

Observations on syphilis, and on inoculation as the means of diagnosis in ulcers and discharges invading the genital organs : comprising also a brief outline of the ancient and modern treatment of syphilis, and pointing to new views and to a new method of treating that disease / by John Crowch Christophers.

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OBSERVATIONS
ON
SYPHILIS,
AND ON
INOCULATION

AS THE MEANS OF DIAGNOSIS IN ULCERS AND DISCHARGES
INVADING THE GENITAL ORGANS;

COMPRISING ALSO
A BRIEF OUTLINE OF THE ANCIENT AND MODERN TREATMENT OF
SYPHILIS, AND POINTING TO NEW VIEWS AND TO A NEW METHOD
OF TREATING THAT DISEASE.

BY
JOHN CROWCH CHRISTOPHERS, M.R.C.S.



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PREFACE.

THE substance of the following observations appeared in the pages of the *Lancet* during the Sessions 1845, 1846, and 1847.

The experience of six years has been to confirm their truth, and to induce me to endeavour to give them increased publicity.

I have spared no pains to keep my cases in view long after their treatment—long after their real or apparent cure; and to this circumstance I attach great importance, feeling assured that had the principle been adopted generally, fewer mistaken notions would have crept into practice, and that our knowledge of venereal diseases would have been more precise and their treatment less discordant.

It is a satisfaction to feel, that the method I propose with the views I adopt can be tested and proved by all who may be at the pains to do so, and that there is no mystery or difficulty appertaining thereto ; industry, patience, humility, and observation, being the sole requirements.

8, Upper Montagu Street,
Montagu Square.

OBSERVATIONS

ON

*SYPHILIS AND ON INOCULATION.

THE history of the progress and treatment of syphilis, from its supposed introduction into this country till the present time, is a subject so replete with importance, information, and incongruity, that a faithful retrospect cannot fail to prove interesting, instructive, and encouraging;—interesting, if only for the subject's sake, and the many bright names associated with its investigation; instructive, as shewing how gradually facts are eliminated, with the amount of labour and experiment necessary to establish them; how error is often mistaken for fact, and fact for error; and how possible it is for the brightest minds, by the most ingenious methods, to reach the portal of truth—to stop short on the threshold;—encouraging, as with all the

* Some authors spell the word, siphilis, deriving it from *σιφλος* odiosam et invisam faciem habens.

labour and talent bestowed, and all that has been accomplished, much remains to be done, which is sufficiently attested by the diversity of opinion and the discrepancy of practice existing at the present time; for when this want of unanimity is found among men equally educated, intellectual, and unprejudiced, it is reasonable to assume, that some link in the chain of evidence necessary to a sound deduction must be wanting—that perseverance, good faith, and unremitting investigation, may yet happily forge.

Impressed with this idea, I have been in the habit, for some years past, of experimenting by inoculation, of noting cases, and of recording observations on the divers modes of treatment employed by myself and others in syphilitic disease. Moreover, I have attended to a point which I consider has been greatly neglected; and to this neglect a vast deal of error and discrepancy is due. I have been at the pains to keep a considerable number of cases under observation for years after their treatment; and as far as this amount of experience warrants, my mind is made up to certain principles, and to a plan of treatment at variance with doctrines hitherto propounded.

The history of the progress and treatment of syphilis, such as I alluded to in the first sentence,

would, I feel confident, form a mass of evidence tending to elucidate much of the obscurity in which conflicting opinions and treatments have involved that disease; but as it would far exceed my present limit, I confine myself to a slight outline, involving those points principally that I consider necessary to illustrate my own views, and that bear on, and lead to, the principles I advocate.

To trace this disease to its origin, admitting it desirable and possible to do so, would in itself form a labour of considerable research, beset with contradictions—would occupy much space and time, and in the end be but conjectural; as some, and on tolerable grounds, accord the credit of its introduction to the new world—others to the old; while some pretend to trace its description in the pages of Divine revelation.

Its origin being obscure, the causes that produced it are not less so, though on this subject many surmises have been hazarded; and do we seek to unravel the intricacy, aided by those writers who first described it, we become involved in a labyrinth of causes, symptoms, and effects, that certainly do not appertain to any disease of the present day. But to come to more modern times, even to the time of the Hunters, and to peruse the valuable volume devoted to this subject by the most illus-

trious of his race, disfigured though it be by the gravest error, yet in parts fully up to our present knowledge, and the foundation on which much of that knowledge has been built, the most inattentive must, I think, be struck with the awful symptoms, the misery, disfigurement, anxiety, and despair, so graphically portrayed in his descriptions ; and not less with the decreased severity, the comparatively harmless demonstrations, of the disease so called in the present day. So striking is the disparity between ancient description and modern evidence, that the question has been mooted as to how far new forms of disease may not have arisen—or, indeed, if syphilis itself be not modified ? That the ancient mode of treatment modified the disease, by assisting to develop most inveterate and atrocious symptoms, is certain ; and that the disease incurred the ignominy that was most frequently due to the treatment, is not less so. That the modern and more rational system of treatment, as compared with the ancient, has produced a mitigation and modification in syphilis, is equally true ; and that the disease, of late years, has been divested of much of the virulence and horror that formerly so unjustly attached to it, and so eminently belonged to the treatment, is more than evidenced by the decrease of alarm in the public mind,

and by the risk that many run, without scruple even, in the face of probability, and by the easy terms on which they escape.

In a word, syphilis, as it now appears, is a disease very amenable to rational treatment; unassisted rarely producing symptoms of severity; tending, by its nature, towards its own cure, and very capable of being helped or led, and as capable of being thwarted in its progress towards that desirable end.

To account for the gradual falling off from the ancient method of treating syphilis, and to trace the dawn of a more moderate and rational system, it is necessary to pass the former in review, when it will appear that evils sometimes mend themselves when they become most evil.

Turning to the older writers to ascertain their mode of treating this disease, it will be found to consist in the use of mercury by means of ointments, liniments, and fumigation; for it was not till a considerable period had elapsed that its administration internally was ventured on. At first this was conducted with the greatest caution; but when it appeared that large quantities might be given without destroying life, it was pushed to an extent almost incredible; at the same time no attempt was made to comprehend its action, or to

reduce its administration to any intelligible rule. Passing over this treatment, so essentially empirical, and turning to that of a more modern date, of which the great work of Mr. John Hunter furnishes an epitome, we at once find a great innovation made on the ancient mercurial system, combined with attempts to explain the specific action of that mineral, to reduce its administration to some sort of rule, to develop the constitutional conditions contraindicating its employment, and to point out certain mischiefs of which it was the undoubted parent, and certain diseases hitherto submitted to its agency, as syphilitic, no longer thought to require its use.

Notwithstanding this, mercury formed the basis of Mr. Hunter's treatment; and the notion he entertained of its necessity, virtues, and power, may be gathered from the following axioms, as laid down by himself:—

1st.—The employment of mercury, topically and constitutionally, is necessary to cure a chancre.

2ndly.—In every case of chancre, be it ever so slight, mercury should be given internally, even in those cases where the sores have been destroyed on their first appearance.

3rdly.—Mercury should be given during the whole period of the cure, and for some time after;

for as there are few chancres, perhaps, without absorption of the matter, it becomes absolutely necessary to give mercury to act internally, and so to hinder the venereal disposition from forming.

4thly.—The quantity of mercury required internally must be uncertain. It must, in general, be in proportion with the size, number, and duration of the chancres.

5thly.—To cure the disease, whether in the form of chancre, bubo, or lues venerea, probably the same quantity of mercury is necessary; for one sore requires as much mercury as fifty sores in the same person, and a small sore as much as a large one.

6thly.—It must be given till it produce local effects somewhere; but not too quickly, that we may be able to throw in a proper quantity, for local effects produced too quickly prevent a sufficient quantity being administered to counteract the venereal irritation at large.

7thly.—Mercury should be given, if possible, so as to produce sensible effects upon some parts of the body, and in the largest quantity that can be given to produce these effects, within certain bounds, and these sensible effects should be the means of determining how far the medicine may be pushed, in order to have its best effects on the dis-

ease, without endangering the constitution: the practice here must vary according to circumstances. If the disease exist in a violent degree, less regard must be had to the constitution, and the mercury is to be thrown in, in larger quantities; but if the disease be mild, it is not necessary to go beyond that rule, although it is better to keep up to it, on purpose to cure the disease the sooner.

Lastly.—The specific quality of mercury in counteracting the venereal irritation consists in its producing another of a different kind, for two actions of a different kind cannot exist at the same time in the same part.

The general notion of Mr. John Hunter and his followers may be resolved into the following propositions:—

1st.—That syphilis does not admit of a natural cure.

2ndly.—That mercury is the only remedy possessing the power to destroy that virus. Further, Mr. Hunter considered the disappearance of any symptom where mercury had not been employed, a proof of its not being syphilitic, and on these principles, the treatment of Mr. John Hunter, his contemporaries and successors, was conducted; and even at this time many very orthodox followers of this doctrine are extant. Yet if we examine into

the merits of this so-called specific on the evidence its advocates provide, it is not difficult to get up a strong case against it. Some of the disastrous effects it produced, even in Mr. Hunter's careful hands, he states to be as follow :—

“Mercury over some constitutions has no influence, whether administered internally or by friction. In others, the bowels will not bear it at all, while on others it acts as a poison. It often produces rheumatic pains, and sometimes nodes, and cases frequently occur in which it acts by accumulation. At one time it cannot be made to produce any visible effect ; but afterwards the mouth and intestines are all at once affected.” Sometimes it produces the same symptoms as rheumatism, and Mr. Hunter has seen such complaints mistaken for venereal affections. Mr. Penson observes, the great objection to the use of mercury is the hazard patients are exposed to, by having the flow of saliva suddenly checked, and of suffering from other diseases as the consequence. He states, also, that several patients generally died suddenly every year in the Lock Hospital, and describes a disease produced by mercury, called *erethismus*.

Dr. Sylvester details cases in which disastrous effects occurred from the use of mercury. He observes,—“When mercury falls on the mouth, in

many constitutions it produces violent inflammation, terminating in mortification; that occasionally it seriously impairs the constitution, and that it may even produce local diseases, and retard the cure of chancres and buboes."

Mr. Mac Mullin, in the fifth number of the *Edinburgh Medical and Surgical Journal*, describes a disease induced by mercury, termed hydrargyria, eczema mercuriale, lepra mercurialis, erythema mercuriale, &c., &c., attended with fever, ophthalmia tarsi, &c. The skin, fauces, tongue, and eyes, are attacked; cracks and fissures occur on the face, scrotum, and groins, discharging a serous, acrid, and highly offensive fluid. The back and hairy scalp are implicated. The disease lasts frequently two months, and repeatedly returns to run the same course.

Mr. Abernethy, in his *Surgical Observations*, says, "Mercury sometimes merely checks syphilis, and can scarcely be said to cure it;" and speaking of pseudo-syphilis, he observes, "It is scarcely possible, when the general disease in some cases assumes unusual characters, to distinguish between syphilis and those diseases resembling it, unless some new distinctions be discovered."

Now it would appear, from the foregoing, that mercury has not only been known to fail in curing syphilis, but that it has produced disease in a very

aggravated form, and has occasionally destroyed life; whereas, it seems to be the law of syphilis that it shall not exercise a destructive influence over organs essential to life—therefore it is not in its nature a mortal disease.

When it is considered, moreover, that mercury was not the specific for syphilis only, and that it was thought impossible to cure any case of that kind without it; but that gonorrhœa also being looked on as a result of the same cause, merely modified in its development by the difference of the textures invaded by it, was submitted to the same plan of treatment; when whole treatises, even volumes, were written to establish this fatal fallacy, the identity of the two poisons, and the absolute necessity for treating both diseases alike, it is not difficult to see the alarming extent its administration reached. The wards of the venereal hospitals were charged with it; and it has been said that newcomers have been brought under its influence by mere residence, while the cancellous structure of the bones have been seen to contain it in their cells. The advantage thought to be derived from its use was often estimated by the amount of saliva excreted rather than by the effect it produced on the symptoms; and no patient was allowed to be cured who had not excreted a definite number of pints or

pots full. Other remedies, it is true, were employed—opium, sarzæ, mezereon, and many more; but little confidence was ultimately reposed in them; which may be learned from the observation of Mr. John Hunter, who says, “Opium, like sarzæ, was supposed, on its introduction, to cure the lues venerea, but that, like the sarzæ, it appears to have no effect till mercury has done its best or worst”—a doctrine mooted in the present day with regard to iodine. So deeply rooted, then, was the prejudice in favour of mercury—so indispensable was it considered for treating a disease in which it was upheld as the only antidote—so universal was the notion that it hardly could be employed in too large quantities, or for too long a period, effectually to eradicate it from the constitution and to perfect the cure—that the every-day appearance of sunken noses, exfoliating bones, disfigured visages, contaminated breaths, hideous and stinking ulcers, emaciated and loathsome forms, that seemed to rot while they lived, had no other effect than to brand the disease with the ignominy that for the most part was due to the abuse and misuse of the treatment; and it was a long time indeed ere any one had the hardihood and energy boldly to stand forward, and in the face of the public and the profession to disclaim its indiscriminate use, far less

to question the necessity for its employment altogether; and when this did occur, the ill-fated proponent was treated with no little severity by both parties: the first viewing him in a light little removed from an assassin, or at least an unprincipled and inhuman experimentalist; the second, attributing such alarming conduct to the most brutal ignorance and fatuity.

The first step, however, that tended to infringe on the heroic mercurial system was the solution of the question—Are the poisons of gonorrhœa and syphilis identical? Mr. Hunter is at some pains to prove that they are, and even calls in inoculation to his aid, and by a false deduction infers the proof in opposition to the fact. This, together with the occurrence of secondary symptoms after cases that were considered to be gonorrhœa, which, in reality, were urethral chancres and gonorrhœa combined, settled the question in his judgment, and forms the disfiguring blot in his otherwise valuable book. Mr. Whatly, Dr. Swiedaur, Mr. Sawrey, and others, followed in his wake; and taking this view, they all, of course, advocate its treatment by mercury, though Mr. Hunter observes that he doubts if mercury have a specific virtue in this disease: for it is as readily cured without as with it, and that he has known gonorrhœa contracted, the party

being under the full influence of mercury at the time; yet he advises its administration, to prevent the possibility of absorption, and with the view of preventing lues venerea. Mr. Benjamin Bell, if not the first, was undoubtedly the most energetic in combatting the opinion of Mr. Hunter and others on this point, denying the identity of the poisons of syphilis and gonorrhœa, and thereby giving rise to the conclusion, that mercury was uncalled for in treating the latter disease; but even in the time of Sir Astley Cooper this principle was not fully recognized, admitted, and acted on; and in his lectures he enters an energetic protest against the employment of mercury in gonorrhœa. Describing its misuse in St. Thomas's Hospital, he says, "If you ask a patient in the foul wards, labouring under a gonorrhœa, at the end of his course, how often he has rubbed in, he will generally answer, twenty-eight times. If you ask whether he is salivated, he will reply, he spits three pints a day. If you ask if his gonorrhœa be cured, he will tell you, 'No, I have a clap still upon me.'" So that up to a comparatively recent period, and in a public hospital, it was thought necessary to treat gonorrhœa with salivating doses of mercury! and even at the present time, so firmly grafted is this notion on the public mind, (though there are few popular errors,

perhaps, that were not at some period adopted or sanctioned by science,) that a common mode of maltreating this disease with mercury is practised by the quacks, several instances of which have come under my own observation.

According to Mr. Benjamin Bell, cases of gonorrhœa are in proportion to cases of chancre as three to one: therefore, by settling the question of the non-identity of the two poisons, with the inference and practice that subsequently ensued, a moiety of victims, at least, were wrested from the dominion of mercury.

To the army surgeons of this country, and to Broussais abroad, must be accorded the transcendent merit of the next step. Mr. Rose, Mr. Dease, Dr. Arthur, Dr. Gordon, Mr. Guthrie, Mr. M'Leod, Mr. Evans, and Mr. Brown, all laboured in the good cause, termed simple treatment; and their research and experiments deduced the following results:—

1st. That it is possible to cure every kind of ulcer on the genitals without the use of mercury.

2ndly. That cases of severe secondary symptoms did not supervene, though that remedy was not used.

3rdly. That though a large number of cases were treated, tertiary symptoms were observed in two

instances only, in each of which mercury had been given before the simple treatment commenced.

The questions that arose were—

1st. Is more time occupied in curing the primary sore by the simple than by the mercurial treatment?

2ndly. Are cases so treated more liable to be followed by secondary symptoms, and are they, when they occur, more or less severe?

3rdly. Are tertiary symptoms more frequent under the simple than under the mercurial treatment? Are they the product of syphilis only, or of syphilis and mercury combined?

1st. To consider the question of time. I well know, having often witnessed it, that some primary sores are most difficult and tedious to heal by simple treatment; but that immediately the system is brought (though ever so slightly, and for ever so short a time) under the influence of mercury, the healing process commences, and they become rapidly cured. On the other hand, there are sores that are seriously aggravated, and that may be driven into a sloughing or phagedænic condition by its use. These I hold to be the exceptions. The rule I believe to be correctly laid down by the advocates of the simple treatment—viz., that it is possible to cure every kind of ulcer on the genitals

without the use of mercury ; but as far as my own experience goes, in the majority of cases it occupies a longer time.

2ndly. As to the more frequent occurrence of secondary symptoms under simple than under mercurial treatment. Now here I must state that the law that appears to me to preside over the development of secondary symptoms has escaped recognition by the advocates of both methods ; and the circumstance that put me in possession of what I hold to be the fact, was the constant practice of inoculating every case that presented itself for some years past. Through this means I found that no one case tested by inoculation, and proved thereby to be syphilitic, whether treated by mercury or otherwise, escaped secondary symptoms, under a more or less severe form ; by which I imply that secondary symptoms, in some shape, are the inevitable consequence of a genuine chancre, be the treatment what it may. The only exceptions are those cases in which the chancres are destroyed by excision or caustic before the fourth day of their existence ; and with this sole reservation, I never witnessed a single deviation from the rule laid down.

The converse position also holds good, that in no instance, the inoculation failing, have secondary symptoms supervened ; therefore, let the treatment

be mercurial, or let it be simple, if the case be one of genuine chancre, secondary symptoms, in some shape, will as surely follow, as that the sore will be reproduced by inoculating with the virus it secretes.

3rdly. Are secondary symptoms more or less severe under simple than under mercurial treatment?

This is a most important question, and one I have been at some pains to investigate. The result of my observation may be stated as follows:—

1st. The severity of secondary symptoms I have invariably seen to be in a ratio with the duration of the primary disease: the longer that exists, the more surely and effectually it impresses the constitution.

2ndly. The duration, not the number, of primary sores influences the severity of secondary symptoms.

3rdly. The duration, not the severity, of the primary sore or sores influences the severity of secondary symptoms.

4thly. The difference in the appearance of the primary sores, (I am always speaking of sores that inoculation has proved to be chancres,) and the difference of appearance assumed by the secondary affection, is influenced by constitutional idiosyn-

crasy, habits, and treatment, and not by virus of different character.

Lastly, assuming secondary symptoms to be the necessary consequence of the primary disease, and that the duration of the one influences the severity of the other, we possess no preventive power over their formation beyond what can be exercised through the destruction of the primary sore; nor over their severity, save by healing the primary sore in the shortest possible time.

With this view, then, that treatment which destroys the primary sore, or, the opportunity being lost, that treatment that heals the primary sore most rapidly, will best fulfil the indication; not that by quickly healing the primary sore the constitution is borne harmless from the secondary affection, but the more rapidly such sores are healed the less severe and permanent will the secondary affection be.

It has been before observed, that some sores are very slow to heal under simple treatment, but that immediately the system is brought (though ever so slightly) under the influence of mercury, they rapidly progress towards a cure. Now here I believe the advantageous use of mercury stops; pushed beyond this, it becomes a positive evil. It is the practice of the mercurialists to keep up a mercurial

action long after the primary sore is healed ; to use their own phrase, till all induration has disappeared ; and this process often extends over a period of weeks and months, and with the view of preventing the supervention of secondary symptoms. Now what will cure an action will not always cure a disposition. Further, induration will sometimes continue after the longest mercurial course, and may remain so long as the individual exists, and yet he may not be submitted to a succession of attacks of secondary symptoms extending over that period. Again, induration may accompany a non-syphilitic sore, of which inoculation has furnished examples ; further, how are we to discriminate, after the sore is healed, between chancrous induration and that induration produced by simple effusion into the surrounding textures, an effect of ulcerative inflammation and consecutive cicatrization.

Where mercury has done most harm, I have observed it to be in a ratio with the duration of the period the system has been kept under its influence, rather than with the quantity administered—*i. e.*, a large quantity, rapidly introduced, will do less mischief than a smaller quantity, extended over a longer period of time.

In acute diseases, wherein mercury is often given in a truly lavish manner, it is rare to see perma-

ment ill effects follow ; and though Dr. Scott has observed, that during his whole residence in India, where mercury is so commonly, so largely, and so injudiciously given for affections of the liver, he never saw a single instance of what has been termed cachexia syphiloidea arise, when syphilis was out of the question. The fact I believe to be, that in the cases alluded to by Dr. Scott, mercury was given in large doses ; but the constitution probably was not kept under its influence for weeks and months together : it is fair to assume it was given till ptyalism was produced, and then altogether suspended. Had it been continued beyond this, doubtlessly it would have produced the cachectic effects so justly attributed to it.

Recognising these principles, I have treated cases of syphilis on a plan differing from both the mercurial and simple systems, and in every case it has succeeded well. Having first convinced myself, by the aid of inoculation, (I am speaking of cases in which the sore has existed beyond the period assigned to it as a local disease,) that it is a genuine chancre I have to treat, I prescribe calomel, in one or two grain doses, till the gums give the slightest evidence of its effect. This accomplished, I suspend it at once, and begin with small doses of the hydriodate of potass, with sarsaparilla ; and it is a

curious fact, that if the gums are made slightly sore with mercury, that action will be maintained in them by very small doses of the hydriodate, though it does not produce that effect generally, if mercury have not been given.

The object in giving the mercury is speedily to heal the primary sore ; the object of the iodine and sarsaparilla to put the system in the most favourable condition to encounter the secondary affection that will inevitably ensue.

Always contending that secondary symptoms, in some shape, are the inevitable consequence of every genuine chancre, proved by inoculation, that is not destroyed before the fourth or fifth day of its existence, be the treatment mercurial, or be it simple, it follows that, so far as actual prevention is concerned, the one method is as efficacious, if not as harmless, as the other, recognising the fact, however, that the duration of the primary sore influences their severity, and that in the majority of cases mercury expedites its cure. So far, a modified mercurial treatment holds advantage over the simple mode, but when persisted in after the primary sore is healed, I contend it becomes a positive evil.

It now remains to inquire how far tertiary symptoms are more frequent under simple than under mercurial treatment. For the term tertiary

symptoms we are indebted to the distinguished M. Ricord, who defines them to consist in deep-seated skin diseases, as lupus exedens ; and affections of the bones, as periostitis, exostosis, caries, necrosis, together with tubercles in divers organs ; sometimes existing in conjunction with secondary symptoms, frequently following secondary symptoms at an indefinite period, but generally commencing long after the primary disease and the secondary symptoms have disappeared.

It has never yet occurred to me to witness a single case of tertiary symptoms following simple treatment. Cases of tertiary symptoms supervening on a prolonged mercurial course are by no means uncommon, though far less so than they were wont to be in days bygone, when that mode of treating syphilis reigned paramount. That this is borne out by the experience of others, the fact that the question, whether tertiary symptoms are the product of syphilis alone, or of syphilis and mercury combined (?) not unfrequently mooted, in some measure attests.

The law presiding over secondary symptoms appears to be that the severity of each succeeding attack decreases till the disposition to recur subsides—in other words, the disease is said “to wear itself out.” With tertiary symptoms, as far as my

experience goes, the opposite obtains : essentially a progressive and a destructive disease, to which time, and not unfrequently treatment, impose no limit, it often persists till the patient succumbs, emaciated and worn out, a victim to that cachectic and vitiated condition of constitution by which its progress is so strikingly characterized.

I believe it possible—indeed, I may say I have seen—a long-continued course of mercury where there was no reason for suspecting syphilitic contamination, produce a class of disease and general condition of constitution very analogous to that implied by the term tertiary symptoms ; and as I have not seen one case of tertiary symptoms to follow syphilis where that remedy was not used, further proof, to my mind, is wanting to shew the justice of attaching tertiary symptoms to untreated syphilis at all.

To inoculation we are indebted for the next step that infringed on the ancient mercurial mode of treating syphilis, and to M. Ricord again belongs the credit of insisting on the important deductions to be gained by its use.

Long antecedent to his time and writings inoculation had been practised by divers persons as a test for syphilis ; but to that distinguished surgeon must be accorded the merit of detecting its real

value, developing by its use many of the laws that preside over the propagation of the venereal poison.

The more frequently an experiment is repeated, and similar results are deduced by parties far removed from, and unknown to, each other, the stronger is the proof or the probability that such deductions are facts; and this consideration induces me to submit the following cases which are selected from others of similar character, all going to prove the value of inoculation in the diagnosis and treatment of ulcers, and discharges invading the genital organs, and the majority corroborate the experience and statements of M. Ricord: therefore though they have little claim to originality or to novelty, they have every claim to disinterestedness and to truth, and with the advantage that the latter pretension may be tested by all who will be at the pains to repeat the experiments.

M. Ricord has stated (and I have seen many cases to corroborate the position) that provided a primary sore of not more than four or five days' standing be effectually cauterized or destroyed, (it being at that period but a local affection,) the supervention of secondary symptoms may be averted thereby. Therefore chancres artificially produced may be submitted with safety to this practice, at the same time that they have been made to serve

every purpose of diagnosis ; for these sores, at a very early stage of existence, will bear unequivocal testimony to the parent whence they spring. Furthermore, it does not appear that the number of chancres, even if left to themselves, renders the supervention of secondary symptoms more certain, nor adds to their severity when they occur. Indeed, I have had occasion, several times to observe the severity of the secondary affection existing in an inverse ratio to that of the primary disease.*

CASE 1, shews the effect of inoculating with syphilitic virus ; corroborates the experience of M. Ricord, that inoculating with matter taken from a chancre produces a sore of the same character.

— —, aged twenty-one, of the lymphatic temperament ; presented two sores on the glans penis resembling chancres, and a bubo in the groin. Inoculated him on the arm with the secretion from the sores. Two days elapsed, and a small angry-looking pimple appeared, which in three days became a sore of circular form, with a depressed, foul, sloughing centre, hard, elevated, and somewhat ragged edges, presenting an appearance identical with that whence the virus was obtained. The patient was submitted to treatment. A month

* Vide Case No. 2.

elapsed—the bubo had disappeared; the chancres on the glans had healed; the sore from the inoculation remained, though (by the repeated application of caustic) it had lost its specific character, and was granulating rapidly. A week elapsed, and the sore had healed. I had opportunities of seeing the patient for some weeks, during that period he was attacked by secondary symptoms.

CASE 2, shews the value of inoculation as a means of diagnosis; how a case, at first sight doubtful, is made clear and evident thereby.

—— —, aged twenty-two, of the bilioso-sanguineous temperament, stated, that he had connexion with a suspected party six weeks and a few days previously, and not since then. The night before he consulted me, he perceived, for the first time, many small pustules around the corona glandis, and when I examined him, on the following morning, it was encircled with a crop of small, superficially excavated ulcers, with foul, depressed centres, eight or nine in number. My patient was most anxious to be informed of their true character, flattering himself, that the time that had elapsed since connexion freed him from the risk of contagion. The case appeared somewhat doubtful,—1st, from the number of the sores; 2ndly, from their appearance; and 3rdly, from the length of time that

had elapsed since connexion. To the two last, no great importance could be attached, as it is difficult to discriminate between a chancre and a common ulcer in its earliest stage; and cases have been recorded of chancres appearing so long as three months after connexion. To the first more weight was due. This, together with the extensive surface it would have been necessary to cauterize, caused me to forego that practice and to inoculate him. On the third day a pimple appeared, which became a chancre. My patient would submit to local treatment only, and in about three weeks the sores around the glans and that on the arm (the result of the inoculation) had healed, each leaving a marked cicatrix. One month after this, he was attacked by severe pain in the posterior part of both knee-joints, accompanied by œdema of the eye-lids, syphilitic mottling, and urticaria—all readily succumbed to small doses of the hydriodate of potass. Some weeks elapsed, and he suffered another attack. Being at that time absent from town, he was directed by a practitioner to take three grains of blue pill every night; he became rapidly worse—cachectic ulcers appeared over the spine of the tibia on both legs. He returned to town, resumed the hydriodate of potass, and got rapidly well. About a month

transpired, and another attack supervened, with ulceration of the tonsils; all again gave way to small doses of the hydriodate of potass. Since then he has suffered several accessions, each decreasing in severity, (which, indeed, appears to be the law in attacks of secondary syphilis,) and all submitting to the same treatment. Some years have transpired since the last. He is now free from all disease, and from all evidence that such ever existed.

The value of inoculation as a means of diagnosis is evidenced by this case. The numerous sores led me to think they were not of syphilitic origin. Inoculation corrected the error, and the secondary symptoms that supervened proved the inoculation. The secondary symptoms were trifling, indeed, (when not aggravated by mercury,) tending to shew that the severity of secondary symptoms does not depend on the number of primary sores, (in this case they were eight or nine in number,) and is an argument in favour of the safety of producing a chancre artificially to test the existence of syphilitic disease.

CASES 3 and 4 shew the effect of inoculating with the secretion from sores strictly resembling chancres situated on the glans penis, corroborating the experience of M. Ricord, that a non-syphilitic

sore does not (by inoculation) produce a specific sore.

—— ———, aged forty-five years, suffering from retention of urine and from symptoms indicative of stone in the bladder; presented three ulcers on the glans penis of considerable standing, (having all the characters of chancres,) with enlarged inguinal glands. He declared he had not had connexion for eight months. Inoculated him on the arm with the secretion from the sores without producing any effect; the ulcers healed with water-dressing; the enlarged glands disappeared. I had opportunities of seeing him during many months; he was not attacked by secondary symptoms.

CASE 4.—A married man of industrious and steady habits, presented an enormous crop of ulcers, to all appearance chancres, completely encircling the glans penis and prepuce. His wife was in perfect health. He declared he had not had connexion with any other person. He was inoculated on the arm several times, at intervals of from three to four days, with the secretion from the sores, without producing any effect. The sores healed rapidly under the influence of simple water-dressing. I saw him several years after this; he had not suffered from secondary symptoms.

I am confident the most practised eye would have

failed in detecting the slightest difference between the appearance of the sores in both these cases, and that of true chancres. Inoculation spared the patient, in both instances, much unnecessary suffering, moral and physical, and that without entailing the slightest annoyance: at the same time, it indicated the treatment.

CASE 5, shews the effect of inoculating with the secretion from a sore resembling a chancre, situate on the labium pudendum, the patient being under the full influence of mercury at the time.

—— —, aged twenty-one, presented a sore on the labium, apparently a chancre, with a mucoso-purulent vaginal discharge of six weeks standing. She had been under treatment fourteen days, and stated she had taken ten grains of blue pill every night during that period. She was fully under the influence of mercury, she was inoculated with the secretion from the sore, and with the vaginal discharge; no effect was produced. Simple treatment was adopted; the sore healed, the discharge ceased, and no secondary affection supervened.

The sore presented all the characters of a true chancre, and the question therefore was mooted—Whether the circumstance of the patient being under the full influence of mercury at the time she was inoculated prevented the inoculation taking?

in other words, Does mercury protect the constitution, or render the syphilitic virus inert ?

CASE 6, shews the effect of inoculating with matter taken from a bubo, the primary sore having healed some weeks previously, the patient being under the full influence of mercury at the time of inoculation.

—— ———, aged nineteen, presented a bubo in the left groin, with a cicatrice on the prepuce, which, he stated, marked the spot where a chancre had been, and which had healed some weeks previously. He was under the influence of mercury. The bubo was opened, and he was inoculated on the arm with the discharge; a pimple appeared two days afterwards, which assumed gradually the characters of a true chancre; the opening made into the bubo put on the same appearance. He continued the mercury; the sore artificially produced was cauterized, and in a month he was quite well.

In this case, when inoculation was practised, the patient was under the influence of mercury, and the primary sore had healed; therefore it goes to to shew—1st, that mercury did not protect from, or destroy the effect of the syphilitic virus; 2ndly, that buboes may be produced by direct absorption; 3rdly, that buboes should be opened as early as possible; for in this case the patient had been sub-

mitted to one course of mercury, whereby the disease was thought cured; when the necessity for a second course arrives, (at least, in the minds of those who treat syphilis by that means,) inasmuch as the bubo contained syphilitic virus, therefore it possessed the power to induce an accession of primary sores. This case also corroborates the experience of M. Ricord, who has succeeded frequently in producing specific sores with matter taken from buboes.

CASES 7 and 8, shew the effect of inoculating with the secretion of a phagedænic ulcer, resembling a chancre, situated on the glans penis; corroborating the opinion of M. Ricord, that there are not several distinct syphilitic poisons, but that the one poison is modified by idiosyncrasy of constitution, mode of life, situation, and treatment.

—— ———, presented a phagedænic ulcer, (in appearance a chancre,) situated on the glans penis, extending into the urethra, and of nine weeks standing. It occupied a large surface, deeply; it developed itself five days after connexion, and was treated by mercury, which appeared to aggravate it and it became worse rapidly. He was inoculated on the arm; on the third day a pimple appeared, which became a well-developed chancre, and did not present any phagedænic character. At the time

of inoculation, the patient was in a very weak state, though improving—evidently suffering more from the effect of mercury than from any other cause. He was ordered generous diet, pure air, and moderate exercise. The phagedænic chancre was cauterized repeatedly ; no medicine was administered, and in three weeks he was cured. Three months after this, he was attacked by secondary symptoms in a very mild form, which readily succumbed to small doses of hydriodate of potass.

CASE 8.—Presented a phagedænic ulcer (quite a chancre in appearance) situated on the glans penis, and a sore of the same character on the posterior part of the thigh; he admitted having had connexion with a suspected party, and five days afterwards he perceived a sore just within the prepuce; he did not interfere with it for a fortnight, when it became so painful he could not walk. He applied to a surgeon, who ordered mercury, till he salivated him: the sore on the prepuce healed, but a very large superficial sore appeared on the glans, which, with that on the posterior part of the thigh, went on to increase rapidly. They both presented the same characters. He stated he took two mercurial pills at night, and one in the morning, during three months. He was so weak and reduced he could barely walk: he was ordered the hydriodate

of potass, but it purged him so severely, it became necessary to discontinue it. He was fully under the influence of mercury. He was inoculated on the arm with the secretion from the phagedænic sore on the glans. Twenty-four hours after, a small pimple arose, which went on to increase and became a well developed chancre; it did not present the phagedænic character of the sore whence it emanated, but solely that of simple chancre. Its form was strictly circular; its edges were red and indurated; its centre was excavated and foul. The patient's health was improving at the period of inoculation, on good air, generous diet, and the absence of medicine; the sores were cauterized repeatedly, and went on rapidly losing their specific character, and granulating healthily. Three months elapsed, and he was quite cured. The repeated application of caustic, combined with good air and generous diet, worked his cure.

In the foregoing cases, both patients had been treated with mercury, and in both instances the general health failed, and the disease as rapidly increased. The mercury being omitted, and good air and generous diet, with local treatment substituted, they both as rapidly got well. In each case, when inoculation was practised, the general health and the sores were improving, and it is to this fact

I attribute the circumstance that the artificial sores refused to assume the phagedænic character of those whence they emanated—a fact going to shew, that the syphilitic poison is modified and controlled by the condition in which it finds the constitution at the time it is submitted to its influence—that is to say, the virus that would produce a benign chancre (the patient's general health being good) would be equally able to produce a phagedænic chancre, his general health being impaired.

CASE 9, shews the value of inoculation in the diagnosis of discharge from the urethra, having all the appearance of a gonorrhœa.

—— presented a discharge from the urethra of long standing, and which had resisted all previous treatment. Inoculated him with the discharge on the arm. In two days a pimple developed itself, which went on to be a confirmed chancre. It was of circular form, with a sloughing centre, and a hard, red, extended base. No ulcer could be seen within the urethra, nor could any induration be detected: he took three grains of blue pill every night. The discharge speedily ceased; the inoculated part healed; and the patient was cured. Some months after he had an attack of secondary symptoms.

The value of inoculating, in this case, is too

evident to require comment. It also corroborates cases related by M. Ricord and others. Analogous cases occurred to Mr. John Hunter, which led, in great measure, (through false deduction,) to promulgate the idea that gonorrhœa should be treated by mercury; inasmuch as he was thereby brought to conclude that the poisons of syphilis and of gonorrhœa are identical.

CASE 10, shews that the pus of a gonorrhœa does not produce a specific sore by inoculation.

—— presented a gonorrhœa of many months' standing, which had resisted all kinds of remedies. Inoculated him on the arm with the discharge several times, at intervals of a few days: no effect was produced. No tenderness or induration of any part of the urethra could be detected. The stream of urine was slightly twisted, though its calibre was not diminished. Passed a catheter every other day for a month: this effected a permanent cure. I had opportunities of seeing him for several years: no secondary affection supervened.

CASE 11 presented a gonorrhœa of long standing. No remedy appeared to control it. Inoculated him on the arm without effect. He was cured by the same means as the preceding patient.

I have never seen a specific sore produced by inoculating with gonorrhœal virus. I have seen,

on one or two occasions, a small vesicle produced thereby; but the same appearance may be imitated by inserting a little milk under the skin, and can by no means be mistaken for a specific sore. M. Ricord states, that constitutional or secondary symptoms never succeed to a simple gonorrhœa, and that in those cases where secondary symptoms have been said to follow a simple gonorrhœa, they have been cases of undetected chancres within the urethra, and not cases of gonorrhœa at all.

Cases might be cited in which inoculation has been employed with the secretion from secondary syphilitic sores. I have witnessed this experiment more than once; in each case it tended to uphold the statement of M. Ricord, that secondary symptoms are not capable of reproduction by inoculation, though they may be transmitted from parent to child, of which the following case is an example.

CASE 12. ——— presented her infant, a few weeks old, covered with a copper-coloured eruption, and she (the mother) presented a sore resembling a chancre on the nipple of her breast. She stated, her husband had diseased her before she became pregnant, and that during the period of gestation she had an eruption somewhat similar to that on her infant, and with which it (the infant) was born. Soon after its birth, her nipple became

painful, and each day it got worse. The child had not any sore about the mouth, lips, or fauces, that could be detected. The mother and infant were both submitted to mercurial treatment, and both as rapidly got well.

This is the only case precisely of this kind I have had the opportunity of seeing, and one in which it appeared that the venereal poison, in its primary form, was propagated by a secondary affection.

Taking a review of the foregoing cases, the retrospect points to the following facts: 1st. That in some the inoculation alone furnished the diagnosis. 2ndly, that in others it corrected it. Lastly, that in all it tested, proved, or confirmed it; and that in a manner decided and correct. That great prejudice exists to the practice of inoculating in syphilis there is little doubt; feelings equally strong, at one time, existed to the practice of vaccination over which the good sense of an enlightened age has happily triumphed; and as inoculation in the diagnosis and treatment of ulcers and discharges invading the genital organs, comes to be more frequently practised, and better understood, I feel confident its uses and advantage will be recognized, and that it will be elevated to the important position its inestimable value eminently entitles it to hold.

In every case in which I have employed inoculation to test syphilis, and the sores have proved to be syphilitic, a specific ulcer has invariably resulted, and in no case (the inoculation failing) have secondary symptoms supervened, tending to prove the contrary. However, it may be, and I believe it has been, argued, that it is not rational to produce disease to prove disease; but if it can be shewn that no evils result from the practice, that important information may be gained, and that unnecessary annoyance and suspense may be spared, it appears not to be reasonable only, but feasible, benevolent, and imperative.

Mr. Abernethy, in speaking of diseases resembling syphilis, observes, that "the venereal disease in some cases assumes unusual characters, and that it is scarcely possible to discriminate between these anomalous cases of syphilis and those of diseases resembling it, unless some new distinctions are discovered." Now inoculation manifestly supplies the deficiency, rendering it no longer excusable to treat a disease as syphilis merely because it resembles it. Inoculation furnishes at once a truthful, immutable, unerring guide, one that lays before us all we seek to know, devoid of inconvenience, accident, or injury. How great a boon is this to the patient and to the surgeon! How much doubt and misgiving

it spares the one; from how much anxiety, risk, and actual misery it may protect the other!

Yet, fraught though its practice be with these undeniable advantages, inoculation is by no means extensively employed. Whether this be due to apathy, ignorance, or unbelief, or to unwillingness on the part of patients, or to that jealousy that inevitably and universally attaches to innovations on ancient modes of treatment, I cannot determine; but this I know, that in every case in which I have proposed to inoculate a patient, having first been at the pains to explain its motive, advantage, and aim, I have not failed to carry the point, and at the end of two or three days I have been enabled to say positively, "Your case is syphilitic, or it is not," thereby doing away with all doubt, uncertainty, and suspense, (though the proof was too often adverse to the wish,) nor failing to raise deserved estimation for the practice. Further to illustrate the value of this most important agent in the diagnosis of syphilis, I will briefly state the facts established by it.

1st. That a chancre is the product of a specific matter.

2nd. That this matter is the secretion of a chancre.

3rd. That inoculating with matter taken from a chancre produces a sore of the same character.

4th. That a chancre during the first four or five days of its existence is essentially a local disease.

5th. That chancres destroyed by excision or caustic, prior to that period, are never followed by secondary symptoms.

6th. That the constitution being under the influence of mercury, does not protect it from, nor destroy, the effect of syphilitic virus.

7th. That buboes may be produced by direct absorption, and that chancres may be produced from their discharge.

8th. That there is not a diversity of syphilitic poisons; but that the one poison is modified by idiosyncrasy of constitution, mode of life, situation, and treatment.

9th. That the pus of a gonorrhœa does not produce a chancre or specific sore.

10th. That cases of gonorrhœa are sometimes accompanied with hidden urethral chancres, and that chancres have been produced by what has been mistaken for gonorrhœal discharge.

11th. That chancres are not produced by inoculating with the secretion from the sores of secondary symptoms.

12th. That chancres cannot be produced by inoculation in the lower animals.

13th. That the number of chancres does not in-

fluence the severity of secondary symptoms, but that their duration does.

14th. That no ill effect results from producing chancres artificially, provided they be destroyed within the prescribed time.

Such are the important facts inoculation has established, and I know not a means of diagnosis in surgery, furnishing information more extensive and important, or so unerring and conclusive. Thus impressed, I am anxious to use my best endeavour to extend the practice, feeling assured it will never deceive, and suspecting, moreover, that there are other facts to be eliminated by its more general use.

Further ; I will observe, that though I have been constantly in the habit of inoculating, and of witnessing inoculation practised, during a period of years, I have not seen one case in which it produced an untoward symptom, nor many in which it failed to elucidate an obscure one. Therefore, if by settling the question of the non-identity of the poisons of syphilis and gonorrhœa, a moiety of victims were wrested from the dominion of mercury, a large addition has been made to the number subsequently by the aid of inoculation ; and it ought not to be too much to say, that what vaccination has done for variola, inoculation may be

made to do for syphilis, though not itself (as in the former case) the prophylactic, it has been the means to indicate it. Variola, under the influence of vaccination, is now well nigh extinct; and were inoculation practised in every case of genital sore, and were every sore that inoculation proves to be syphilitic destroyed before the fifth day of its existence, the same remark might nearly apply to syphilis. The exceptions would be cases of urethral or concealed chancres, and cases of direct absorption; of the latter I have not seen an instance.

The power to convert the germ of a loathsome, disgraceful, contagious, and contaminating, constitutional disease, into a simple, harmless, local ulcer, easy to cure, and of short duration, is no slender privilege, and honour and credit are due to the distinguished surgeon whose acute perception detected the means to rid mortality and its offspring of a most potent curse.

The next step that infringed on the ancient heroic mercurial mode of treating syphilis was the introduction of iodine and its compounds in the treatment of secondary and tertiary symptoms. Formerly, when, under the influence of mercury, (those cases appeared to retrograde, or failed to progress,) the necessity to increase the mercurial dose was thought to be imperatively indicated, in

order (as it was imagined) that the antidote, so called, might keep pace with, and eventually outstrip, the disease, the notion that it might aggravate and even that it might produce the symptoms it was given to cure, was of course rarely, if ever, entertained. Simple treatment, happily, has unmasked that fatal fallacy, and it is now generally admitted that some of the worst cases of secondary and tertiary symptoms that mercury was employed most largely to remedy owed their severity and duration to its misuse. Sir Astley Cooper, however, in his Lectures, p. 519, exhibits some misgiving of this kind, and though a strenuous advocate for its employment in syphilis generally, observes that, "Mercury itself unfortunately produces diseases very similar, both in appearance and effect, to syphilis." He continues, "I recollect at the commencement of my studies in these hospitals, one day, on going round the wards with a surgeon, having been very much surprised to see mercury so indiscriminately employed, and at seeing every poor emaciated wretch continually rubbing in. There was one individual, I remember, in a dreadful state who had been using mercury for a great length of time, and under which he continued to get rather worse than better. In this case I took the liberty to suggest the propriety to discontinue

it, when, in a short time, the patient became completely cured. Mercury, in reality, when given injudiciously, or to excess, sometimes produces ulcers, that a man of little experience would say were venereal."

Mercury at the present time, in the hands of its warmest advocates, is rarely persevered with long after a chancre is healed; never after the induration around it disappears. Secondary symptoms supervening, the patient having gone through a mercurial course, it is by no means universally employed; but recourse is had, for the most part, to iodine, or to some of its preparations. The general effect of iodine is to increase the secretions; and the first and a constant evidence of its influence is the occurrence of coryza, and congestion of the mucous membrane of the nose, eyes, and fauces, somewhat like that produced by small and continuous doses of arsenic. If it be administered while the gums are under the influence of mercury, it will maintain that action, and in very large doses I have seen it produce it.

Iodine does not appear generally to induce the absorption of natural structure, though it frequently exercises that power over morbid and extraneous growths; and though I have seen it lavishly administered, I have not witnessed wasting

of the testicles, the mammæ, or great emaciation, or loss of virility, supervene. It may be detected in the blood, the sweat, the urine, the saliva, and in the milk. Though many constitutions are obnoxious to mercury, few rebel under iodine, if the fitting dose and vehicle be ascertained. Referring to the pernicious effect of mercury in certain cases, Dr. Wheeler related an instance of a patient in St. Bartholomew's Hospital, who barely escaped sloughing of the tongue from having taken but a single grain of calomel; and there is at this time a lady under my care for whom the late lamented Mr. Liston prescribed two grains of calomel, which produced a salivation so violent, and attended by such fearful constitutional disturbance, that she kept her bed for two months, enduring the most excruciating torture; she would have undergone the same suffering several times since, on consulting other medical men, had not the great surgeon charged her not to take mercury from any one. The case of Sir Thomas Overbury, in the year 1613, published in 1651, furnishes a most atrocious instance of slow poisoning by mercury, and is the more interesting now, as it shows the identity of the symptoms so produced with the symptoms universally and unjustly attributed to syphilis in those times. The period of the poisoning extended from

May 6, 1613, to October 7, in the same year. Sir Thomas Overbury was imprisoned in the Tower at the instigation of Rochester, and was poisoned by the direction of the Countess of Essex, who caused small quantities of mercury to be introduced into tarts, jellies, &c., which were eaten by the prisoner. The narrator says, "Sir Thomas languished with the extremity of sickness till the 7th of October, when an apothecary's boy was bribed to poison, and administer to him a glyster, after the receipt of which he fell into a great extremity of vomiting and other purging, which left him not till it caused his soul to leave his poisoned body: being dead, he was presently unreverently buried in a pit digged in a very mean place. On his body, thus venomously infected, appeared divers blanes, and blisters, whereupon they, to take away as well his good name as his life, did slanderously report that he died of the French pox; but this report was cleared in court by the depositions of his servants and of other men of worth and credit." De la Bell, an apothecary, who saw him a little before his death, says, "He was changed in his complexion; his body consumed away, full of yellow blisters ugly to look on;" and it appears by a letter wrote by Lord Northampton to Somerset, that "there were found on his arm a bleb, and on his

belly twelve kernells raised (not like to break) as broad as threepence; an issue on his back, and from his shoulders downwards a dark tawney-coloured eruption ugly to behold; that he stunk so intolerably as not to be borne withall, and that they were glad to throw him in a lousie sheet into the coffin, and that they burried him with the stigma that he died of the pox," the symptoms detailed corresponding in great measure with the appearance of the disease so called and described by the authors of those times.

Actual poisoning by iodine in the human subject must be rare, as there are but few cases on record; in the lower animals, death has often been produced by it. Cases of poisoning by hydriodate of potass are not to be found, if we do not admit the somewhat doubtful cases detailed by Chevallier and Dr. Christison, where, in one parish, one-sixth of the population were attacked with swelling of the face, head-ache, urgent thirst, inflamed throats, colic pains, and bloody diarrhœa, symptoms attributed to the use of impure salt obtained from kelp after the separation of the carbonate of soda, containing a portion of hydriodate of potass, in which state Chevallier at one time found a third-part of the salt in use at Paris; but even in these cases there is no account that in any one actual death ensued.

Hydriodate of potass, uncombined even in very small doses, by certain constitutions cannot be tolerated, producing head-ache, sickness, prostration, giddiness, and an unbearable metallic flavour in the mouth, with pyrosis. In the case of one Morrison, a patient in the Middlesex Hospital, one-grain doses produced all the foregoing symptoms ; but by combining it with opium, a dose of ten grains, three times a day, was taken without inconvenience, and produced the desired effect. His case was one of secondary syphilis. In the case of Chilcott, also at the Middlesex Hospital, large doses of iodine and hydriodate of potass were taken for a long period, without any apparent ill effect. She took one grain and a half of metallic iodine and two drachms of hydriodate of potass three times daily, for months. She laboured under secondary and tertiary symptoms, which this medicine relieved. She had taken previously enormous quantities of mercury, which both aggravated her malady and impaired her constitution. Whilst taking these large doses of iodine and hydriodate of potass, she became comatose, and suddenly died. It fell to my lot (being at the time house-surgeon at the Middlesex Hospital) to make the post-mortem examination, Mr. Kiernan and Mr. Tomes being present. All the abdominal and thoracic viscera were

healthful. There was a clot of extravasated blood at the base of the brain.

In one other case in private practice, a patient was taking large doses of hydriodate of potass for secondary syphilis, when he became comatose also, and suddenly died. I attended the post-mortem examination with the late Mr. Scott. Here, also, a clot of blood was found extravasated at the base of the brain. He was a man remarkably thin and spare, of most abstemious habits, and in no way appearing likely to suffer from apoplexy. How far these two cases owed their fatal termination to the hydriodate of potass I do not say; but their coincidence struck me forcibly at the time, and, I must admit, impressed me unfavourably of such enormous doses. I have not found it often necessary, to ensure the utmost benefit from the hydriodate of potass, to increase the dose beyond ten grains three times a day, and I begin generally with two or three grains daily, continuing it in that dose for a week, and gradually increasing it up to the quantity named. Moreover, I have found it more efficacious with sarsaparilla than alone or in combination with anything else; occasionally, I have seen cases where it had a tendency to disagree, rendered more tolerant by adding half a drachm of tincture of hops to each dose of sarsa-

parilla. I have found, also, that after it has been taken for a long time, and in large and increasing doses, it loses its effect, and that by suspending it for awhile, and by beginning again with the minimum dose, it regains it. Administered in combination with mercury, I have found it no less useful in treating the primary than in treating the secondary disease, and I have found secondary symptoms following, or occurring during its administration, of a very tractable and trifling character.

To iodine and its compounds, therefore, is due the next step that infringed on the heroic mercurial treatment of syphilis, for no surgeon of the present time would, I conceive, continue to treat a case of secondary symptoms for any time with mercury, if under its influence the disease retrograded, or even failed to progress, without abandoning that remedy for hydriodate of potass, or for some preparation of iodine.

To the recognition of the phagedænic primary syphilitic sore, as distinguished from the common or benign forms of chancre, with the treatment that resulted, is due another step that infringed on the heroic mercurial treatment. We understand by a syphilitic primary phagedænic sore a chancre in a state of rapid ulceration, inflammation, and slough-

ing. This condition, however, as inoculation proves, does not depend on any peculiarity or extraordinary virulence in the virus itself, as there is not a diversity of syphilitic poisons, but the one poison is so modified by idiosyncrasy of constitution, mode of life, situation, treatment, &c.

The evil effect of treating these cases with mercury, with the treatment suited to them, is well illustrated in the following cases from my notebook :—

1839, Nov. 1. O. S——, aged thirty-nine, a pale man, of lymphatic temperament, a native of Denmark, and subject to rheumatism, was admitted to Pyke's Ward, at the Middlesex Hospital, with a phagedænic chancre, situated around, and extending into, the urethra; it presented a large surface, and was very deep. He states, that last summer he contracted gonorrhœa, which was nearly cured, leaving induration around the urethra, when, nine weeks since, about four or five days after a suspicious connexion, a chancre appeared at the orifice of the urethra, occupying the indurated portion alluded to. Immediately he perceived it, he consulted Dr. Andrews, who ordered him mercury and black wash. His gums soon became sore, and the treatment was continued for three weeks. During the whole time the chancre extended, and

rapidly got worse. He then applied to Mr. Wm. Andrews, who freely cauterized the part; still the chancre increased, and the tissues around became so swelled that he could not pass his urine; he then applied to another medical man, who passed a catheter for him, and gave him more mercury, and the sore rapidly extended: in this state he came under Mr. Mayo's care, who inoculated him on the wrist from the virus of the chancre.

2nd. There was bleeding from the urethra; the pain on passing urine is excruciating.

3rd. A pustule formed on the inoculated part. Ordered, hydriodate of potass, ten grains; decoction of sarsaparilla, three ounces; three times daily. Balsam of Peru ointment for the chancre.

4th. The artificial chancre looks angry; the phagedænic sore improves. Full diet, wine, &c.

9th. The artificial chancre stationary; the phagedænic sore rapidly improves; cauterized the former.

12th. The chancre on the penis is mending rapidly; the artificial chancre has nearly healed.

Dec. 4th. The patient is well; he is discharged.

Remarks.—Each time mercury was given, the symptoms were greatly aggravated. Inoculation proved the syphilitic nature of the sore. The balsam of Peru ointment applied to the sore did great

good ; the nitrate of silver (from which I often have seen so much benefit in these cases) did great harm. The patient was inoculated on the first ; the chancre resulting was fully developed on the 3rd ; it was cauterized on the 9th ; it was nearly healed on the 12th ; it was quite healed on the 16th.

Though the artificial chancre was left so long unmolested, it did not attain any great size, nor did it present any phagedænic characters. Had the patient, instead of being placed on generous diet and hydriodate of potass, gone back again to his mercury, then (as inoculation has often proved) would the primary and the artificial sore have presented the same characters, inasmuch as their mutual condition essentially depends on the constitutional state of the individual at the time he is invaded by, and labours under, the disease.

CASE 2. Thomas D——, aged twenty-one years, a pale, weakly man, subject to pleurisy, was admitted to Pyke's ward, September 2nd, 1839, with a phagedænic chancre, and a sore of like character on the posterior part of the thigh, as big as the palm of the hand. States that in March he perceived a small lump on the thigh, which burst, and emitted a sanious discharge ; it commenced to spread, and in two months attained its present size. On Whit-Thursday he had suspicious connexion, and five

days afterwards he perceived a sore within the prepuce. He left it to itself for a fortnight, when it became so painful he could not keep about. He then applied to a surgeon, who gave him mercury till he was completely salivated. The preputial portion of the sore healed, but it increased considerably and rapidly on the glans, and also on the thigh. During the whole time he was kept under the influence of the mercury, a period extending over three months. On his admission to the hospital he was so weak and reduced that he could barely walk.

Sept. 2nd. Ordered, hydriodate of potass, ten grains ; decoction of sarsaparilla, one ounce and a half, three times a day, with balsam of Peru to the sores. The iodine purged him so violently, and affected his head so severely, that it was suspended.

7th. Chalk mixture with opium.

14th. Dover's powder, ten grains. The sores are no better.

25th. Calomel, two grains ; opium, one-third of a grain, three times a day. Continued till the 5th of October, when his mouth became sore. All the ulcers are greatly aggravated. Suspend the mercury.

Oct. 10th. Ordered, nitrate of silver, ten grains ;

water, one ounce, for a lotion ; full diet, with wine.

12th. The sores improve considerably. Mr. Mayo inoculated him on the wrist from the virus from the chancre. Twenty-four hours after, a small pimple arose, which went on to increase, and became a well-developed chancre. It did not present any of the phagedænic characters of the sore whence it emanated ; but solely and entirely those of a common chancre. Its form was circular, its edges red and indurated, its centre excavated and foul. The patient's health was fast improving prior to the inoculation, which was attributed to removing him from the syphilitic to a more salubrious ward, and to the improvement made in his diet. All medicine was suspended.

Nov. 1st. The chancre and the general health improve together. Mr. Mayo cauterized the chancre and the artificial sore.

2nd. The artificial sore loses its specific character and begins to granulate healthily, as does that on the penis, a great portion of which has healed.

3rd. He goes on well. Ordered three ounces of wine and a pint of porter daily.

9th. Cauterized both sores.

13th. Ordered, hydriodate of potass, twenty

grains; decoction of sarsaparilla, three ounces, twice daily.

Dec. 7th. Has taken the medicine up to this date without any inconvenience, and has gradually improved. The artificial chancre is quite healed. The chancre on the penis is fast healing.

10th. Discharged perfectly cured.

This case shews, in two instances, the ill effect of mercury over phagedænic chancres. That this was a case of chancre the inoculation proved. When the patient was inoculated from the phagedænic sore, his general health had improved; and to this may be attributed the circumstance, that the artificial sore did not take on the character of that whence it emanated.

The repeated application of nitrate of silver, the administration of hydriodate of potass, when he was strong enough to take it, with good air, generous diet, wine, &c., appeared to work this patient's cure.

Were it necessary, I could select several cases, in addition to the foregoing, all pointing to the fact that cases of phagedænic chancre are ever aggravated by mercurial treatment; and that they oftentimes owe their origin, for the most part, to the cachexia induced thereby; or to that debilitated condition of constitution that supervenes on privation, dissipation, or vitiated atmosphere.

Nor does this observation respecting mercury apply to chancres only, for Mr. Travers in his *Surgical Essays*, part i., p. 152, states that a malignant ulceration of the prepuce and penis following phimosis, and requiring amputation, may be brought on by an indiscreet perseverance in the use of mercury during the period of inflammation.

It may not be out of place here briefly to pass in review the several steps, as they became recognised, that tended to infringe on the ancient mode of treating syphilis—a disease then thought to be amenable to mercury, and to mercury only!

The first step was certainly due to the solution of the question of the non-identity of the two poisons of syphilis and gonorrhœa, and to the treatment resulting.

The second, to the army surgeons—to Broussais—and to the introduction of what is called simple treatment, thereby proving the possibility of curing every genital sore without the use of mercury.

The third step, to M. Ricord, aided by inoculation, shewing that chancre, in its first stage, is strictly a local disease.

The fourth step, to the introduction of iodine and its preparations in the treatment of secondary and tertiary symptoms.

The fifth step, to the recognition of the primary

phagedænic, as distinguished from the common or benign form of chancre, with the treatment resulting. (Carmichael.)

The sixth step, to the treatment of the local sore, and to the means adopted for the early healing of the same; for the longer the primary sore remains unhealed, the more severe the supervening secondary affection becomes.

The seventh step, to determining the non-contagiousness of secondary and tertiary symptoms, and to distinguishing therefrom warts, certain kinds of condylomata, &c., that are communicable.

The eighth step, to ascertaining some of the laws that appear to preside over hereditary syphilis—among the rest, the shewing, that to administer mercury to the parent or parents labouring under secondary symptoms, does not prevent contamination accruing to their offspring; the determining, moreover, the futility of administering it to patients labouring under what is termed tertiary symptoms, with the same view, inasmuch as tertiary symptoms are incapable of being transmitted by hereditary disposition, this being considered by M. Ricord their characteristic mark.

It is of the three latter I now come to speak.

First, as to the early healing of the primary sore. The great John Hunter recognized the fact,

that the more speedily the primary sore was healed, the less severe the subsequent secondary affection became. The early writers on syphilis say but little on this point, which allows the inference that they paid but little attention thereto. They sought to heal the local sore by bringing the constitution under the influence of mercury. The modern treatment of syphilis comprises both local and constitutional treatment, and many chancres that would with difficulty succumb to the one, readily succumb to both.

The means of treating the local sore may be stated as follows:—

Excision, simple or combined; escharotics; stimulants and sedatives, with the means for keeping parts from contact.

Excision.—This is applicable to chancres in the incipient stage. M. Ricord has shewn that for the first four or five days of its existence syphilis is purely a local disease, and that if the primary sore be destroyed within that period, secondary symptoms never supervene.

Excision may be practised simply, but more frequently it is employed in combination with escharotics; and this is the usual mode adopted when recourse is had thereto.

Escharotics are employed for the most part to

effect the same objects as excision. The potential cautery, the potassa fusa, nitric acid, and lunar caustic, are those in general use, the last taking precedence.

Stimulants are employed to expedite the healing of the chancre, after the period for its destruction has been lost; and a very marked good effect they have, when judiciously used.

Solutions of nitrate of silver, of nitric acid, of sulphate of copper, of lead, and of zinc; tincture of muriate of iron, dilute acetic acid, strong beer-grounds, sugar-yeast, powdered bark, rhubarb, calumba, balsam of Peru, blue-lint, black-wash, and calomel, are among those commonly employed.

The means last mentioned,—the application of calomel to the local sore,—was, so far as I am informed, first made public by Dr. Burton, assistant-surgeon, Royal African Corps, in a paper published in the *Medical Gazette* of August 4th, 1838. He there recites two cases, in which it produced marked benefit. The mode of applying it is to pass the solid nitrate of silver over the sore, and cover it with lint; twenty-four hours afterwards remove the lint, and cover the surface of the sore with calomel; reapply the lint; remove this in twenty-four hours, and repeat the application.

On the third application in the first case nar-

rated by Dr. Burton the sore was healed ; in the second case the sore was healed in three days. The same paper alludes to other cases no less successful. Sedatives also are extremely useful in certain cases, either alone or in combination with stimulants, poultices, fomentations, and other wet applications. They for the most part consist of solutions of opium, hemlock, henbane, and hops. The means of keeping parts from contact by the introduction of lint simply, or saturated with water or other medicament, is an important matter in treating the local sore ; and I have often seen this expedient alone sufficient to cause it to heal. The same principle has been thought of in cases of gonorrhœa ; but I have not seen it applied, nor do I remember by whom it was proposed.

While speaking of the local sore, I will take this opportunity to state that I have observed that its severity, the difficulty of getting it to heal, and the intensity of the supervening secondary affection, are ever in a ratio with the period of its incubation. I think Dr. A. Wilson has made a similar observation respecting the period of incubation, and the consecutive severity of rheumatic and other fevers.

The longest period of incubation observed by me was nine weeks ; the sore was intractable, and the secondary affection severe and persistent, extending

over a period of five years. Six weeks, a month, three weeks, are not uncommon periods, but from three to six days is about the average time. I have also had the opportunity to observe that sores of different characters, differing also in the period of their incubation in severity and duration, are communicated by the same party to different individuals. Dr. Fergusson relates a case somewhat of this kind.

An officer, four days after having connexion with an opera-dancer at Lisbon, applied to Dr. Fergusson, with the whole penis enormously swelled, of a deep red colour; there were chancres on different parts of the prepuce, and two on the glans penis, "the appearance of which could be compared to nothing but the holes made in a piece of mahogany or log-wood." He was a young man, robust and plethoric. The skin was hot; the pulse sharp and quick; the tongue white; the eyes suffused. Being copiously blooded, and cold acetous lotions having been applied to the part, and free purging obtained with neutral salts, the tumefaction subsided, and the sores became healthy. The person who communicated the infection continued on the stage for many months afterwards, apparently in perfect health, but occasionally infecting others, yet without anything extraordinary that was learned in the nature of the symptoms.

Another instance is from Mr. Rose, who observes, "I recollect, many years ago, a healthy young man, who was afflicted with a decidedly sloughing sore in the penis, in consequence of a suspicious connexion. He twice afterwards, at a very considerable interval, had a fresh infection, and the sores each time had the same bad character as the first."

I have also had the opportunity to observe that some constitutions appear to be obnoxious to syphilis, others to gonorrhœa; and I have at times seen chancre, gonorrhœa, balanitis, warts, excoriations, and secondary symptoms, all existing at the same time, on the same person, from one connexion. Further, I have known two persons to have connexion with the same individual, the one to escape, the other to be severely infected. The different manner in which different persons perform the same act may, in some sort, explain this; for, if you merely lay a portion of matter secreted by a chancre on a healthy corona glandis, it will not always infect, but if you apply very slight friction, or abrade, or puncture, it will do so surely; and I have seen reason to think that friction is almost necessary to contact, to infect with syphilis in a healthy state of the parts; and it may be from this cause that some are held not to be

liable to that disease, when their immunity is really due to the want of a sufficient and energetic application of the virus. In this point of view "circumcision" would seem to answer, in degree, as a prophylactic in syphilis, since by exposing the glans it gradually loses the characters of mucous membrane, and takes on those of the common integument, and is therefore less easily abraded. It has not fallen to my lot, either in public or private practice, to have more than one Jew for a patient labouring under venereal disease, and he suffered from gonorrhœa, but I have often felt interested to ascertain if persons of that persuasion contract syphilis as readily as their uncircumcised brethren.

At the Westminster Medical Society, Saturday, November 16th, 1839, Mr. Gregory Smith detailed some particulars of the case of an aged woman, who contracted a virulent gonorrhœa from her husband, who was not himself diseased, but who had been connected with an impure woman an hour or two before he had communication with his wife. The man's glans penis was very hard, and was not covered by the prepuce.

It must be in the experience of most surgeons to hear patients attribute an attack of syphilis, or of gonorrhœa, to a visit made to a strange *cabinet d'aisance*, &c. Doubtlessly, in the latter instance

such an occurrence is possible, but for syphilis to arise from the same cause is most improbable, not to say impossible. The slightest contact of gonorrhœal matter with the urethra (as with the conjunctiva), is generally sufficient to infect; but I have often proved that such is not the case with the virus from a chancre. Indeed, were it so, one chancre in the same patient would reproduce itself infinitely wherever the matter touched; this manifestly is not the case, otherwise the penis would be surrounded with chancres in most cases where one chancre exists. I am aware the doctrine has been mooted that true chancre and constitutional contamination are not experienced by the same party more than once, and that analogy has been sought to be established on this point between syphilis and variola. Every day's experience, I think, proves the fallacy of this position, and few of its promoters would be willing, I imagine, to run the risk on the faith of it. There also appears to be a sort of periodicity, as between syphilis and gonorrhœa: they seem to reign in cycles, whether it be the effect of accident or not; but it is not unusual for a time to see many cases of gonorrhœa, and then for a time to lose sight of that disease, and to see an unusual number of cases of chancre. It is not very common to see chancre and gonor-

rhœa existing at the same time in the same patient. John Hunter mentions a case in which a patient had gonorrhœa, upon which he contracted syphilis; immediately the chancre appeared, the gonorrhœa ceased. I had a case somewhat analogous under treatment; the patient had gonorrhœa, and afterwards contracted a slight sore on the frænum, which I cauterized, and the discharge immediately stopped.

Somewhat recently it has been proposed to treat cases of gonorrhœa by counter-irritants applied to the integument of the penis, and it is said with good result: the two cases just cited appear to me to favour that treatment.

The next step, the determining the non-contagiousness of secondary and tertiary symptoms, was most important in its result. Formerly it was thought possible not only to contract the secondary affection by contact, but that it was possible also to reproduce the primary disease in the same way. The religious order termed the Mendicant Friars, who, having taken the vow of celibacy, certainly should have been quite free from syphilitic contamination, were not uncommonly sufferers therefrom; and the circumstance was not unfrequently attributed by them to sitting on the same seat with infected persons, wearing some of their clothes, or

even to shaking hands with them ;—in a word, to read the notions formerly entertained on this subject, one would be almost led to think that to look upon a person infected would be sufficient to contaminate ; and the idea was carried so far that diseases of the same and of the most dissimilar kinds were referred to this cause. I remember reading, in a treatise on aneurism, the case of Petrus Antonio Ferrari, a cook, who was admitted to the Hospital of the Holy Ghost, in Rome, under Petro Javina, suffering with a true aneurism of the groin, which Javina ascribed to the venereal disease ; and mercury was often given under all the circumstances mentioned, as a prophylactic.

Inoculation has set all this at rest, for it has proved that secondary or tertiary symptoms cannot be produced by contact, or by inoculation ; and though the former may be transmitted, the latter cannot be reproduced at all.

Warts and some kinds of condylomata may be produced by contact and by inoculation ; but the former are not a secondary or constitutional affection, nor does the administration of mercury influence them ; but being purely local in their cause, origin, and communication, they require only local means for their treatment. Sometimes they succumb very readily to the most simple measures ; at

others, nothing short of the knife, the ligature, or escharotics, will effect their cure. I have seen a coronet of venereal warts on the glans penis cured by wearing a piece of dry lint around it; and I have seen the same case, to all appearance, resist caustic and savin powder, energetically applied, but to succumb at length to the scissors and to escharotics.

The eighth step, which recognizes some of the laws that preside over hereditary syphilis, also materially infringed on the heroic mercurial treatment of that disease.

It must have fallen to the lot of most surgeons to be consulted by patients about to enter the matrimonial state, on whom some very slight mark of secondary affection exists,—

First, whether the disease in that state can be communicated to the wife?

Second, whether it be capable of being transmitted to the offspring?

Third, and if so, whether they can be put in possession of a prophylactic, in either case, as they must be married immediately?

I have witnessed and noted a sufficient number of these cases myself, to warrant the assertion, that no man's wife, no man's offspring, is safe, while the slightest trace or evidence of secondary

affection lurks about him ; and no man is moral or prudent who will marry till he has freed himself from all such evidence for at least twelve months. This statement is made in face of the fact, that secondary affections are not communicable by inoculation, or by ordinary contact of any kind ; but in the class of cases under consideration, the mother is contaminated by the embryo. A few months after conception, some evidence of secondary affection generally appears in the person of the mother ; and at the birth of the child, (should the mother go her time, for this is a very common cause of abortion,) there will generally be some evidence about the child, whether it be a sore on the tongue, or in the mouth, or on the side of the lips, in or on the nostrils (snuffles) or fauces, or spots on the skin, clefts round the anus, groins, or armpits, or sore eyelids. In some cases, no evidence appears till a week or two after birth. I have the notes of cases, in which the father, labouring under secondary affection, was put under the influence of mercury beforehand, and at the time of begetting the child. Where the mother only was treated in the same way, and where both father and mother, under similar circumstances, were submitted to the same treatment, yet the result was the same : the child in all three cases was contaminated ; in

neither case, therefore, mercury proved itself to be a prophylactic.

There are cases of this kind that seem to warrant the idea (and they form the solitary instance) that the primary disease may be propagated, or rather reproduced, by the secondary affection. A case occurred when I was house-surgeon at the Middlesex Hospital. A mother presented her infant covered with a copper-coloured eruption, with sores and clefts around the anus, and sores at the corners of the mouth; the mother also had psoriasis, and being much out of health, she could not suckle the child. She stated that her husband was diseased some months before her pregnancy, but did not communicate the disease to her in the primary form, but that about the fourth month of gestation she had sore throat and spots, and became then pale and weak; she went her full time, and could not nurse her child; her husband had an eruption similar to that on herself. Our attention was then drawn to the nurse, who on the nipples of both breasts had a circular circumscribed sore, with a foul, depressed centre and hard elevated edges—a sore that resembled a chancre. The woman, I believe, was inoculated. I have mislaid the notes of this case; but I well remember that the father, the mother, the infant, and herself, took mercury,

and that the last had syphilitic psoriasis subsequently, which was cured by the iodide of potassium.

Having now passed in review the several steps that infringed on the heroic mercurial treatment of syphilis, and depicted the dire affliction which that treatment entailed; having traced the dawn and establishment of the simple and more rational method of treating the disease, and expressed the conviction, based on frequently repeated observation, that neither mercury nor any other drug or remedy, save the destruction of the primary sore within the proscribed period, is prophylactic of constitutional contamination; and that no case of chancre, proved by inoculation to be a chancre and left undestroyed, fails to entail secondary affection in some form; having attempted to limit the administration of mercury in syphilis to safe and useful bounds—a limit also based on extensive observation of that disease; and having insisted, moreover, on the many advantages to be derived from inoculation,—I venture to express the hope, that an attempt, however humble, endeavouring to elucidate the laws that govern, and seeking to indicate the treatment best suited to a disease which may be infinitely reproduced by the sufferer, while it is perpetuated in his offspring—a disease which,

though it spare for the most part organs essential to life, directs its violence against the more ornamental parts of the human frame, the skin, the eye, the hair, the throat, the organ of voice, being among the structures usually invaded, while the exposed portions, the face, the hands, the nose, form its favourite locality—a disease that fixes its stamp on a man like a plague spot, pointing him out to his neighbour, and making him feel he has placed himself for the time being without the pale of society: an attempt, though humble, I repeat, striving to add to our means of preventing or controlling a disease fraught with such dire calamity, may be received with consideration for the intention's sake, and that the magnitude of the object may atone in some measure for the deficiencies of the performance.

FINIS.