decub.

strongly recommend it, following up its employment by the application of one of the embrocations given below.¹

So soon as ever the first severity of the disorder is checked, another class of remedies will have to be called into service—a class particularly adapted to the more advanced stage.

Foremost among these stands iodide of potassium. Should the surgeon decide upon giving it *alone*, I would venture to suggest that it should be ordered in five-grain doses and be prescribed with some aromatic tincture or infusion, and a mild diuretic, as the spirit of nitre or juniper: the one to prevent its disagreeing with the stomach, the other to obviate the dryness of the fauces which will sometimes follow the use of even moderate doses of this salt. But, in my opinion, it acts much better accompanied by the use of the red iodide of mercury, one-sixteenth of a grain three times a day, and then rather a less quantity is required. I know of no better mode of prescribing the two in combination than that given below.²

Another excellent remedy is colchicum. Should the surgeon object to the pill already prescribed, he may give one of the tinctures or wines. When a fluid preparation is called for, I prefer the wine of the corms. The dose in the pharmacopeia is given at ten to thirty minims, but according to my experience it is absolutely necessary to give quite the latter dose, or even more, twice a day, or twenty minims thrice daily. No fear need be felt about giving this quantity: I have ordered twenty drops at a dose several times

¹ ℞ Guttæ nigræ,
Chloroformi, aa. ʒj.
Lin. camphoræ,
— saponis, aa. ʒiij. ℥.

Ft. embroc.

Or—

℞ Chloroformi ʒj.
Linim. belladonnæ ʒviij. ℥.

Ft. embroc. A very good plan of applying these liniments is to sprinkle a teaspoonful or two on a piece of spongio-piline and then bind this upon the affected part. I believe many chemists now keep a tincture of opium of the strength of Cook's black drop.

² ℞ Potassii iodidi ʒij. ad ʒj.
Mist. camphoræ ʒiiss. ℥.

et solve; dein adde

Hydrargyri biniod. gr. j.
Syrupi flor. aurant.,
Tinct. chirettæ, aa. ʒvj.

Capiat coch. min. ij. bis terve quotidie.

to a girl of eleven years, *and seen the dose taken*, without any ill effects. The reason why colchicum so often fails is that it is given in a form which insures all its distressing effects, and in quantities so small as to be quite useless. It should be kept in large bottles, as suggested by Home, in order to insure the settling of the gum and starch, which most probably bear with them the colchicin. Only the perfectly clear liquid should be used, and of this a couple of drachms may be given daily without bringing on either purging or sickness to any extent worth notice. It can be given along with the iodide of potass mixture, and both should be taken after a meal.

Mr. Johnson doubts whether colchicum can be "a substantive remedy" for gout or rheumatic gout, because it is beyond what his "*chemistry or physiology can comprehend*," that "it should rid the blood of those poisonous constituents which are in excess." Such an opinion, accompanied by the alarming statement that "its continuance" may lead to organic deposits, tophi, or fatty heart, might lead hundreds to refrain from the use of this valuable remedy to the extent to which, if employed at all, it requires to be carried. These fears, however, are quite gratuitous; ample experience has shown that colchicum, properly prescribed, may be used for years. Mr. Johnson does not object to its use so much, provided that "with alkalies and with the neutral and diuretic salts *we antagonize the acids* of nitrogenous origin," and dismiss them by the kidneys and skin. I should have thought it was somewhat difficult to antagonize an acid with a neutral salt, and that to prescribe alkalies, neutral salts and diuretic salts all in one sentence, was rather vague for a chemical theory of treatment.

But what nitrogenous acids are there in the blood? Perhaps uric and hippuric acids are meant; if so, a little more precision would have possibly conduced to a clearer understanding of the matter, as sceptical people might be induced to say, that if present in the blood they are already pretty well neutralized. But their presence in this fluid is quite a moot point. It is not very certain that uric acid exists free even in urine; that it circulates free in the blood to any extent, is as a rule quite out of the question, and this holds good of hippuric acid. Besides, the fact of the blood being alkaline precludes the possibility of such a thing as free acids being found in it.

It is always most painful to me to write in this way, but Mr. Johnson has shown so little mercy that he cannot expect much, and

I should be wanting in moral courage were I not to say at once, that if treatment is ever to be made dependent upon chemical theories, the patient will be safer in the hands of a hospital nurse than of a learned physician. If we are to hold to doctrines exploded in the days of Voltaire and Molière, let us at all events be consistent, and begin by burning the works of Hunter, Brodie, and Cooper—people who trusted a good deal to experience—and branding them as impostors.

We hear lecturers speak with pity of the schoolmen whose absurd theories such giants as Bacon and Descartes, Locke and Newton, found it hard to overthrow. But a great deal is said in arguing about treatment of disease which seems of much the same cast; and if the human mind is ever going to cast off the shackles of humoral doctrines, which seems rather doubtful, it is time men stirred in the matter.

I have so repeatedly stated my conviction that observation is the only guide to treatment, and that reason must be guided in its groping trials by the torch of experience, that I can say no more, and I therefore gladly avail myself of this opportunity to recommend to the reader a most able pamphlet on the subject by Dr. Bushnan;¹ a bold and powerful criticism, in which the narrow limits of the rational system of medicine are clearly pointed out. The physician, he most justly says, who is guided by precepts, trusts to rules drawn from observations *made on the species at large* and applicable only to a limited extent to the case before him. At the best, such principles have but the force of moral certainty; there is no such thing in medicine as the certainty we find in science; they are hardly entitled to the name of principles. Valuable remedies are discovered by experience; science may show how their sphere of action is to be extended. Purely rational medicine says fever and tetanus are the same form of action; give the same amount of opium in both and see what will be the result. Enteritis and pneumonia are both inflammations; give a patient with inflammation of the bowels as much tartar emetic as may be prescribed with safety for a man suffering with pneumonia, and you simply kill him.

It is not for a moment contended that a surgeon who holds to bedside experience as to his sheet anchor should necessarily be ignorant of everything else, as so many writers would fain have us

¹ *Remarks on the Narrow Limits of so-called Rational Medicine.*

believe. Let imagination range at will over physiology and pathology, over chemistry and pharmacy. Let the reader avail himself of any aid they can give, but do not throw aside the teachings of experience at the bidding of a theorist. Read the history of medicine, and "see how vain have been the efforts of the greatest ornaments of the profession to render Medicine rational, without imbibing, what so remarkably characterizes some of the smaller men of the present age, a contempt for the labours of the medical worthies of past times."

The use of *blistering* cannot, I think, be too strongly inculcated, and the part affected should be blistered not only thoroughly but repeatedly. Sometimes, as in old cases and where the foot is the principal seat of the pain, blistering by cantharides is not strong enough. The tartar emetic ointment however will generally in time get through the toughest skin, and is often most useful. In rheumatism of the head, or when the pain seems disposed to assume a neuralgic form, atropin or veratrin in ointment may be applied. One grain of the former or ten of the latter should be mixed with an ounce of lard. It is to be applied very sparingly, just enough to bring on a feeling of coldness or numbness in the part and no more.

In some obstinate cases a joint may be bandaged with mercury plaster, or the hot douche may be used, or even pumping cold water over the part may be tried. My experience is that the resolute use of the hair-belt is about the best remedy yet found out.

To sum up then, I should say the best treatment was muriate of ammonia at the outset, with a colchicum pill, and when the pain was very severe a sedative at night, accompanied by dry cupping and a sedative embrocation; followed by iodide of potassium in conjunction with biniodide of mercury and colchicum, accompanied by counter-irritation.

12. *Gonorrhœal Ophthalmia*.—As I did not feel satisfied with my own observations respecting gonorrhœal disorders of the eye, I requested the assistance of Mr. Robert Taylor, on whose opinion I felt I could perfectly rely.

Mr. Taylor distinguishes—1. *Gonorrhœal Ophthalmia*, resembling ordinary purulent ophthalmia, except in its origin, which is due to the contact of gonorrhœal matter. The conjunctiva is first affected, and thence, if unchecked, the inflammation extends to the other tissues. It is a very destructive form of disorder, but Mr. Taylor

is not satisfied that it is more so than uncomplicated purulent ophthalmia. Considering the prevalence of gonorrhœa, it is a rare disease. This is a fortunate state for the patients, as the disorder is so uncontrollable. As to its origin from the contact of purulent matter, I have only one observation to make, which is that I believe in far the greater number of cases the pus never comes into contact with the conjunctiva at all ; indeed, though a few well-authenticated instances have occurred where pus was launched right into the eye, yet this accident must for obvious reasons happen but very rarely ; and the probability is, that if the application of matter be the cause, it acts first upon the lids on which it is accidentally smeared, much as I believe in gonorrhœa the irritating vaginal pus is really only applied to the mouth of the urethra.

2. *Gonorrhœal Iritis*, which may or may not be accompanied by gonorrhœal rheumatism. It attacks principally the iris and other internal structures, and is *not* accompanied by purulent discharge from the conjunctiva. Mr. Taylor speaks of it as very rare. It is quite unknown to me.

3. *Rheumatism of the Eyeball*, affecting the sclerotic, iris, and other tissues ; rather a common disorder, sometimes accompanied by rheumatism in other parts of the body, though sometimes the eyeball alone is affected. Patients who suffer from it are always of the rheumatic diathesis, and in the majority of instances have previously suffered from articular or muscular rheumatism. At any rate it seems to be constitutional in its origin, that is to say, it is not exactly dependent for its existence on weather, habits, a first attack of gonorrhœa, &c., for it has been known to recur four or five times in the same person.

This form, accompanied by purulent discharge from the conjunctiva, is the only affection I am familiar with, arising unmistakably from gonorrhœa. It was never found destructive to the eye in my practice, and is widely different from pure purulent ophthalmia.

Mr. Holmes Coote, however, gives a case clearly arising from this source, in which the patient, when last heard of, was lying in a darkened room, with the eyesight quite unfit for useful purposes, and in a questionable state as to ultimate recovery. It is said to be peculiar to males.¹ There may very possibly be a cause for this

¹ Lawrence *On Diseases of the Eye*. 1841, p. 280.

in the lower organization of the parts originally attacked in the female, so that gonorrhœa does not excite a disorder with such extended ramifications as in the male.

As to this disorder arising from repulsion, considering how often this idea has been refuted, it may now be assumed that it is sheer waste of time to argue with persons who make use of it. You might as well dispute with a man who denied the circulation of the blood, or that the earth moves round the sun. The very act of running counter to all common sense and experience has a charm for some minds. A village schoolmaster who couldn't speak twenty words without some mistake, once told me with an air of profound wisdom that he didn't believe all *as* Sir Isaac Newton taught. He had once been to London and heard a great preacher lecture there on the figure of the earth, who quoted the Bible and then said, "Would any man stand on the top of a high mountain, or by the shore of the ocean, and look on it and then tell him that the earth was round? He should like to see that man." The preacher was wise in his generation; of course he didn't see "the man," but he stopped all argument by sticking at no assertion however outrageous. In the same way, those who talk of repulsion are wise. They use a figure of speech patients can understand, and they save themselves the trouble of thinking. They begin with assertions which, having no other value, are clearly expected to derive weight enough from the fact of their being patronized by the speaker or author in question, and these assertions are supported by arguments which have every merit except that of a base to rest upon.

Gonorrhœal ophthalmia is a disorder which admits of no trifling, and therefore the surgeon should begin as energetically as possible. I believe the best application is the nitrate of silver, in weak solution at first, and rapidly increasing the strength till even the solid form can be used. I advise it to be applied two or three times a day at least, four grains to an ounce; and if this should not arrest the march of the complaint, go, without loss of time, to the solid nitrate. I have never seen it fail if used early and freely enough.¹ If there be any chance of destruction of the cornea, free incision should be resorted to.

Mr. Travers² advises division of the external canthus and mercury, but Mr. Coote's advice to remove the swelled mucous membrane

¹ Brown, *Dublin Quarterly Journal*, Aug., 1856.

² *Guy's Hospital Reports*, 1857, p. 192.

with scissors is, to my thinking, the best and simplest way of dealing with the difficulty. I am quite of Mr. Coote's opinion, that the danger of dividing the vessels supplying the cornea is imaginary. An evaporating lotion containing solution of the acetate of ammonia and spirit of wine or ether, should be freely applied to the forehead and eyebrow. Dr. Durkee recommends injecting warm water in a fine stream. When sloughing has begun he considers solution of alum, six grains to an ounce, and undiluted liquor plumbi valuable applications.

As to the internal treatment, with the exception of mild, warm purgatives, I know of nothing that is likely to be of service but calomel and opium. I have always given the latter very freely indeed, one or two grains every two or three hours till the pain and uneasiness were thoroughly checked, but of the calomel I have never made but a moderate use. As to bleeding, it seems but another word for almost certain mischief; the only inference to be drawn from the horrors recorded by Wardrop, Lawrence, Adams,¹ and others, is that at least half the victims to the destructive influence of antiphlogistic treatment lose their sight. Thanks to the labours of Critchett, Bowman, and other excellent observers, these frightful affairs are fast becoming matters of history.

The treatment of the rheumatic form is simply that of rheumatism itself. Solution of nitrate of silver should be dropped into the eye every day, and *the lids brushed over with the same fluid*. Free use may be made of spirit lotions over the eye. Mr. Johnson speaks very highly of liquor plumbi as a local application, and I can see no possible objection to its use. With all possible care, the cure is apt to prove tedious. Dr. Durkee recommends² poultices containing a large proportion of powdered green veratrum. As to the treatment of gonorrhœal iritis, I have no remarks to offer.

13. *Strong Tendency to Bleeding* is the last of these complications. All those I have seen affected with it had suffered from disorder of the liver. The mildest injections produced bleeding from the urethra, and I was obliged in all cases to give them up until this tendency gave way, which it generally did in a little while under the use of aperients and tincture of steel. The gonorrhœa was very mild in these patients.

This bleeding is not like that from injury to the urethra, or that

¹ *Lancet*, 1852, vol. ii. p. 289.

² *Op. cit.*

form of congestion in which the blood, to use the excellent simile of M. Robert, issues like water from a sponge when squeezed. It is a slight but very persistent trickling.

The bleeding generally seen is, in nine cases out of ten, due to neglect and want of rest. The conditions under which it occurs generally point so clearly to the treatment required, that I should scarcely have thought it necessary to say more than that they are comprised in three words—rest, cold, and pressure. Mr. Cooke, however, mentions a case where the surgeon injected tincture of iron into the urethra to check the bleeding, and succeeded in doing so, but at the same time coagulated the blood into such a firm plug that an opening had to be made behind it to let the urine out! So that it is necessary to give due notice that this at least should *not* be done.

CHAPTER VI.

GLEET AND INVETERATE GONORRHOEA.

First Class—Gonorrhœa of Long Standing, simply owing to Neglect, 201.

Second Class—Intractable Gonorrhœa, 209. Third Class—Muco-purulent Gleet, 211. Fourth Class—Pure Mucous Gleet, 211.

AT first sight nothing seems easier to cure than a gleet; yet few slight complaints are more difficult to subdue, and the number of remedies suggested by authors only proves how often all their resources have failed.

Some authors—as Professor Graves, M. Ricord,¹ Mr. Whately, &c.—candidly confess that they have met with instances where the disease did not yield to any treatment; but others are rather careful how they commit themselves to any very decided statements. The manner however in which the subject has been handled leaves no doubt on the mind of the reader, that the authors in question are quite familiar with those obstinate cases which go on for months, or even years, till at last the patient gets so thoroughly sick of medicines, that he makes up his mind to endure an evil he cannot remedy; or if he happens to be a Frenchman, M. Robert tells us that he not unfrequently conceives a disgust for the world, goes mad, or decides that suicide is better than taking jorums of copaiba, cubebs and alum, tar-water by the quart, and creosote to the extent of one or two drachms daily, besides being made the subject of interesting experiments with iodide of iron, sulphuret of cadmium, catechu, tannin, or the last new drug.

The following digest will, I think, comprise the pith of all the directions and suggestions by those authors I have consulted:—The

¹ *Traité Pratique*, p. 744.

specific remedies having failed, they may be tried combined or along with steel or cantharides;¹ then the bougie, simple or armed,² the latter being, when of any service, often intensely painful,³ often failing, and almost invariably requiring to be repeated; violent exercise; a mercurial course, or one of Zittman's decoction⁴ is to be used, or the urethra may be cauterized; these failing, constitutional treatment is to be suggested, or change of air, sea-bathing, or the cold plunge bath, or perhaps an alterative course of mercury. Finally, we are told of cases where the *coup-de-grâce* has been given to the rebellious disease by some desperate remedy, such as an injection of brandy, a violent debauch, a drastic purgative,⁵ a seton, or a blister to the perinæum—so that the despairing reader has a method of getting out of the difficulty equally useless to himself and to the patient.

It is very safe to go into generalities, to offer simply collective experience, but it does not meet the difficulties of the subject. A surgeon, who has an obstinate gleet to cure, does not feel much wiser after reading over a list of remedies which would take two or three years to become thoroughly acquainted with.

Now, when a case of gonorrhœa or gleet has been regularly treated for thirty days, and at the end of that time is no better; if during all this time the surgeon has reason to think that the patient has given the treatment fair play, and finally, if there be no complication, such as swelled testicle or abscess in the perinæum, my opinion is that it will not be cured by the ordinary remedies more than once in fifty times; nay, I question if any benefit result from employing them: and could we attain to a sufficiently accurate diagnosis at the outset, it would, I think, be better to resort at once

¹ Dr. Bumstead considers cantharides to be useful in gleet. He says "experience has shown that this drug exerts a decidedly curative action in many cases of gleet, and in gonorrhœa also in the chronic stage."—*Op. cit.*, p. 107.

² Dr. Durkee uses, for arming or smearing the bougie, one part of blue ointment and two of extract of belladonna.

³ Mr. Johnson, one of the advocates for the practice, candidly admits this.—*Op. cit.*, p. 100. He also says that it is apt to induce inflammation of the testicle or bladder, and has seen bad stricture from it.

⁴ Dick, *Op. cit.*, p. 65.

⁵ "A gentleman had a gonorrhœa, all the symptoms of which continued for two months, and by taking at once ten grains of calomel, which purged him most violently, he was almost immediately cured."—Hunter, *Treatise on the Venereal Disease*, 1786, p. 77.

to a different plan. But I know of no means of doing this—and the only rule I can find for using extraordinary measures is the failure of others.

Again and again have I in such cases, at the wish of the patient, or from a desire to avoid recurring to my last resource, tried one medicine after the other, and injections of all kinds. The result always was, either that the patient left uncured, that some complication sprung up, or that a cure—if effected at all—was wrought by some totally different means. I have now given up this plan, convinced that *if one medicine fail, a second has just as little chance.*

It may be said that this is a very short time to fix for a trial, but I can scarcely recall a case of cure where there were no signs of amendment within a month. Delay is perilous; while we are trying to cure the discharge, stricture may be at the bottom of the mischief.

When a patient with long-standing gleet only comes under treatment at an advanced stage, the first step of all is to make out the history of the treatment. Many of these cases last so long solely because no pains have been taken to secure a different result.

Thus, in one case the disorder had continued twelve months, but the patient had only taken pure copaiba and sweet spirit of nitre: a cure was effected in three weeks by the daily use of an injection of nitrate of silver. In a second, the gonorrhœa had lasted five months, but on cross-questioning the patient, he admitted having neglected it: it was cured in a few days by mild aperients and sulphate of zinc injections. In a third, the patient said he had had it off and on for eighteen months. His plan had been to go to a surgeon for three or four months, and if not relieved to betake himself to another; thus perpetually beginning treatment anew. He reaped the results in the form of a stricture. A fourth patient had been treated at intervals for twelve months by injections, and at the end of the time had not learned to give himself an injection properly.

In order to make a purely practical arrangement of the subject, I purpose to eliminate all cases with such complications as stricture; next to join all varieties of gleet, except discharges of pure mucus, to gonorrhœa, for they are only one disease; and finally to divide this disease into four classes.

First Class.—*Gonorrhœa of Long Duration, simply owing to neglect.*—The discharge is generally not great in quantity, and is not

accompanied by much chordee or scalding on or after making water. Such cases generally yield to a mild aperient, as the infusion of rhubarb with soda, and an injection two or three times a day.

But if, at the end of thirty days, no improvement has been effected by these or any other means, the bougie may at once be passed; for every variety of discharge may be accompanied by more or less stricture, and the only sure proof of no contraction being present is that a bougie will pass.

Should this exist, it is needless to say that it requires its special treatment.

The unexpected size to which this work has already swelled, obliges me now to compress all I have to say on such a subject into the narrowest possible space. After having tried, and seen tried, most of the systems in modern use, I feel myself compelled to say, that, as a rule, all such operations as sudden expansion of the stricture, or division of it internally or externally, are almost always unnecessary, and only too often dangerous; *that except in the case of sudden retention of urine, they effect no purpose which cannot be gained more safely and painlessly by means of dilatation with the bougie to be presently mentioned, with applications of nitrate of silver*, and that at least nine times out of ten they are superfluous, inasmuch as the patient has ultimately, whatever operation be performed, to trust to gentle dilatation. I should be very sorry to offend any one by expressing this opinion; I am quite ready to bear ample testimony to the value of the inventions of Mr. Thomas Wakley and Mr. Barnard Holt, and to that of the operation devised by the late Mr. Syme, but I must adhere to the view I have expressed.

I would therefore recommend, as the first step, that a proper bougie be chosen. I give preference in the most unqualified way to the bougies made by Walters & Co., both on account of the shape, which is, to my thinking, far better adapted for finding its way through a stricture than that in ordinary use, and of the material, which is so soft that no mischief can be done to the walls of the urethra.¹ As to first of all passing a wax bougie, a bougie à boule,²

¹ The gutta-percha bougies recommended by Mr. Acton (*Practical Treatise*, 1851, p. 156) are most dangerous instruments. At least four cases have been reported in which it was necessary to perform the operation of lithotomy, in consequence of these bougies breaking in the urethra.

² Dr. Dick, who has paid great attention to gleet, thinks very highly of the ball staff, and considers that in many cases of gleet and diseased urethra it is

or any other implement of the kind, I hold it to be totally unnecessary. A surgeon, whose hand is properly trained—and no other ought in such a case to attempt to pass a bougie—can learn everything really requisite from using this instrument.

The second step is, having made out the size, that the bougie should be *properly* passed twice a week. By properly, I mean that it should first of all be plunged into very hot water, that it should then be gently and slowly passed quite into the bladder, and that it should never be suffered to remain in the urethra more than two or three minutes at the utmost. My experience has satisfied me that to pass a bougie too often, or to let it remain in the passage too long, is a mistake, and that instead of hastening the cure, it is very apt to retard it, by setting up so much irritation that instead of the stricture yielding more rapidly it becomes more contracted. Too much gentleness can never be exercised, and if I have learned one thing more than another from experience, it is that when the stricture is very tight, irritable, and resilient, gentleness will get through it more frequently and effectually than any brusque movement. The more sensitive too a patient is to pain, the more is this treatment adapted to his case. I have repeatedly, when the patient had suffered so much from the use of a metallic or even an ordinary gum-elastic bougie, that he shrank from the very idea of an instrument, guided one of these softened bougies through without creating more than the most trifling uneasiness.

Should, however, the progress of the cure not correspond to the wishes either of the surgeon or the patient, should the discharge continue, and still more, should it be aggravated by the use of the instrument, I would suggest immediate recourse to the nitrate of silver, applied as described at page 178. When the patient prefers the

impossible to discover the seat of the affection unless we use it. He is however such an advocate for dilatation, that he thinks it absolutely necessary to push it still further when the urethra will admit an instrument which is as large as the orifice. My observations would lead me to think that contractions not tighter than this have no pathological significance.



nitrate to the bougie, and many do so, I would apply it regularly till the instrument slips, without any force being used, right through the stricture. When that occurs it is generally not necessary to do much more with either caustic or bougie. A few extra applications of either can do no harm, but they are seldom really requisite.

Whichever be used, bougie or nitrate, I think a tonic, such as quinine with sulphate of magnesia, or the tincture of the sesquichloride of iron, should be prescribed; an aperient pill should always be given at the same time.¹ When there is much pain on erection, some form of counter-irritant, such as the occasional friction with biniodide of mercury and veratrin ointment,² may also be employed. In addition to this the diet should be sedulously attended to. All heavy meats, such as pork, ought to be interdicted, and as to beer, it is, when it exerts any influence at all, perfect poison in such cases. My decided opinion is that till he has quite thrown off his complaint, the patient is much better without malt liquors. Violent exercise should be abstained from, as relapses often occur in consequence of giving way to temptation of this kind.

There is one case, and one case only, in which I long made a reservation in favour of sudden expansion, and that is where the patient *must* shortly leave England for a distance, as for India, &c., where he will probably be too far from any surgical attendance to rely upon it in the least. Here I did at one time look with some favour

¹ ℞ Quiniæ sulphatis gr. xij.
Acidi sulph. diluti ℥j.
Tinct. cardam. compos. ℥iv.
Aquæ cinnam. ad ℥vj. m.

Capiat cochlear. ampl. bis terve quotidie.

℞ Tinct. ferri sesquichlorid. ℥j.

Capiat minim. xxx. ter quotidie ex aquæ cyatho vinar.

Along with either a mild aperient pill, *c. g.*,

℞ Pilulæ aloes et myrrhæ, vel Pilulæ rhei compos. ℥j. Divide in pil. xij.
Capiat j. vel ij. horâ decubit.

² ℞ Hydrargyri iodid. rub. gr. iv.
Veratriæ gr. ij.
Olei olivæ m. xv.
Adipis ad ℥iv.

The veratria should be rubbed down with the oil and mixed with the lard. The iodide is then added. The ointment is spread thinly on a narrow strip of lint and bound on the under surface of the penis, where it may be suffered to remain two to four hours. If it cause any uneasiness it should be removed at once.

upon the operation ; but I have given it up. So many cases have, even after pretty fair dilatation has been achieved, turned out very badly indeed ; so many patients have been compelled to stop on their journey, or even to return home much worse than before the operation, some only to die ; that I think it is a much safer plan, and one by which more real progress is made, to apply the nitrate as freely as the patient's stay will allow, and then instruct him how to use the bougie. In such cases I have applied the nitrate as much as nineteen days in succession, and though a good deal of suffering was often caused, no other ill effects ensued ; the patients were always able to attend to all that was necessary for their departure, and in some cases I know they made fair and even good recoveries. Of many I, of course, heard no further, but no instance of any serious results has come under my notice, and that is more than I can say of speedy dilatation.

It may not, perhaps, be considered irrelevant to offer here a few remarks on the utility of employing the endoscope in these cases. I am sorry to say, that though I highly admire the ingenuity displayed in the construction of this instrument, as well as in that of the uretroscope invented by the late Mr. Avery, I am obliged to conclude that in their present form they are not practically of much use. The exceedingly small surface illuminated, the dimness of the light cast upon it, the loss of time, and the discomfort a patient must necessarily be subjected to even by the most expert operator, militate, in my judgment, most seriously against the use of both instruments. Farther, I think they teach nothing which cannot be learned as quickly and effectually by gentle manipulation and passing the bougie in the way I have mentioned. Dr. Dick says the instrument invented by M. Desormeaux is better, the light being reflected by an oblique mirror, but I have no practical knowledge as to its value.

But if no stricture be detected, I would advise that the penis should be blistered without delay, and whatever form of counter-irritant the surgeon may choose, observation will soon show him that there should be complete vesication. So soon as the soreness has passed off, mild injections can be employed. In most of these cases a single blister effects a cure ; in few does a second fail ; if it should, the use of the bougie, and touching the posterior part of the urethra *gently* with the nitrate of silver, will, assisted by a mild aperient and tonic, generally effect a cure.

As what I said on the subject of blistering has drawn forth some very erroneous remarks, I take the opportunity of placing the subject in its true light. I never thought of claiming the credit of having *discovered* that blisters cure gleet. I knew that blisters to the perinæum had been recommended long before I was born: nay, even in Hunter's time they were used for this purpose, as also to the under part of the urethra,¹ and Howard confidently looked forward to great benefits from their use; but I believe, that if other surgeons than the one mentioned by Hunter had ever resorted to blistering *the penis*, the remedy had at the time I broached the subject fallen into very undeserved desuetude; so much so, that, except in the one instance just referred to, I found no trace of the practice in the works I read. I certainly have met with a few injunctions not to blister the penis, which from their tenour I should have said were written by those who knew nothing of the matter, but this may be a misconstruction on my part. Of course, it is easy in all such cases to rake up some claim to priority.

A blister is one of the most powerful remedies that can be employed. It will cure almost any case that is not complicated with stricture. So far as my experience goes, it is, when properly employed, the most efficacious remedy we possess in many cases, and the best calculated to remove that painful susceptible state of the urethra often remaining after gonorrhœa treated in the usual way; the tendency to catch fresh infection, and the defective expulsion of urine and dribbling after making water, which lead so many patients to think they have stricture.

I have heard it condemned as a violent remedy. I appeal to the fact that many patients cured by it of gonorrhœa and gleet have, on being a second time infected, blistered themselves of their own accord.

Again, I have been told that I have overrated its powers. Among others, Dr. Bumstead says,² "It is to be feared, however, that this remedy has proved less successful in the hands of other surgeons than in Mr. Milton's. Recent writers, who have spoken favourably of it, appear to have done so chiefly on Mr. Milton's authority; others, as Mr. Langston Parker, have given their testimony decidedly

¹ *Works of John Hunter.* 1835, vol. ii. p. 224. Hunter simply speaks of two cases of this treatment having been mentioned to him: I do not observe that he ever employed it himself or saw it employed.

² *Op. cit.*, p. 114.

against it, and in my own practice it has not been attended with such success as to lead me to prefer it to other and less disagreeable modes of treatment." I think a fair way of meeting this is to refer Dr. Bumstead to the experience of Mr. Park and Mr. Chalmers Miles. Irrespective of these gentlemen, there are surgeons in England who have employed it at my suggestion, and have found it very successful indeed.

And why should surgeons hesitate to blister in gleet? They are not so scrupulous about using such a remedy in the vicinity of the eye, the most delicate organ in the frame. Why should the penis be the only part of the frame which we cannot vesicate? If patients complain of such trifling discomfort, it only shows how inconsistent and ungrateful man is. They must, then, really expect to be cured of these disorders without any sacrifice of trouble or convenience. If they had lived a century ago, they would have been only too glad to avail themselves of such a remedy.

In order that a blister may be properly applied, there are some points which, however trivial they may seem, require as much attention as the leading features of the case. Where these are neglected, blistering is apt to produce such a filthy, excoriated mess, that the patient will not submit to it a second time; whereas, if carefully laid on and dressed, it is, from the part being out of the reach of friction in the ordinary movements of the body, even less troublesome than if on a limb or the trunk.

Before putting it on, a little of the hair at the root of the penis is cut off, and if the foreskin be naturally retracted it must be drawn forwards over the glans. A piece of paper is then to be fitted on the penis, and cut till it exactly covers it from the root to within half an inch of the mouth of the urethra. This is then laid down on the blister, which is cut out by it, wrapped round the penis, and fastened with threads behind the glans and near the root.

The patient should remain quiet while the blister is on, lest it should come into contact with the scrotum and vesicate it, which is very soon done. He should not, however apply it at bedtime, as he will most likely fall asleep and not awake till the penis is one mass of vesications, a state productive of needless sufferings.

In mild cases or where the skin is very tender, an hour and a half or two hours will often suffice; the blister is then removed, and if there are any vesicated spots they are to be covered with pieces of linen or lint spread with benzoated zinc ointment, a layer

of cotton wool is bound over these and kept in its place by means of worsted, or two small india-rubber rings.

When a more severe case renders free blistering necessary, it must be kept on three or four hours, sometimes longer, but always till the penis is blistered. To protect the part from chafing, a T bandage, with a linen bag sewed into the part which receives the penis, or a handkerchief tied round the waist and dipping down in front so as to keep it tight up, will be found necessary.

The first effect of the application is to increase the discharge in some persons, in others this is not seen. In either case it generally soon grows ropy or mucous, and finally disappears in a few days, or remains somewhat more persistent, requiring a few injections when the penis is so far advanced towards healing that it can be handled without pain. It may however demand even a second blister. One of the most cleanly, convenient, and least painful forms of blister is Brown's cantharidine tissue; it causes much less irritation, and heals more quickly than the emplastrum lyttæ. Dr. Durkee prefers cantharidine collodion to blisters.

The blistering fluids, if strong enough to vesicate, caused such pain, that I soon renounced the employment of them in most cases, though they are very useful applied to the perinæum. I say most cases, because there are patients in whom the skin of the penis is so exceptionally tough that the blistering tissue will scarcely touch it. In these instances they may be resorted to.

Beyond the pain, however, I never had any untoward results from the use of the vesicating fluid but once. In the case I speak of, the patient warned me that he was "a bad subject;" whatever he had he suffered severely from. He had used the tissue ineffectually, and I therefore prescribed Bullin's fluid, enjoining him to use it very gently, instead of which he put on a most unnecessary quantity. Intolerable burning pain and swelling of the penis set in, and about a sixth part, I should think, of the surface of the penis went into ulceration, looking like a bad form of multiplying sore. The patient, notwithstanding the freest use of sedatives, suffered very severely, but was rapidly recovering when I last saw him. He was then on the eve of leaving London.

For three or four days after the application of the blister in question, the quieter the patient is the better. So soon however as the blistered surface begins to heal up, a few mild injections may be given. The bowels should be kept gently open.

Now and then it will happen that the patient is mortified and surprised to find the discharge re-appearing at the very moment he thought all gone. Thus on the third day there may be no discharge and on the fourth there is a good deal; but it generally subsides as rapidly as it appeared if the patient will only abstain from tampering with it.

How does this remedy act? By counter-irritation, will perhaps be the answer. But, if this were the case, why should there be increased action in the urethra for a few days, and why should the discharge from the urethra begin to disappear when the counter-irritant surface is healing up? It would seem as if the organized constituents of the urethra are capable of keeping up a certain amount of over-action for an indefinite time;¹ but that, when hurried beyond this by a healthy stimulant, a *rebound* takes place, which leaves them less capable than before of furnishing a secretion, morbid in amount or in quality, or in both.

Among the advantages of blistering is the fact that it generally arrests, or cures most effectually, that most unsatisfactory state known as irritable urethra. Properly aided by any tonic suited to the patient's digestion, and mild aperients, it will remove irritability more rapidly than any remedy I have seen tried or ever heard of.

Second Class—Intractable Gonorrhœa.—If the case, however, be more severe, accompanied by a good deal of scalding and pain, often most marked opposite the junction of the under side of the penis and scrotum, it will if recent often be found connected with stricture; but if of some standing, as eighteen months to two years, there is usually none. For if stricture do come on in these bad subjects, it soon becomes so marked as to make the diagnosis quite certain; if at the end of six months the canal remains quite free, my experience is that it will be equally free at the end of a year.

In every case of this kind, whatever may have been the previous duration of the disease, I can see no objection to its being treated at once as acute gonorrhœa, and perhaps a small number of these cases may be cured—certainly many of them are somewhat relieved. Here also, if at the end of thirty days no improvement be effected, the disease will in most cases yield to ordinary treatment. Hence

¹ M. Ricord used to tell his class that he was consulted by a patient who had suffered under gleet for thirty years!

at the end of this time I at once blister the penis and order a smart purgative, treating the case subsequently as in the preceding class.

Many surgeons have thought that a tendency in discharge from the urethra to relapse, whenever the patient indulged in wine or connection, should make the surgeon suspect stricture. Sir E. Home seems to have leaned to this opinion; others, Jesse Foot among the number, considered that gonorrhœa could hardly endure very long without inducing structural change in the urethra. Neither rule holds always good. I have treated numerous cases of bad stricture in which nothing of the kind occurred; and I have cured old cases of gonorrhœa, and long afterwards found the urethra quite free. It is quite true that a patient often consults a surgeon for a discharge which proves obstinate; the surgeon passes a bougie and finds a stricture. On further questioning, he makes out that the same thing had happened once or twice previously. Very often, too, in these cases, there is reason to believe that the female by whom the infection was set up was not suffering from any discharge. Such occurrences as these are apt to give the impression that the stricture is at the bottom of the affair, and perhaps it has something to do with it, certainly it is a complication which makes the discharge more difficult to remove; but I have reason to think its importance in this light has been over-estimated. I have over and over again seen the discharge return in this way when there was no stricture, and in both classes of cases it will often be found, when the patient's attention is directed to the point, that some slight tenderness of the urethra, some passing of shreds in the urine, and now and then the appearance of a speck of matter at the mouth of the urethra have been noticed occasionally, which really means that some preceding attack was never properly cured, and that *that* is the cause of the relapse.

When the surgeon has removed a discharge of this kind, I would strongly advise continuing the use of the bougie, as recommended at page 203, once or twice a week, for some little time after. The urethra is not always restored to a healthy state with the cessation of the discharge. During all this time a tonic and aperient ought to be given.

Patients suffering from gleet in any form are very often habitually guilty of one piece of imprudence. In order to see how the complaint is going on, they squeeze the penis to force out any pus. They should be strictly warned not to do this. I have many times

had reason to believe that this habit had been instrumental in keeping alive the discharge, because so soon as they had desisted this had somewhat lessened. The proper plan for ascertaining whether the secretion of pus is lessening or not is to make water into a glass vessel,—an old tumbler for instance, and examine the amount of shreds and flocculi in the urine.

Third Class—Muco-Purulent Gleet.—When there is but a small quantity of muco purulent discharge, with little or no swelling, accompanied by pricking pains in the urethra—when the history of the case is, that the patient has given his surgeon fair play, and the orifice of the urethra looks narrow—the bougie may at once be passed, however confidently the patient may assert that the opening never was any larger, and that he makes water as well as ever he did. In all these cases I have found stricture, with one exception, in which the patient had a small fistulous opening behind the frænum, and so habitually placed his finger there to stop the urine that he never thought of telling me.

To this class of cases may be added those when the discharge is thin, or seems broken up, as if some portions of it were more consistent than others, or slightly coloured with brown. Here I have sometimes succeeded in arresting the discharge, and the patient has come back months after with stricture. Hence I now always resort at once to the bougie.

If there be much muco-purulent discharge, a mild injection may also be used; but where there is only sufficient to glue the lips of the urethra together, the necessary relief will be derived from injections of pure water.

In many of these patients the health is a little out of order, principally, I think, from their having taken so much medicine. Small doses of quinine, a mild aperient pill once or twice a week, and when there is pain in making water, an ointment containing twenty grains of Morson's veratrine to 3j. of lard, rubbed below the urethra, will generally effect a good cure.

Fourth Class.—Pure Mucous Gleet.—A free discharge of mucus from the urethra unaccompanied by pus is not very common, at least I have only seen few cases of it. But for the anxiety it causes the patient, I should say the best treatment was to let it alone. I have tried various astringent injections, among others that of green tea, without much result.

Occasionally the resins, such as Chian turpentine, in doses of

ten grains, or the inspissated essence of spruce fir or pine, in the same dose, twice a day, are of some avail, particularly if the bladder be involved.

Dr. Bumstead calls attention¹ to a form of obstinate gleet dependent entirely for its continuance on narrowness of the opening into the fossa navicularis. Dr. Phillips, he says, records four cases in which he has cured this kind of discharge by introducing a director along the *upper* surface of the urethra till he reaches the lacuna magna, and slitting up the wall of the urethra with a narrow bistoury.

Connection between Inveteracy and Diathesis.—It may be asked, how is it that gonorrhœa affects some persons so differently? Is it owing to the prevalence of a rheumatic, gouty, or scrofulous diathesis? Such an explanation has been suggested. Wallace says, "gleet may arise from rheumatism, scrofula, venereal poison;" and again,² "such persons as labour under gleets are sometimes of rheumatic or scrofulous habit." Howard expresses himself to much the same effect. He says,³ "It is always more troublesome in a robust sanguineous than in a phlegmatic habit. . . And the difference of habit is still more conspicuous when a disposition to scrofula or scorbutic acrimony is joined to a young robust sanguineous temperament;" and again,⁴ "When a person labouring under a gonorrhœa is subject to redness, tenderness, and increased secretion from the eyelids, has a thickened upper lip, or redness, tenderness, and increased secretion from the glandulæ odoriferæ, such person will probably suffer more, and be cured with greater difficulty, than another who has not any of these affections, and that whether his habit be weakly or robust." Dr. Bumstead also tells us⁵ that "gleet is peculiarly frequent and obstinate in persons of a strumous diathesis;" and Dr. Dick says,⁶ "The first thing a practitioner has to do, when consulted for gleet, is to examine well his patient with respect to antecedents, to ascertain if he had a scrofulous or cutaneous affection in his early life, or has been subject to gout or rheumatism." I fancy the occurrence of gleet in a scrofulous constitution must be rather rare. I have examined upwards of a hundred cases of this affection in a very obstinate

¹ *Op. cit.*, p. 105.

² *A Treatise on the Venereal Disease.* By Wm. Wallace. 1838, p. 283.

³ *Op. cit.*, vol. i. p. 211.

⁴ *Op. cit.*, vol. iii. p. 42.

⁵ *Op. cit.*, p. 102.

⁶ *Op. cit.*, p. 37.

form *without*, except in the instance to be presently mentioned, *finding any evidence of the strumous diathesis in a single instance*. I never could trace anything of the kind. In one patient, who had suffered from abscess in the perinæum, there were rheumatic pains; and another, who was also the subject of abscess, had, in early life, been afflicted with scrofulous ophthalmia of the eyelids. All the rest appeared quite as healthy as the average of men, and presented every variety of temperament.

We see men of a particularly delicate, unhealthy appearance throw off gonorrhœa with the greatest ease, while in others, blessed to all appearance with the best of health, the first attack brings on stricture and abscess. We find that in men of a like temperament the disorder often runs a course so different, that no experience will enable us to predict its duration or the results it will entail. The coarse formulæ of temperaments usually accepted form no guide for prognosis in diseases of the generative organs, where alone inflammation can go on for years without injury to the health or marked change of structure; and I have equally failed in tracing the peculiarity to faulty development of the organs themselves, to any influence of the weather, or to irregular habits; in short, the only inference I can draw is, that it results from an inborn infirmity in the secreting apparatus of the urethra, and that imperfect evolution of cell and fibre has more to do with it than bodily features.

My task is now concluded. The doctrines I have now ventured to lay down have been pretty severely tested. Nothing has been recommended by myself in this work but what has stood the brunt, not merely of experience, for that I rate rather low, but of special observation. My aim was, as far as possible, to separate clearly what might be looked on as established from what was doubtful, and not merely to prove every assertion, but to place it on such a basis that it could not be disproved. Whether I have succeeded or not I leave to my readers to say. For the remedies advised, or the views upheld by other authors I do not hold myself answerable. I considered my task was to select what seemed most likely to improve treatment, and only hope I have executed it in a satisfactory way.

VALE !

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