

The modern treatment of syphilitic diseases : comprising the treatment of constitutional and confirmed syphilis by a safe and successful method : with numerous cases, formulae, and clinical observations / by Langston Parker.

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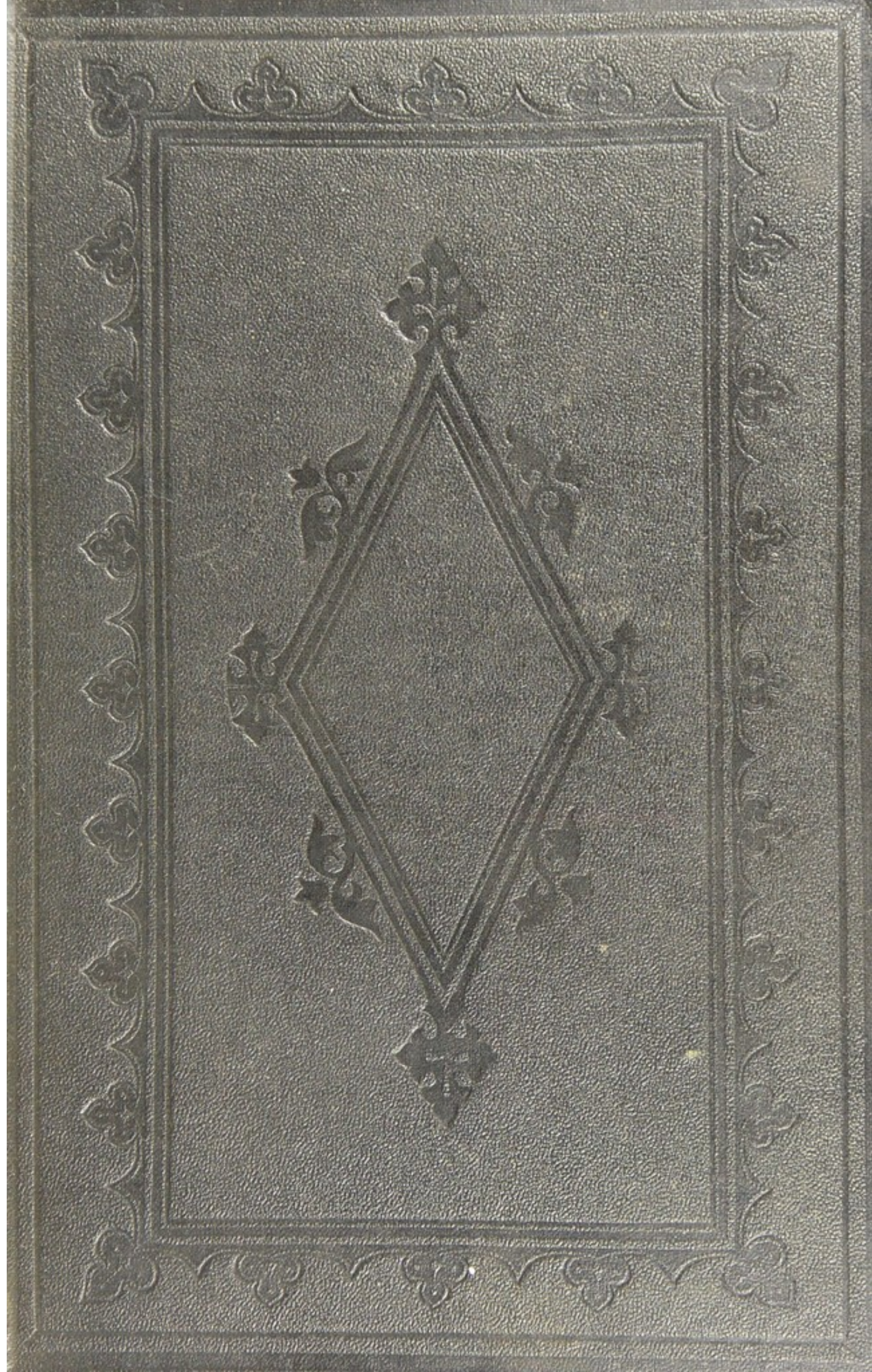
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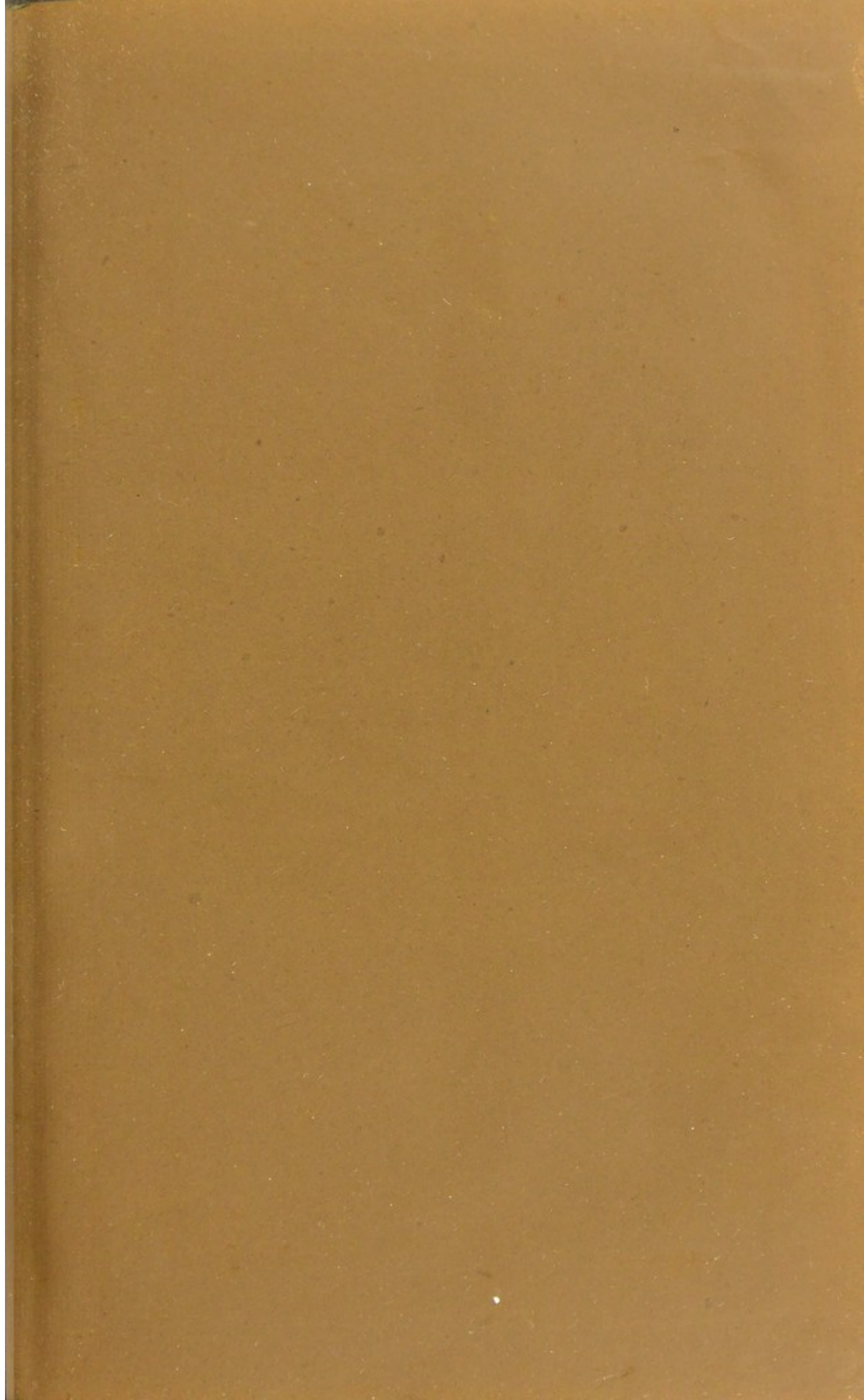


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THE
MODERN TREATMENT
OF
SYPHILITIC DISEASES,

COMPRISING
THE TREATMENT OF CONSTITUTIONAL AND CONFIRMED
SYPHILIS BY A SAFE AND SUCCESSFUL METHOD;
WITH NUMEROUS
CASES, FORMULÆ, AND CLINICAL OBSERVATIONS.

BY
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CONSULTING SURGEON TO THE QUEEN'S HOSPITAL, BIRMINGHAM,
ETC. ETC.

FIFTH EDITION.

ENTIRELY REARRANGED AND RE-WRITTEN, WITH NUMEROUS ADDITIONS.



LONDON:
J. & A. CHURCHILL, NEW BURLINGTON STREET.
1871.

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PREFACE.

THE present Edition has occupied the leisure hours of a professional life, and I hope may find the favour in the eyes of the public which the previous four editions have done. The practice taught in these pages has been the result of thirty years' experience, and is that upon which I place the greatest reliance.

I have particularly insisted, and in this I have been supported by one of the late great masters of our profession, Sir Benjamin Brodie, on the importance of using mercury by the skin, and not by the mouth, where this drug is indicated; and in the practice inculcated in the following pages this mode is perfectly harmless, whether used by friction on any part of the body, or by hypodermic injection.

Of the methods of treatment spoken of in the following pages, perhaps I have laid most stress on the "Mercurial Vapour Bath;" and although I have devoted a separate publication to this, still it will be found fully described in the following pages.

THE PAST

The first thing I noticed when I stepped out of the house was a sense of freedom. The air was fresh and the sun was shining. I had been so long in the city, and now I was in the country. The house was old and the garden was overgrown, but it was mine. I had bought it with my own money, and it was a dream come true. I had always wanted a place like this, a place where I could be alone and at peace.

I had been so busy in the city, so busy with work and with people. I had never had time to think about myself, to think about what I wanted. But now, here in the country, I had time. I had time to think, to dream, to live. I had time to be happy. I had time to be free. I had time to be me.

It was a strange feeling, this sense of freedom. I had never felt like this before. I had never been so happy. I had never been so free. I had never been so me. I had never been so happy. I had never been so free. I had never been so me.

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THE
MODERN TREATMENT
OF
SYPHILITIC DISEASES.

PART I.
PRIMARY SYPHILIS.

CHAPTER I.

GENERAL SKETCH OF THE MODERN HISTORY OF THE PATHOLOGY
AND THERAPEUTICS OF SYPHILIS. THE SIMPLE OR NON-
MERCURIAL TREATMENT.

THE modern history of Syphilis, both as regards its pathology and therapeutics, may be said to date from the time of John Hunter, whose treatise on the venereal disease appeared in 1786. The doctrines of that surgeon have influenced surgical opinions and practice even to the present day. Hunter, regarding syphilis and gonorrhœa as varieties of the same disease, and looking upon mercurial inunction as the grand panacea for both, submitted both to the same treatment.¹ These doctrines were opposed by Benjamin Bell, of Edinburgh; but so powerful for good or evil are the doctrines of a great man, that up to the period of Sir A. Cooper's appointment to Guy's Hospital patients suffering from gonorrhœa were compelled to rub in so many drachms of mercurial ointment till a profuse salivation was induced. Even the late Professor of Surgery in the Uni-

¹ See chapter vi, part 2, of his Treatise on the Venereal Disease.

versity of Edinburgh¹ charges a father as being unnatural, who, having a son suffering from syphilis, would submit him to any treatment except a mercurial one.

Hunter proved the existence of a specific "morbid animal poison," or "virus," by inoculation. M. Ricord has revived this practice, and from a most extended series of experiments has laid the foundation of a pathology which has removed from the study of syphilis much of the confusion by which it was formerly surrounded.² When the physiological school of medicine and surgery arose in France, its founders and partisans, reviving the idea of Bru (*'Méthode Nouvelle de traiter les Maladies Vénériennes,'* Paris, 1789), denied the existence of a special poison, or virus altogether, attributing the phenomena, or pathological symptoms, called "*syphilitic*," to certain modified conditions of ordinary irritation. Richond des Brus (*'De la Non existence du Virus Vénérien,'* Paris, 1826) and the learned M. Jourdain (*'Traité Complet des Maladies Vénériennes'*), may be named as the most strenuous supporters of physiological doctrines so far as they relate to the pathology of syphilis.

A mixed doctrine was subsequently taught by the late Mr. Carmichael, of Dublin, in which it was attempted to show that many primary sexual ulcers were due to the action of a specific virus, and were best combated by specific remedies; whilst, on the other hand, a great number of these ulcers were due to other forms of irritation, and required no specific treatment for their cure.³

Mr. Carmichael recognised several separate forms of the primary disease, corresponding, or giving rise to as many distinct forms of secondary manifestation. At the present day, surgeons are divided in their opinions whether there exist one or more forms of the primary disease. These are the "unicists" and the "dualists," the former believing in the

¹ Sir C. Bell; see his *'Institutes of Surgery.'*

² See *'Traité Pratique des Maladies Vénériennes; ou, Recherches critiques et expérimentales sur l'Inoculation appliquée à l'étude de ces maladies, &c.'* Paris, 1838. See also the chapter "On Inoculation."

³ *'An Essay on the Venereal Diseases which have been confounded with Syphilis, and the Symptoms which exclusively arise from that Poison,'* by R. Carmichael. Dublin, 4to, 1814.

existence of one form of the virus only, the latter recognising two; considering the different forms under which the primary disease appears to be due to certain local or constitutional causes. This I shall speak of more fully hereafter, merely alluding to it here as a simple matter of history.

In 1813, Mr. Carmichael first drew the attention of the profession in this country to the treatment of venereal diseases without mercury, limiting the employment of this medicine to certain forms of primary and constitutional infection. Mr. Carmichael inculcated the employment of mercury "in alterative doses" in cases of the "simple primary ulcer of the papular venereal disease which did not yield to rest, the antiphlogistic treatment, and astringent washes, and to produce its full effects in the true Hunterian chancre, with hardened edge and base." In the constitutional forms of disease, this surgeon had recourse to mercury in alterative doses, "when the papular and pustular eruptions became scaly, and obviously on the decline, and had not yielded to sarsaparilla, antimonials, and the hydriodate of potass," to produce its full effects in iritis, in nodes when iodine had failed, and for the scaly eruption, lepra or psoriasis, and the deep excavated ulcer of the tonsils.

In 1817, Mr. Rose read before the Royal Medical and Chirurgical Society his paper on the "Treatment of Syphilis," with an account of several cases of that disease in which a cure was effected without the use of mercury." A careful perusal of Mr. Rose's cases will show, as far as the primary diseases were concerned, that although the ulcers had healed, the disease was not cured, for many of the patients left the hospital with a "hard and elevated cicatrix;" the treatment did not prevent constitutional infection, for many of the cases were followed by secondary symptoms; whilst, as far as the treatment of the latter were concerned, they were a long time disappearing, and had a great tendency to recur. Many of the cases were apparently quite cured; the confusion in Mr. Rose's paper doubtless arises from the want of discrimination between the two classes of primary sores—the soft and indurated, or the infecting or non-infecting—a point in the pathology of syphilis not recognised in Mr. Rose's day.

The simple antiphlogistic rational or non-mercurial treatment

of syphilis is directed towards the removal of all the local and constitutional irritation which accompanies a venereal sore, by which the sore itself in many instances heals, and the disease is cured. It is especially indicated in soft chancres; those which secrete pus more or less abundantly, and which are free from a hard base. It consists in placing the patient on a regulated diet, suited to his constitution, not always on a low diet; in confining him to the recumbent position, or to bed; in destroying the ulcer by caustics, or covering it with lint soaked in weak solutions of sulphate of copper, sulphate of zinc, the diacetate of lead, or nitrate of silver; and giving internally aperients, antimonials, the mineral acids, or the preparations of iron, according to the circumstances of the case.

In all venereal affections, whether primary or secondary, a proper diet is of essential service, and a neglect of this element in the treatment frequently nullifies the effect of otherwise the most suitable remedies.

On this point no fixed rules can be laid down; they must be dictated by the circumstances of the case, and call for the exercise of much judgment on the part of the practitioner. It may be easily conceived that the severity of the regimen must vary according to the constitution and habits of the patient we have to treat. Some subjects are soon weakened or rendered irritable by abstinence, or quickly placed in conditions favorable to the action of remedies; others, again, are not so readily brought into such states. It constantly happens that primary ulcers which resist all modes of treatment when the patient pursues his ordinary occupation, and lives in his usual way, heal rapidly when the patient is confined to bed and lives low. I have verified this hundreds of times, both in hospital and private practice. Mr. Labatt (*'Observations on Venereal Diseases,'* Dublin, 1858) attributes the infrequency of secondary syphilis in regimental hospitals to the severe diet insisted on during the treatment of the primary sore; perfect rest is enforced, and all stimulants are prohibited. Mr. Labatt is of opinion that many of the failures under the non-mercurial plan have resulted from a neglect of these restrictions of diet. "When patients were not confined to the hospital, the cases of secondary syphilis were more numerous. This is attributed,

not to any error or defect in treatment, but to the unavoidable absence of that discipline and restrictive system as to diet, rest, &c., so essential to permanent success." See pp. 20-22 of the work already quoted. Mr. Guthrie also remarked that it was only when the troops were moving and under irregular management that the cases of secondary syphilis were numerous—'Med.-Chir. Transactions,' vol. viii, p. 569.

I introduce two cases to illustrate the opposite effects of diet in the treatment of syphilis,

CASE I.

Secondary venereal ulceration of the throat of many months' standing; failure of the ordinary remedies whilst the patient used her ordinary diet; rapid cure by the same remedies and abstinence.

A healthy-looking female, æt. 26, was sent to me from the country for my opinion respecting her throat, which had been the seat of venereal ulceration for some time past, and for which she had taken mercury under various forms without benefit. During this treatment she had followed her usual occupations and lived in her usual way. There were three deep ulcers on the soft palate, and one on the left tonsil; the remaining portion of the throat being generally of a vividly red colour.

I advised her to leave off animal food, stimulants of all kinds, and take as little food, and that only in the shape of tea or gruel, as she could be comfortable under. She was ordered the third of a grain of tartrate of antimony three times a day, and mercurial frictions to the axilla. All the ulcers had healed in a fortnight.

I detail a second case, where a totally opposite effect was produced in a protracted case by abstinence and low diet, and this is by no means uncommon.

CASE II.

Failure of the diet and abstinence in the cure of syphilis; rapid improvement under an opposite plan.

A gentleman, æt. 46, in the habit of living well, contracted a

primary sore, which was succeeded by a well-marked attack of syphilitic lepra, which affected the hands, the face, the abdomen, and other parts; for this secondary disease he placed himself under my care, and was treated by the mercurial vapour bath; the scaly eruption had disappeared in about three weeks; two livid blotches, however, remained, one on the face and one behind the ear, which ran on into deep, dirty ulcers, affecting the whole depth of the skin: these not amending, I recommended abstinence from all specific treatment for a time, change of air, and attention to the general health. As the weather was fine, the patient went to the coast, where he consulted a gentleman, who recommended the use of Zittman's decoction, a vapour bath daily, and a very low diet. In six days the sores had spread frightfully; the patient was so reduced that he could not stand, and a copper-coloured mottling broke out over the whole body. A second practitioner was now consulted, who advised a full diet, three or four glasses of port wine daily, and small doses of blue pill with the hydriodate of potass: under this treatment the sores healed, and the patient recovered his health; some small scaly blotches still remained on his return to me, which disappeared under the use of the compound decoction of sarsaparilla, small doses of the bichloride of mercury, and the mercurial vapour bath.

Age, previous habits of living, and constitution, most materially modify the treatment both of primary and constitutional syphilis, especially in relation to diet and general management. Climate and situation have also much to do with the management of constitutional syphilis. I have frequently had occasion to remark that obstinate cases which have been very rebellious to treatment, mere locality has speedily improved and got well under the same treatment, when the residence of the patient has been changed, or when even a temporary change has been made. A low diet is generally indicated in the earlier stages of primary sores, if the patient be plethoric and accustomed to live freely, or the disease accompanied by much inflammation. It is also indicated in the earlier stages of secondary syphilitic eruptions on the skin, especially if they are accompanied by some amount of fever, or if they are of the exanthematous or scaly kind. In all pustular diseases, or secondary syphilitic

ulcerations, or in the protracted or chronic forms of constitutional syphilis, a full diet is almost always essential.

The position in the cure of venereal affections is of much importance; hence, whenever it is practicable the patient should be confined to bed. This has the advantage of keeping the skin warm, and promoting perspiration, points very essential, whilst the recumbent position favours the return of blood upwards through the pelvis, and tends to mitigate any inflammatory action or tendency. This also renders the application of dressings much easier, and places the patient in a more advantageous condition for the action of remedies. In buboes, posthitis, acute or subacute gonorrhœa (especially if complicated with affections of the bladder or prostate gland), ulcers on the genitals, vegetations about the anus, affections of the skin, &c., the recumbent position in bed, if not indispensable, most materially facilitates the cure.

The warm bath is a modifying agent of great utility. In a great variety of cases the patient may use it frequently with advantage. The hip-bath, in some instances, from the situation of the affection, may supersede the necessity of immersing the whole body. The patient may be directed to remain in the bath for longer or shorter periods, according to circumstances. Baths medicated with gelatin, starch, bran, or the decoctions of poppy, henbane, or belladonna, may be employed. Diet, aperients, or the mineral acids, or the preparations of iron or bark, the warm bath, with repose in the recumbent position, constitute the general simple treatment of syphilis; and so efficacious are these means in mitigating the irritation or inflammation accompanying primitive or secondary syphilitic affections, that, of themselves, they frequently work a cure. Where a mercurial or other specific treatment is adopted, the simple general treatment, pursued at the same time, will be found most materially to assist it, whilst by keeping the constitution in a state free from irritability, it prevents the accidents to which a mercurial course frequently gives rise.

The treatment of the soft chancre on the simple plan consists in keeping the sore clean by daily irrigations of tepid water, by dressing it night and morning with soft lint, soaked in one of the lotions prescribed in the chapter on chancre. The diet

should be regulated, neither too low nor too stimulating. Walking, running, swimming, or riding should be forbidden for fear of producing bubo; any frequent or strong exercise is likely to do this. The patient should take, internally, the chlorate of potass, the potassio-tartrate of iron, or the dilute nitromuriatic acid. Mercury should only be given in conformity with the directions laid down in the next chapter; if the chancre be much inflamed, or the penis red or swollen, the mixture prescribed below¹ will be found very serviceable. The best anti-syphilitic is frequently a dressing methodically made, it being in vain that we attend to the constitutional treatment of our patient, at the same time irritating or neglecting the local disease.

Syphilitic sores should be daily cleansed or irrigated by means of soft new lint and tepid water, from the discharges which their surfaces secrete; this should be done without creating any irritation or pain, and care should be taken not to disturb any parts undergoing a process of cicatrisation. Syphilitic ulcers, perhaps, more than any other kind, are liable from slight causes to become irritable, and assume a phagedenic character. The dressings to these ulcers should be of the simplest kind; mild astringent and anodyne solutions generally succeed better than the various kinds of ointments, particularly those which contain mercury. The testimony of all modern authors is decisive upon this point. Aqueous solutions of opium, weak ones of the nitrate of silver, of the sulphate of copper, sulphate of zinc, sulphate of iron, or the tincture of the sesquichloride of iron, the nitric acid largely diluted, port wine and water, or the black or yellow washes made very weak, are some of the most suitable applications to primary syphilitic sores in their early stages. These generally agree better, are more convenient, and cleaner than ointments; should the latter be preferred, the unguentum zinci, or the cerat. plumbi acetatis, with or without opium, will be found proper. Sometimes cold

¹ R—Ant. tart., gr. ii—iv;
Magnes. sulph., ʒvj;
Liq. opii sed. (Battley), ℥xx—xxx;
Tinct. card. co., ʒss;
Aquæ ad ʒviij. ʒj 4tis horis.

water, or soft dry charpie, or lint, agrees better than anything else. When a primary sore becomes painful under any local application, when its secretion is increased, when it inflames, or its edges get red and hard, or the ulceration spreads in depth or extent, the local application does not agree, and must be changed.¹

Mercurial washes—such as the black or yellow washes—very frequently disagree with primary venereal sores. They generally are better suited to secondary ulcers than primary ones. The ulcers that succeed to the rupture of pustules, or the softening of tubercles, are commonly benefited by these applications. Langlebert² makes a similar observation with regard to dressing primary sores with mercurial ointments. They increase the sensibility of the sore, dispose it to spread and to inflame and secrete profusely, and even to become phagedenic. Their use in soft chancres as topical applications, especially in the first days of the existence of the chancre, cannot be too severely condemned. I have seen appalling effects from their indiscriminate use. “In the larger number of sores, mercurial applications (washes or lotions) are hardly admissible in our list of remedies; the common astringent salts, lead, silver, zinc, copper, varied as the state of the sore will bear, check the disposition to spread, and bring on an appearance of granulation. To the premature use of mercurial dressings much of the troublesome career of these sores may be attributed.”—Key, “Report of Primary Syphilitic Cases,” ‘Guy’s Hospital Reports,’ vol. iv.

Irritation is frequently kept up by the mere contact of two inflamed surfaces, notwithstanding an appropriate treatment, in all other respects, may be methodically practised; hence, certain forms of superficial primary syphilis, or of balanitis, and posthitis, are kept up by the contact of the glans penis and prepuce, and some gleet protracted from the contact of the two sides of the urethra, or in females by the two sides of the vagina. In such cases mashes are very useful, and frequently succeed in effecting a cure. Fine strips of soft lint or cotton wool intro-

¹ For other particular forms for these remedies, see the chapter on Chancre.

² ‘*Traité des Maladies Vénériennes, &c.*,’ par E. Langlebert. Paris, 1864, p. 418.

duced between the glans and prepuce, or into the urethra, or into the vagina, moistened with an appropriate lotion, are in many cases exceedingly beneficial. I have frequently succeeded in curing obstinate gleet by introducing a small portion of lint into the urethra, dry, or soaked in a mild astringent solution. The prepuce and glans, when either is the seat of irritation or ulceration, should always be separated by the introduction of fine linen or lint. The continued contact of the glans and prepuce, when inflamed or ulcerated, frequently occasions their total or partial adherence. Parts affected with syphilis which are deeply seated, or covered by folds of integuments or mucous membrane, should be daily cleansed by tepid anodyne or astringent injections, according to the character of the accompanying irritation. These injections should be practised quietly, without force, and without creating pain.

Abscesses should be opened early, more particularly if the presence of matter occasions much pain, or take place under fasciæ or tendinous expansions, where the pus cannot readily make its way to the surface.¹ Long and deep sinuses should be laid open, or if it be practicable, a counter-opening may be made.

All parts in a state of natural or acquired strangulation which offer impediments to the cure of syphilitic diseases should be quickly relieved; this becomes necessary in natural or acquired phymosis or paraphymosis. The circumstances which contraindicate this practice will be mentioned under the article on the particular diseases themselves.

The non-mercurial, simple, or physiological treatment of syphilis, consists in the employment of the means already passed in review, both local and constitutional, without having recourse to mercury as a specific therapeutic agent in their cure, and this plan may be adopted both in the primary and secondary forms of disease. It will be found, however, that the primary are very much more easily cured than the secondary upon such a plan. It cannot be concealed that the non-mercurial treatment does not always succeed in the cure of primary syphilis; and that, in

¹ An exception to this rule is the formation of matter occasioned by the suppuration of a node, either on the cranium, or on the surface of the tibia or other bones.

a great number of cases, the cures are more apparent than real, the sores breaking out again when the patients return to their customary diet and occupations. Matters go on very well whilst a patient is limited to a proper diet, and confined to bed, and watched in the wards of a hospital; but in private practice this cannot be done; and hence it has been found by military surgeons, that whilst they could cure the privates, they could not cure the officers on the non-mercurial plan. In the French memoirs of military surgery,¹ the medical officers of the military hospital of Toulon states that, although the non-mercurial plan is useful in allaying the irritation, or inflammatory symptoms which accompany primary venereal sores, yet they were compelled to resort to mercury to obtain radical cures. Fifty-two surgeons met at Nantes, in July, 1835, to discuss this question: they had five discussions; two only, one of whom was M. Devergie, declared themselves in favour of the physiological, or non-mercurial treatment of syphilis.²

As a general rule or principle, mercury should never be employed except as an aperient, in the ordinary forms or earlier stages of primary soft chancre. The immediate local or specific effect of the syphilitic virus produces a degree of irritation or inflammation on the part to which it is applied, during the continuance of which mercury is, to say the least, injurious; and it is not till rest, low diet, mild opiate or astringent washes, and the other remedies just noticed, have failed in producing a cure, that mercury is to be thought of as a specific agent. When, however, all these have failed, and the case has assumed a perfectly chronic character, mercury may be used with every prospect of a beneficial result,³ and this is certainly the result of modern experience on this subject.

¹ 'Recueil de Mémoires de Médecine et Chirurgie Militaires,' tom. xxxv.

² 'Procès Verbaux des Séances tenues par les Médecins de Nantes, pour discuter la valeur des doctrines nouvelles relativement à la nature et au traitement de la Syphilis.' Nantes, 1835.

³ Desruelles, of Val-de-Grâce, concluded from observations made on 8810 patients, that the non-mercurial treatment must be considered as the base of all rational practice; "but," says he, "should the ulcers continue without disposition to heal for twenty or thirty days, mercury should be employed to effect a cure."—The same doctrines are taught

In order that the non-mercurial plan may be successful, it should be employed in that species of chancre which is termed simple or soft: the base or skin upon which the chancre is placed exhibiting no complication either of a specific or inflammatory kind. The treatment of soft chancres by the potassio-tartrate of iron consists in applying a solution of this salt to the sore, and taking it internally at the same time. It is indicated in the chronic ulcerative stage of soft chancres, after the acute stage has passed, and the sore continues to spread, or to be approaching a condition of ulcerative phagedena.¹ The effects of the potassio-tartrate of iron have been, in my opinion, much over-rated. I have personally given it full and fair trials in indolent soft chancres, and in ulcerative phagedena. M. Ricord considers it the specific remedy in such cases. I wish I had always found it so. M. Fournier says it is "parfois infidele." The result of my experience is that it is an uncertain remedy.

by Dr. Egan, of Dublin, &c. &c. ('Syphilitic Diseases, their Pathology, Diagnosis, Treatment,' &c. &c. London, 1853, pp. 330-331.)

¹ R—Ferri potassio-tart., ℥vj—℥j

Aquæ destillatæ, ℥viij. M.

Cap. cochlear. ij, larg. ter die.

A lotion of the same strength to the sore. This, however, requires dilution in many cases.

CHAPTER II.

GENERAL REMARKS ON THE USE AND ABUSE OF MERCURY IN
THE TREATMENT OF SYPHILITIC DISEASES, WITH DIREC-
TIONS FOR ITS VARIOUS MODES OF EMPLOYMENT.

IN this chapter I shall point out the circumstances which modern experience has indicated for the use of mercury; for, although this remedy cannot be considered in any measure as a specific against syphilis in any of its forms, still there are numerous cases in which it is the most powerful and certain therapeutic agent we can oppose to them.

Why is mercury to be employed in the treatment of syphilis? When is it to be employed? In what manner is it to be employed? What are the states of the constitution and of the sore which are to guide us in pursuing its use or giving it up? And when is it to be discontinued? These are the practical questions which suggest themselves to us in reference to the use of mercury in venereal diseases, and to them I shall give the answers that modern experience has sanctioned.

Modern surgeons employ mercury with a view of healing a syphilitic ulcer that has resisted other modes of treatment, or to diminish the chance of secondary symptoms.¹

¹ This statement requires some comment. That mercury, however administered, will not in all cases prevent secondary symptoms, is a fact as certain as that secondary symptoms do occur. One reason why mercury is not more successful under this point of view is owing to the manner in which it is given, and the irregularities of the patient during its exhibition. That mercury should fulfil these intentions, it is necessary that it should be employed properly or not at all, and that its use should be limited to that description of sore hereafter spoken of. The mode of its administration should also be considered, and the patient should be subjected to those rules of diet and regimen which

There are several circumstances which particularly indicate the use of mercury in primary syphilis. 1. When a soft chancre which has resisted other modes of treatment remains long open, and shows no disposition to heal under the non-mercurial plan detailed in the last chapter.¹ 2. When secondary symptoms appear before the primary disease is cured. 3. In well-marked indurated chancre, with a chain of indolent, indurated glands in one or both groins, without any tendency to suppuration.² 4. In certain cases of rapidly-spreading ulceration hereafter to be described. In considering the propriety or the indication for the employ of mercury in reference to those primary diseases just alluded to, the question naturally arises—What is the object to be attained? do we administer mercury with the intention of healing the chancre, or to prevent the constitutional taint of which certain forms of chancre are the premonitory symptoms. Let us examine these questions in detail.

have already been laid down in the chapter 'On non-mercurial Treatment.' It is owing to a neglect of these precautions that secondary diseases so frequently follow mercurial treatment, which under other circumstances would not happen. The particular modes of its employment will be considered further on.

¹ In Norway, a general specific treatment is never adopted till constitutional symptoms appear.—'Medical Times and Gazette,' Sept. 5, 1857.

² The term induration, as limited to a primary sore, is to be understood to mean a cartilaginous hardness of a whitish colour which immediately surrounds the sore, on the top of which the ulcer is sometimes seated, or in which it is dug out; the redness or inflammation accompanying the one is generally on the outside of this white hardness, which is moveable under the skin; this appearance of induration sometimes does not come on at first, but makes its appearance during the progress of a sore, and in other instances the induration appears on the site of the cicatrix after the sore has healed, but under which circumstances it is prone to ulcerate again. Specific induration must not be confounded with the swelling, œdema, or inflammation which accompany other ulcers of the penis, nor again with a thickened condition of the edges of a sore, which is frequently produced by improper local treatment, or appears when simple ulcers become indolent. "In such cases," says M. Ricord, "six months never elapse without secondary symptoms manifesting themselves, unless a specific treatment be employed." It is also the experience of M. Puche, who has verified its truth in hundreds of instances, without an exceptional case. "This is an universal law which there is no means of eluding,

Mercury should never be employed generally, or as a rule, in the treatment of the soft chancre; it has little or no effect upon it; it does not arrest the ulcerative action, nor does it dispose the sore to heal.

Mercury has commonly no effect in averting the ulcerative process of the soft chancre, or in disposing it to heal, and there can be no necessity for its employ under the second indication, viz., the prevention of secondary symptoms, since as a rule the soft chancre is not followed by a constitutional taint; for although, in some rare instances, such an event may follow, such are exceptional cases; and the exhibition of mercury certainly will not prevent them. On this point, and in reference to this chancre, I must say with M. Diday, that mercury only prevents those secondary accidents which would never have appeared without it. These remarks are especially applicable to the use of mercury in the earlier stages of soft chancre. Mercury may be tried in exceptional cases where a soft chancre remains long open, and shows no disposition to heal under the non-mercurial treatment. As soft chancres are occasionally followed by a constitutional taint, so they may be sometimes benefited by mercury, but when perfectly chronic and all other means have failed, the rule is to treat the soft chancre without mercury, and employ this remedy only in exceptional cases. In soft chancres, then, mercury does not fulfil the first indication for its use, that of healing the sore; and the second indication, that of preventing a dyscrasia, is totally wanting.

Mercury is not to be used during a state of fever or local inflammation which may be present during the first days of venereal ulcers, nor till our patient is prepared for it by appropriate diet and medicines. When the fever and local inflammation, if any, or irritation which commonly attend primary venereal sores, are removed, when the process of ulceration has stopped, and the sore remains indolent under the use of topical applications; above all, when its edges and base are elevated and hard, mercury may be employed with the full expectation of realising its most beneficial results.

but by mercurial treatment. (See Ricord's Letters, by Stapleton, p. 51.)

Mercury always acts more certainly, and with less injury, when the sore is perfectly indolent; when a primary ulcer resists simple treatment, remains indolent, and all irritation has disappeared, it generally heals quickly and soundly under a properly regulated mercurial course. I consider this remark very important. I have constantly observed cases in which a primary ulcer has remained indolent for weeks, uninfluenced by treatment, and rather disposed to spread than heal, the edges getting hard, and the base becoming infiltrated, heal, and all hardness disappear, in a few days after the system had been brought under the influence of mercury.

I have said that mercury is indicated if secondary symptoms appear before the primary sore has healed. It should not be used on the first appearance of eruptions on the skin, especially if these be of a pustular or a tubercular character; mercury is rarely beneficial in moist secondary eruptions on the skin, and it is commonly very hurtful in such cases; it should not be used whilst any febrile excitement is present: it may be, when the eruptions are scaly and on the decline; and it is strongly indicated, if not absolutely essential, in indurated chancre, with indurated glands in the groin, and the scaly eruption or excavated ulcer of the tonsils which commonly accompanies it.

I regard, with MM. Ricord, Cullerier, and others, the indurated chancre, with its chain of enlarged glands, as the first mark or symptom of a constitution already infected; the syphilitic diathesis is already established, though in the first degree, and all modern surgeons conversant with the disease, with very few exceptions, agree on the necessity for the employment of mercury in this particular stage or symptom of the disease. Mercury may retard, weaken, or altogether eradicate the taint in such instances; but much, very much, depends upon the mode of its exhibition.¹

Mercury does not prevent secondary symptoms, but it frequently cures them. A chancre specifically indurated marks a system already tainted, therefore administered in such states it cannot prevent what has already taken place; here it removes induration, and promotes cicatrization of the primary sore in a

¹ See foot-note, page 99, of Ricord's Lectures on Chancre, by Fournier, Maunder's translation.

manner more certain than any other known therapeutic agent, and it may also prevent the further development or spread of the disease if properly and perseveringly used.

It should not be employed—and, indeed, it is useless—in ordinary cases of soft chancre, without a phlegmonoid base; it does not control the ulceration in soft chancre. I have watched the disease spread totally uninfluenced by mercury; on the other hand, the ulceration of the specifically-indurated chancre is almost immediately influenced by mercurial treatment. Where the base of soft chancres becomes hard from the effusion of lymph, mercury is useful; it promotes the absorption of this lymph if other remedies fail in doing so.

In those cases of chronic ulcerative phagedena into which soft chancres occasionally run, and in the ulcerations of the same character consequent upon buboes which have suppurated specifically, mercury is also occasionally useful, where the patient has not been injudiciously treated by it in the earlier periods of the disease; here it promotes the healing or cicatrization of the sore.

I have occasionally, I may almost say frequently, seen these ulcerations heal in a few weeks under mercurial treatment, which have resisted a non-mercurial one for months, and *even years*.

Some surgeons have been dissatisfied with the test of induration, as marking the distinction between an infecting and a non-infecting sore; and perhaps there may be cases in which it may be difficult to decide from this alone to which class of sores the chancre may belong. I think, however, that the experienced eye will rarely be deceived in this, especially when taken into consideration with the state of the glands in the groin. The infecting chancre secretes very little; it is dry, red, and glazed, and is a sore very difficult to inoculate. Mr. Henry Lee, in a very able paper on the 'Infecting and Non-infecting Sore,' has made the microscopic appearance of the secretion of the sore a test of its simple or infecting character. He says, "The information which the degree of induration fails to give to the touch, the nature of the secretion, examined by the microscope, will often supply. The globules contained in the secretion of a sore accompanied by adhesive inflammation

(the infecting chancre) will often, it is true, at first sight resemble those derived from a suppurating sore. But if the secretion before being examined be treated with acetic acid, a clear distinction may be made between those cases in which the well-known nuclei of pus-globules may be seen, and those in which they cannot."—'British and Foreign Medico-Chirurgical Review,' October, 1856.

Mr. Lee has also made this microscopic appearance of these sores a test for the exhibition of mercury. Where the secretion showed pus-globules no mercury was given, as it was presumed no secondary symptoms would follow: where no pus-globules were detected, the patients were treated with mercury.

It will be seen by referring to my remarks on the exhibition of mercury in the treatment of the simple or purulent chancre, under what circumstances I recommend or justify the exhibition of this remedy.

In what manner is mercury to be employed when indicated by the before-mentioned conditions? It may be used in four ways: by internal administration, by friction, by moist fumigation, or by hypodermic injection. I have little faith in the internal administration of mercury alone for the fulfilment of the intentions just stated, and never depend on it alone, unless combined with the moist mercurial fume. "You may patch up the disease," says Sir B. Brodie,¹ "by giving the remedy internally, but it will return over and over again." The advantages of administering mercury by the mouth are the facility with which such a plan may be followed, this, however, being vastly counterbalanced by its disadvantages, which are the uncertainty of its results and its operation on the patient; it is more commonly followed or accompanied by the evil effects of mercury, and less frequently followed by the cure of the disease than the other methods. In this country the *hydrargyrum c. cretâ*, the *pil. hyd.*, or the subchloride of mercury (calomel), are the remedies generally used; on the Continent, the bichloride, the iodide, and the biniodide.²

¹ 'Lectures on Pathology and Surgery,' p. 242.

² See the chapter 'On the employment of particular Preparations of Mercury,' for further details on these points.

There are four methods in which mercury may be employed; and

The treatment by friction is much more certain than that by the internal administration of mercury. This method consists in rubbing in before the fire each night, till the proper effect is produced, from a scruple to a drachm of the stronger mercurial ointment. These frictions may be made on the inside of the thighs, in the popliteal space, on the soles of the feet, or in the axillæ. Frictions in the axillæ are of service in obstinate ulcerations of the throat. I very frequently employ them with complete success in this situation. Cullerier records the histories of two cases cured by mercurial friction in the axillæ, which had resisted its employment in other parts. Sir B. Brodie ('Lectures on Pathology and Surgery,' p. 243) prefers this method, which was that of the late Mr. Pearson of the Lock Hospital, to all others; he believes that surgeons have gone back in their treatment of syphilis. Mr. Hunt ('On Syphilitic Eruptions with especial reference to the use of Mercury') is of the same opinion. In reference to the treatment of infantile syphilis,¹ it is clear that frictions are much more safe and efficacious than treatment by the mouth. "Very few of those children ultimately recover to whom mercury has been given internally; but I have not seen a single case in which the other method of treatment has failed."² The frictions must be continued every night, or every each of these methods, separately, find their indication in individual cases; one frequently succeeds when another fails, and often when one method ceases to do good, it may be changed for another. The particular mode of employment of each of these is fully described in the chapter on the employment of the particular preparation of mercury. These four methods are:—

1. By internal administration;
2. By moist fumigation, locally or generally;
3. By friction; and,
4. By hypodermic injection.

¹ See the chapter on this subject.

² Sir B. Brodie, *op. cit.*, p. 245. In the treatment of infantile syphilis the treatment of mercurial inunction approaches as near a specific as any therapeutic agent can be supposed to do. The infant before, thin, emaciated, and senile, in appearance, with a face haggard and anxious, soon gains flesh and colour, and becomes plump and healthy. I smear the soles of the feet with mercurial ointment, and renew the application every day or every second day. Let the infant wear warm, woollen socks, which should not be changed, except to renew the ointment; the feet should not be washed till the remedy is no longer needed.

other night, till the gums swell, and the secretion of saliva is slightly increased; the intervals between the frictions must then be lengthened, but the effect kept up till some time after the sore has healed, and its specific induration gone. ("Added 1870.") When mercurial inunction is employed let that part of the skin upon which it is to be used be well washed with soap and warm water till it is quite free from grease and dirt; the frictions may then be employed as frequently as the case requires till the cure is complete. That mercurial treatment by friction should succeed, it is absolutely essential that the patient should be confined to a warm room, and if possible to bed; exposure during a mercurial course sometimes entirely destroys the effect of the remedy. It is owing to an observance of these rules that patients in hospital frequently get cured, who are made to observe them, whilst private patients who neglect them, or cannot observe them, are not so fortunate. The diet during this treatment should be light, nutritious, and unstimulating; the older and more weakly the patient, the better the diet; should he be young and plethoric, he should combine the hunger cure with the frictions. The treatment by friction is milder, safer, and more certain than that by the internal administration of mercury; but it is liable occasionally, though not so frequently, to produce the evils already alluded to when speaking of the use of that class of remedies. In certain cases, I have used with great benefit frictions of calomel on the gums; this method of treatment, originally, I believe, suggested by a surgeon named Clare, had entirely fallen into disuse. Some years ago I tried it in a case of obstinate ulceration of the throat. It succeeded perfectly, and quite cured the patient, and I have since regularly employed it in cases of this nature. Its use is indicated in secondary ulceration of the mouth, tongue, and fauces; but in one or two cases it has succeeded in my hands as a general remedy. I can confidently recommend it as a remedy in many obstinate cases.

Professor Sigmund of Vienna esteems the treatment by mercurial frictions as most efficacious. In the 'Wien Wochenschrift' for 1856, No. 35, quoted in the 'Medical Times and Gazette,' May 2, 1857, the Professor gives particular rules for the employment of mercurial frictions; but these rules are

almost identical with those I had already laid down in the preceding paragraph. He combines gentle perspiration and a low diet with the frictions. Of all means of eradicating constitutional syphilis, none are more or so efficacious as the combination of sweating by means of moist mercurial vapour, with mercurial frictions; the frequency of the frictions, and the duration and extent of the sweating produced by the bath, must of course be regulated by the peculiarities of each individual case.¹

Mercury, when indicated in the treatment of venereal diseases, may be employed by way of fumigation, in the manner alluded to by me in the second edition of this work, and more fully detailed in a separate publication in 1850.² There is no doubt but that the dry method of fumigation, introduced by Lalouette in 1786,³ and subsequently practised both in this country and on the Continent, was exceedingly efficacious in the treatment of a great number of venereal diseases intractable or incurable under ordinary methods.⁴ The old manner of applying it, however, by vapourising the mercury from a heated piece of iron or hot cinders, was so uncertain that sometimes no effect was produced, at others too much. The plan which I suggested

¹ See the chapter 'On the Mercurial Vapour bath.'

² 'On the Treatment of Secondary Syphilis,' &c. Churchill, 1850.

³ 'Nouvelle Méthode de traiter les Maladies Vénériennes, &c. Paris, 1776; publiée par ordre du roi.'

⁴ "I have reason to speak in the highest terms of the cinnabar fumigation which I have never found to fail in arresting the rapid ulceration that we often find so formidable in the throat and on the penis; usually one or two applications are sufficient to change entirely the character of the sores, and to convert the destructive state into a process of healing." —Mr. Vincent's 'Surgical Observations,' p. 350.

"So late as the year 1814, it was the practice in Stockholm to heal primary symptoms by most free inunction, and, under this system, it was calculated that the number of cases of secondary affections of the bones was no less than fifty-four per cent. In 1814 this treatment was changed, and a milder method adopted, *by fumigations* and by diet; and the result is stated to have been so eminently successful, that the College of Health reported that the cases of diseased bones were reduced from the large number mentioned to about 6½ per cent. It is also added, as a consequence, that, instead of there being six hospitals for the reception of venereal patients, there is now only one in all Stockholm." —Williams's 'Elements of Medicine,' vol. ii, p. 134, quoted in 'Brit. and For. Medico-Chirurgical Review,' No. 18, July, 1851.

of vapourising the mercury from a tin plate by the heat of a large spirit lamp, and mixing it with a small quantity of common steam, so that the patient is exposed to a gradually increasing temperature, divests fumigation of all its antecedent evils; and I believe, when this method is combined or not with the internal administration of very small doses of this remedy, or, what is better, with gentle mercurial friction, that this is by far the least hurtful and most certain way of employing mercury that can be adopted.¹ Mercury may be employed in another mode, the hypodermic method; by injection of certain preparations under the skin; by means of a fine syringe; the remedies I have employed for this purpose are, the biniodide, the bichloride, and calomel. The solutions of these remedies must be employed in small quantities, and their effects carefully watched. (See Chapter XXXV for a full account of this method.)

In many forms of indurated primary syphilis, the treatment by the mercurial vapour bath, combined or not with small doses of mercury internally, or with gentle mercurial frictions and proper diet, answers very well; it is rarely attended with any of the accidents which commonly accompany a mercurial course, such as salivation or diarrhoea; it is as certain in its effect and as little hurtful to the patient as any treatment can be.

The treatment by moist fumigations is frequently very efficacious in primary ulcerative phagedena, succeeding to soft chancre or to the ulcerating syphilitic bubo. I succeeded in curing a patient, in the year 1858, in whom the upper portions of the thigh and lower part of the abdomen were covered with large sores, consequent on the spreading of an ulcerated syphilitic bubo which had succeeded to a soft chancre. This case had resisted various modes of treatment for twelve months previously to being placed under my care. The cure was perfect, and all the ulcers had healed after six weeks' treatment by the vapour.

Salivation rarely accompanies treatment by moist fumigation, and this is prevented by the sweating which the process occa-

¹ "Mr. Langston Parker's work certainly contains strong evidence in favour of the merits and the advantages of this method over any other mode of obtaining the therapeutic effects of mercury in this disease."—*'Edinburgh Medical and Surgical Journal,'* No. 102, October, 1852.

sions. If patients use an ordinary vapour bath whilst taking mercury internally, or employing it by friction, salivation very rarely takes place. The frequent or constant use of alum as a gargle in keeping the mouth clean tends very much to prevent salivation.

During the employment of mercury the states of the sore, of the constitution, of the mouth and breath, are to be carefully watched, since each of them may assume certain conditions which would render the further use of mercury injurious.

The state of the sore whilst the patient is taking mercury should be frequently examined, and topical applications suited to its condition employed. At one time it may require anodynes, at another astringents, or again slightly stimulating applications may become necessary. During the mercurial course also the diet should be mild and unstimulating, and the condition of the stomach and bowels carefully watched, as diarrhœa is very apt to set in, sometimes severely. Dr. Wallace recommends the mastication and deglutition of grains of allspice or pepper during the day, and covering the abdomen with two or three folds of flannel. A nightly draught or pill of some preparation of opium with capsicum¹ may be employed with advantage, even during the period the patient is using mercurial frictions; the former not only prevent those attacks of pain, griping, and diarrhœa, which sometimes come on during a mercurial course, and materially retard the healing process, but they contribute directly to the therapeutic effects of the mercury.

It is from a want of attention in these circumstances that persons are so frequently placed upon the mercurial plan without being cured. This arises from their neglecting the modifications of topical applications, and not observing the dietetic regimen suited to their state.

The condition of the sore is very frequently an indication of

¹ ℞ Pulv. opii, gr. j;
Pulv. capsici, gr. ij;
Conf. aromat. q. s. ft. Pil.
Omni nocte sumend.

Or,

℞ Liq. opii sedativ., ℥ xx ad xxx;
Tinct. capsici, ℥ xxx ad L;
Aquæ. Cinnamom, ℥j. M. ft. haust. h. s.s.

the effect of mercury upon the constitution, and points out clearly whether it is agreeing with the system or not. From this circumstance I recommend a frequent examination of the local disease during the time the patient is using mercury. "It will be found a most important rule in practice to omit all mercurial treatment whenever there appears an increase of inflammation or sensibility to arise in the local disease during the employment of mercury; for a perseverance in its use, under such circumstances, will almost inevitably tend to some form of destructive action, determined in its character by the constitution of the patient. In such cases we must have recourse to emollient and anodyne applications, purgatives, rest, abstinence, and diaphoretics, with or without narcotics; and, as soon as the morbid actions which have supervened have been removed, mercury if necessary may be again resumed, to be suspended afresh in case of a return either of inflammation or irritability."¹

The state of the constitution as well as of the sore demands great watchfulness during the administration of mercury for the cure of primary venereal sores. It is quite certain that venereal sores which have resisted all other modes of treatment daily heal under the use of mercury, whilst the remedy produces no sensible effect upon the economy either by causing salivation or mercurial fever, more especially when moist fumigation is used. We therefore insist upon the principle, that the greater the degree of excitement or of deviation from the healthy condition of any of the functions of the body which mercury produces, the greater is the danger of its action being followed by deleterious effects, or of its ceasing to influence in a salutary manner the symptoms of syphilis.

It is not necessary that mercury should produce salivation in order that its benefits, in curing primary syphilitic ulcers or diminishing the chance of secondary symptoms, may be realised.²

¹ Wallace, *op. cit.*, p. 119.

² The gums should be just touched with the remedy; they should be made red, elevated, and slightly sore, and the breath fetid; beyond this it is not necessary to go: the remedy must then be diminished in quantity, or the chlorate of potass given. Salivation, properly so called, and ulceration of the mouth, should be carefully guarded against.

What, then, are the rules to guide us in these circumstances? How long is our patient to be submitted to the use of mercury, and when is it to be discontinued? Is the healing of the sore without a thickened condition of the cicatrix our rule for the discontinuance of mercury? I think not absolutely; the disappearance of a symptom is not the cure of a disease; and, as M. Ricord has very justly observed, "that to continue specific treatment only until the symptoms disappear is the method by which we may be almost sure of their return." A change in the form of mercurial remedy exhibited is frequently very efficacious, particularly in syphilitic diseases of the skin, or in rebellious forms of ulceration. I have seen the mercurial fume bath succeed after a complete treatment by inunction and blue pill had failed, and the bichloride in small doses beneficial when blue pill and calomel had been taken without success.¹

¹ "Although mercury acts specifically and independently of the forms under which it may be administered, still the choice of these is a matter of importance. An individual who may prove refractory to one of these may be strongly acted upon by another, and will only derive benefit from the one which is most appropriate to his constitution. One preparation may have no effect upon a patient, whilst another gives rise to exaggerated pathogenic effects."—Ricord's Lectures on Chancre, by Fournier, Maunder's translation, note, p. 149. What is more remarkable, and what I have frequently observed in the administration of mercury, one preparation will influence a symptom beneficially for a time and then lose its effect, whilst the cure shall be completed by altering the form of the remedy, but not the remedy itself. It will be found in primary syphilis that one preparation of mercury will often succeed in removing a particular symptom when another will fail, and one mode of administration will succeed when another will fail. And in secondary or constitutional syphilis certain symptoms in the same individual will yield one preparation of mercury, or to a particular mode of administration; whilst other symptoms in the same individual will remain totally uninfluenced; when, on a change from one preparation of mercury to another, or from one mode of exhibiting the remedy to another, the symptoms which had previously remained obstinate will rapidly disappear. I give an illustrative case out of a number which I could bring forward in support of this position:—"A gentleman, of good constitution, about 26 years of age, was treated by me for primary and secondary syphilis. The latter outbreak consisted of ulceration of the tonsils, and scaly blotches on the body. All these disappeared under treatment, which consisted at various times of mercury by the mouth,

"A gentleman was treated by me for a scaly eruption, which yielded in three weeks to the moist fumigation. At this period some large red blotches appeared on the face and abdomen, which ran into foul sores. The vapour had no effect on them; but they yielded quickly to small doses of blue pill and the iodide of potass. These had hardly healed, when a second scaly eruption made its appearance, different in character to the first, which spread under the use of blue pill and iodide of potass, but which very quickly disappeared when the vapour with one twentieth of a grain dose of the bichloride was used. No return of symptoms since." The old rule was to continue the remedy, after the disappearance of the symptoms, for as long a period as it had taken to cause the disappearance of them; this, though not infallible, is certainly not a bad guide in practice. Salivation certainly is not a test of the eradication of disease, and, if it occur suddenly or prematurely, rather gives promise than the reverse of a secondary attack.¹ In fact, there

mercurial frictions, and the mercurial vapour bath. All the symptoms disappeared, and he appeared perfectly well, with the exception of one large scaly, copper-coloured blotch on the leg. This, evidently syphilitic, did not ameliorate in the least; it remained perfectly uninfluenced by all the treatment adopted for several months. At length I recommended him to use calomel frictions on the gums. In one week the spot began to get paler, and in a fortnight it was gone, and has never returned.

¹ Various methods have been suggested to prevent the occurrence of salivation. Sweating prevents it; and this is one of the great advantages of the vapour treatment. One of the most efficacious remedies now used is the chlorate of potass. If much soreness of the gums be produced by a mercurial course, this is most commonly arrested by the exhibition of the chlorate of potass; if administered before this occurs, it prevents it. From half a drachm to two drachms a day must be taken. It is better to wait for the action of the mercury on the gums before the chlorate of potass is given. "It possesses a preservative or prophylactic action, which permits of the administration of mercury for long periods without the least injury to the cavity of the mouth; the proof of such immunity being due to the chlorate of potass is found in the fact that mercurial stomatitis is at once developed when the chlorate of potass is left off." Given during a mercurial course, it protects the mouth from salivation, and does not prevent or interfere with the therapeutic action of the mercury. It may be used as a gargle, as well as given by the mouth. See M. J. V. Laborde's Memoir which gained the Cor-

is no certain rule that can be laid down on this point. The late Dr. Colles inculcated that mercury should be continued for a few days after all hardness of the cicatrix had been removed, and thinks moderate ptyalism should be kept up for a month. Mr. Judd mentions twenty-five to thirty days; M. Ricord advises a "daily dose to produce a sensible or physiological effect for six months." The rule I invariably act upon is to continue the specific effect for two or three weeks after the primary disease has disappeared, with all induration of the cicatrix; to advise the patient, when he leaves me, to live regularly, take a smart aperient from time to time, a vapour bath once or twice a week; and to avoid all causes which are likely to interfere with the general health, since it has been shown by Cazenave¹ and others that accidental causes affecting the general health very frequently determine an outbreak of syphilis, and hence in confirmed cases regular attacks occasionally supervene in spring and autumn.

The state of the mouth should be carefully examined before resorting to a course of mercury; sometimes a stomatitis may be present before the administration of this remedy, and we might thus be deceived in its effect, mistaking the inflammation of the mouth, which was previously in existence, for one which is the result of mercury. It is quite certain that many morbid conditions of the mouth and breath so closely resemble those produced by mercury, that without an examination of the mouth

visart prize for 1857, 'Edin. Journal,' August, 1859, from 'Gazette Médicale,' May, 1859; also the note by Fournier to Ricord's 'Lectures on Chancre,' p. 336, French edition. The biborate of soda and the chlorate of soda have the same effects in a minor degree. I have been for a long period in the habit of recommending my patients to wash the mouth with a decoction of bark and alum, in the proportion of two drachms to the half-pint. When salivation is to be feared, or soreness of the mouth is present, Sigmund, of Vienna, quoted by Dr. Walker, of Peterborough, states that sucking a piece of alum frequently, whilst the patient is under mercurial treatment, prevents all salivation, or even uncomfortable soreness of the mouth.

¹ 'Traité des Syphilides; Causes des Syphilides,' p. 529.—See also a remarkable case, and the remarks on it by Sir B. Brodie ('Lectures on Pathology and Surgery' p. 247), which fully bear out what I have said on this subject.

before resorting to a mercurial course, we might be led into great error. When the breath becomes fetid, and the gums tender, the mercury must be diminished in quantity, and the chlorate of potass given. Patients may also use slight astringent gargles, with the mineral acids.¹

As a résumé of my opinions on the use of mercury in primary syphilis, I should say—

1. That the use of mercury as a specific agent is not indicated in the treatment of the soft chancres, secreting pus freely, and without any complication in the groin.

2. Mercury is not generally indicated in the treatment of the bubo which accompanies this form of chancre, whether the bubo be inflammatory or virulent (See the chapter on bubo).

3. Mercury is not generally indicated though occasionally useful in the treatment of the inguinal chancre, which succeeds the opening or bursting of a virulent bubo.

4. Mercury may be tried when the soft chancre is perfectly chronic, or when the inguinal chancre is perfectly chronic, and has resisted the usual routine of general treatment. In the earlier stages of either of these diseases mercury is positively hurtful; but in the perfectly chronic stage, as a dernier ressort, it may be tried, and occasionally its use is attended with benefit. In such states the treatment by mercurial vapour is sometimes very efficacious.

5. Mercury is indicated in the treatment of the phlegmonoid induration, which sometimes accompanies soft chancre; here its influence is limited to the resolution of the induration which accompanies the chancre; it has no influence in retarding or dispensing either of the forms of bubo which may complicate the chancre.

6. Mercury is indicated in the treatment of specifically indurated chancre; it is the most powerful and certain therapeutic agent which can be opposed to it. It removes the induration

¹ R Sodæ chlorid. solutionis (Beaufoy's);
Tinct. myrrhæ, āā ʒss.;
Aquæ, ʒv. M. ft. garg.

R Aquæ destillatæ, ʒvij;
Aluminis et potassæ sulph., ʒij;—ʒij;
Mellis rosarum, ʒj. M. ft. garg.

which surrounds the chancre, and it resolves, to a certain extent, the bubos or inguinal glandular enlargements which accompany it, and which remain stationary or continue to enlarge unless mercury be used. It weakens the force, or retards the appearance, or altogether radicates the dyscrasia, or constitutional taint, of which they are the first symptoms.

7. Mercury may be given externally, used by way of friction, or administered in the form of vapour or injection. There are cases in which each of these modes may find their special application. Generally speaking, the internal administration is the most injurious to the patient; it has the least efficacy in its influence on the disease. The two latter modes, especially the last, are the least injurious to the patient, and have the most powerful and certain effect on the disease.

CHAPTER III.

ON INOCULATION, AS APPLIED TO THE DIAGNOSIS AND
TREATMENT OF SYPHILITIC DISEASES.

HUNTER practised inoculation, but not on an extensive scale. His experiments led him into numerous errors; they led him to conclude that a chancre and gonorrhœa were the same disease, and that secondary symptoms, because they were not inoculable with a lancet puncture, were not contagious; opinions at variance with modern observation and the result of more extended experiments. M. Ricord has deduced from an extended series of experiments certain conclusions of great value and importance, which he has given to the world in his great work, '*Traité Pratique des Maladies Vénériennes; ou, Recherches critiques et expérimentales sur l'Inoculation, appliquée à l'étude de ces maladies.*'¹

A chancre is produced by a specific matter which is secreted by a chancre only, which matter produces a similar disease whenever placed in circumstances favorable to contagion. This is found in the pus which simple or non-indurated chancres secrete, and also in indurated chancres which furnish or have been made to furnish a purulent secretion.

This specific matter is only secreted from the surface of a chancre during its first stage, that is, during the period of ulceration, or when the sore is indolent or stationary. At these periods only does a chancre secrete a virus capable of producing a similar disease by inoculation. When the sore begins to heal and a process of reparation has commenced, it is merely a simple ulcer, does not furnish a specific secretion, and is not capable of propagation by inoculation.²

If matter be taken from a soft chancre during the period of

¹ Paris, 1838.

² This account of inoculation refers only to the simple, soft, non-

ulceration, and introduced under the epidermis by means of a lancet, it produces the following effects. During the first twenty-four hours the puncture becomes more or less inflamed, from the second to the third day it is accompanied with slight tumefaction, and presents the appearance of a small papulæ surrounded with a red areola; from the third to the fourth day the disease assumes a vesicular form, the epidermis being raised by a fluid more or less opaque, presenting at its apex a small dark point: from the fourth to the fifth day the contents of the vesicle become purulent, the apex of the pustule depressed, resembling very much the pustule of smallpox. At this period the areola, which had progressively increased, begins to diminish or altogether disappears, particularly if the disease does not increase: after the fifth day, however, the subjacent and surrounding tissues, which hitherto had undergone little or no modification, or were merely slightly œdematous, became indurated by the extravasation of a plastic lymph, which communicates to the touch the resistance and elasticity of cartilage.¹ After the sixth day the contents of the pustule thicken, the pustule itself shrivels up, and is covered with crusts. These enlarge towards their base, and forming by successive striata, at length assume the form of a truncated cone with a depressed apex. If these crusts are detached, or if they fall off, we find them under an ulcer with the hard base of which we have spoken, extending through the whole thickness of the skin. The surface of this ulcer, of a deep red colour, is foul, covered with a thick adhesive pultaceous matter, almost like a false membrane, which cannot be removed by any attempt to clean the sore. The edges of the ulceration at this period, as though it had been dug out from surrounding parts by a sharp circular instrument. The immediate vicinity of the sore is surrounded by a red, dark, or livid margin, more elevated than the surrounding parts.

infecting, chancre, or suppurating sore. The inoculation whether practised upon another healthy individual, or upon the subject of the chancre (auto-inoculation) are identical.

¹ This condition of the integuments surrounding the soft chancre is to be carefully distinguished from that of the specifically indurated or infecting chancre. (See chapter 8.)

Such is the course taken when the inoculation is successful, and when the matter is taken from a simple or non-indurative chancre secreting pus freely. The indurated or infecting chancre is very difficult to inoculate; it is the simple chancre, with a profuse purulent secretion and a soft base, which produces a characteristic pustule when inoculated. M. Fournier, in the notes to M. Ricord's 'Lectures on Chancre' previously alluded to, gives a detailed account of forty-four cases of simple chancre which were inoculated; forty-four positive results followed. He adds fifty-five inoculations of indurated chancres which yielded no results. The indurated chancre cannot be commonly inoculated with the lancet puncture; but the following experiment made by Dr. Faye shows that, under these circumstances, it is readily propagated by inoculation. The patient had a true indurated chancre, from which the secretion was tried with sixty inoculations by lancet puncture, on eight different persons, without the slightest effect. A small incision was then made in the patient's arm, and some threads moistened in the pus of his own chancre inserted into it daily. By these means venereal ulcers were obtained which yielded pus of great intensity, and which was readily inoculable. This experiment showed the fallacy as to the matter from an indurated chancre being regarded as non-inoculable."—'Edinburgh Monthly Journal,' October, 1857, p. 364. Probably the mode of inoculation is in fault when indurated chancres fail to be inoculated. Such was the fact clearly in Dr. Faye's case; although the lancet puncture failed, yet another mode of inoculation succeeded. The same takes place with respect to secondary symptoms, which although not inoculable by a lancet puncture, are occasionally so in other modes which I shall presently allude to. That inoculation should succeed, it should be carefully performed. I always raise the epidermis with a new or carefully-cleansed lancet, and introduce the virus on the tip of a new vaccine point; this should be done two or three times if the first puncture does not succeed. Primary venereal sores of a phagedenic character should never be inoculated. See, in addition, 'On different Forms of Primary Syphilitic Inoculation,' by Mr. Henry Lee, 'Medico-Chir. Transactions,' vol. xlii.)

The ulcerations completely destroyed or arrested on the third,

fourth, or fifth day from the application of poison, are not liable to secondary inflammation. It is not before the fifth day that the induration of chancres commonly commences, and it is the indurated chancre that is most frequently followed by secondary symptoms; this induration seems to indicate that the affection has become already constitutional; as long as there is no induration, we may suppose the disease to be merely local.

The various characters of chancres are due to circumstances which are foreign to the specific cause which produced them; these are principally the particular constitution of the patient, his mode of living, the influence of any antecedent or present disease with which he may happen to be affected, the local treatment of the sore, and the organization of the part on which the chancre is seated. It is from one or many of these circumstances that we see phagedenic ulcers in subjects who have contracted their disease from others affected with ulcers of the simplest character.

The first stage of chancre, *i. e.* of ulceration or indolence, is the only one during which the disease is susceptible of propagation by inoculation; the period of this stage is not limited, but may extend over a long period of time, frequently many months.

Buboes are of two kinds, simply inflammatory or sympathetic or virulent: in the first instance, succeeding to gonorrhœa, balanitis or any other non-specific primary affection; and in the second, arising from the consequences of the direct absorption of virulent matter from a soft chancre. To the pathology of bubo we shall return in the chapter particularly devoted to its consideration, in this place merely detailing the results obtained by inoculation from buboes in a condition of ulceration.

A virulent bubo, or one resulting from the absorption of the specific pus from a chancre, is a disease precisely similar to chancre, merely differing from it in its seat, and the anatomical organization of the parts affected. This species of bubo is the only one capable of producing a pustule by inoculation: the symptoms hitherto indicated by authors, with a view of establishing the differential diagnosis between a true virulent

bubo and one merely inflammatory, are of little value, inoculation being the only certain and pathognomonic sign.

It must be evident, and indeed the fact has been admitted by all observers, that very few buboes can be inoculated in proportion to the number of the primary venereal sores that are followed by such a result. The late Dr. Wallace, of Dublin, is said to have succeeded only three times in many hundred experiments. Dr. Egan also frequently failed in producing the characteristic pustule; the same has happened to myself, and must have done to all other surgeons who have tested buboes in this way. Whether we test the pus that first escapes when a bubo is open, or that from the bottom of the abscess, "the deeper layer," the result is in many instances negative, and yet the bubo may be of a purely syphilitic character. This may be very easily explained by the fact, that the virus absorbed from the chancre by the lymphatics is modified in its passage through them, and the first lymphatic gland or glands they enter, by becoming mixed with the ordinary products and contents of the glands itself. The virus acts as an irritant on the lining membrane of the lymphatics, which causes them to swell and inflame whilst the morbid poison is passing through them. "On examining glands which become enlarged from the result of irritation from a neighbouring ulcer, we find them to be soft, and readily yield, on section, a dirty, turbid fluid. If we examine this fluid under a magnifying power of 250 diameters, we find it to be crowded with the cell elements of the gland, some of which are considerably enlarged. It would appear that, under these circumstances, the cell elements not only increase in number, but that some of the latter assume a power of development which they never present in a state of health."¹ If this condition go on to suppuration, the specific irritant may be so mixed up with pus and the altered secretions of the gland as to be with difficulty met with sufficiently pure to produce a characteristic syphilitic pustule when tested by inoculation; and this is the true explanation why syphilitic buboes are not so

¹ 'Leucocythemia, or White-cell-blood, in relation to the Physiology and Pathology of the Lymphatic Glandular System,' by John Hughes Bennett, M.D. Edinburgh, 1852.

frequently inoculable as primary sores; here, as in primary sores, inoculation is only of value when positive.

With reference to the value of test of inoculation, some difference of opinion exists. Whenever inflammation and suppuration of the cellular tissue, or lymphatic glands of the groin, is owing to any other cause than the occurrence of chancre, the pus secreted furnishes no result from inoculation, at whatever periods and under whatever circumstances the test may be made. Neither does it follow, of necessity, that buboes succeeding to true chancres will furnish a specific pus, and consequently, by inoculation, a characteristic pustule. That this may occur, it is necessary that the bubo shall not merely be owing to a simple sympathetic inflammation, but that actual absorption of the specific matter of the chancre shall have taken place. When absorption of the matter from a chancre on the genitals takes place, it is generally confined to the superficial glands of the groin; and most frequently the syphilitic poison is conveyed to one gland only, although many of the glands in the immediate vicinity of the latter, both superficial and deep seated, are inflamed, and suppurate at the same time, so that the matter taken from one gland shall be purely syphilitic, and give rise, by inoculation, to the characteristic pustule, while those in its immediate neighbourhood shall be affected by simple phlegmonoid inflammation, the pus from which shall, when tested by inoculation, give a negative result.¹

It may be very readily conceived that the irritation produced by the passage of the syphilitic poison through a lymphatic vessel and ganglion may excite in the neighbouring organs an inflammation which is not specific, but merely phlegmonous, and this appears to be the true nature of the case. M. Ricord opened a bubo which had succeeded to a chancre, the pus from which produced no result by inoculation. In the centre of the abscess he discovered an enlarged lymphatic gland, presenting an evident fluctuation; this was punctured and tested by inoculation; the characteristic pustule of chancre was obtained.

Discharges from the urethra are of two kinds, resulting either from the existence of a true syphilitic ulcer in some part

¹ See Ricord, *op. cit.*, pp. 142 et suivantes.

of the passage, or owing to gonorrhœa properly so called.¹ Chancres, or syphilitic ulcers of the urethra, to the consideration of which we shall return in a particular chapter, are in all respects, except situation, of the same character as other primary sores, and give rise to the same results when the matter is tested by inoculation.

The matter of gonorrhœa, applied upon a mucous surface, produces an inflammation and discharge of the same character. In no instance can it produce a true syphilitic sore, although by remaining in contact with a mucous surface for a certain period of time it may occasion a greater or less degree of excoriation, but is not capable of producing a specific ulcer.

The diseases which are consecutive to gonorrhœa, as sympathetic buboes, &c., do not secrete pus capable of producing a specific ulcer by inoculation, neither do secondary or constitutional symptoms generally succeed to a simple gonorrhœa. In the rare cases where secondary symptoms have been said to have followed a simple gonorrhœa, it has been supposed that the diagnosis of the primitive disease has been inexact, that the diseased surfaces have not been properly examined, and therefore have been concealed chancres of the urethra, and not gonorrhœa. It is also extremely probable that such were the forms of disease which embarrassed Dr. Wallace, who says that he has met with some forms of discharges from the urethra which were beneficially influenced by mercury, and which he was unable to cure without its exhibition.

The pus of gonorrhœa, tested by inoculation, gives no result: it may be followed by inflammation, but never produces a specific sore; injected into the urethra, it produces a disease like that of which it is the product; applied externally between the glands and prepuce, it occasions inflammation and discharge, balanitis, or external gonorrhœa: a similar effect follows its application upon other mucous surfaces.

The results of inoculation in secondary or constitutional diseases have seemed to favour the opinion that the pus of a constitutional syphilitic sore is not inoculable; but it must be

¹ See the chapter On Gonorrhœa for a fuller explanation of this remark.

recollected that the experiments which led to these conclusions were performed on patients who were themselves the subjects of the constitutional disease. The results were fallacious; they led to the opinion that secondary syphilis was not contagious. I have always maintained the opinion that secondary syphilis was under many and certain forms communicable from the diseased to the healthy, without the intervention of any primary disease. The cases on record, which prove this beyond the possibility of question, are now so numerous that it would be a waste of time to quote them. The results of experiments also prove it. The late Dr. Wallace, M. Waller of Prague, and others, have proved by experiments that secondary syphilis can be propagated by inoculation from the diseased to the healthy. The question has been entirely set at rest by the inoculation of the reporters of the Imperial Academy of Medicine in 1858. As these experiments, and the deductions made from them, constitute an event in the history of syphilis, and are of themselves so important, I shall quote them :

“ On the 25th of October, 1858, the Minister of Commerce, Agriculture, and Public Works, addressed a letter to the Imperial Academy of Medicine, requesting, *in the interest of practical medicine and of medical jurisprudence*, to be furnished with answers to the two following questions :

“ 1st. Are the accidents of constitutional (secondary) syphilis contagious ?¹

“ 2nd. As regards contagion, is there a difference between constitutional syphilis in infants at the breast and in adults ?

“ A commission, composed of MM. Velpeau, Ricord, Devergie, Depaul, and Gibert, was appointed to reply to these questions. Their report, drawn up by M. Gibert (the author of various works on diseases of the skin), was presented to the Academy on the 24th of May.

“ The report begins by stating that, although the contagiousness of secondary syphilis has been denied by some, clinical facts

¹ “ Evidence is conclusive to the effect that syphilis may be communicated by intercourse during either of its stages, local or constitutional.”— ‘ Report of the Committee appointed by Government to inquire into the Pathology and Treatment of the Venereal Disease, &c., with Appendices,’ p. 15.

and experimental researches proved that various secondary symptoms were contagious, and that certain of these, particularly condylomata (*papules* or *plaques muqueuses*), syphilitic ecthyma, and ulcers of the throat, could be communicated by inoculation. The members of the commission, however, felt themselves in some difficulty—should they rest satisfied with the results of others, or should they repeat the experiments for themselves. After full consideration, they decided that although such a mode of investigation is in general highly objectionable, they would, in the present instance, be justified in repeating the experiments which proved the transmissibility of syphilis by inoculation. After the experiments had been performed, the reporters arrived at conclusions absolutely identical with those which had been announced by Dr. Rinecker in 1852. These are as follows :

“1. The local lesions consecutive to the inoculation of the matter of secondary syphilis never appear before the end of the second week, in general they are delayed till after the fourth; *the length of the period of incubation is characteristic.*

“2. The first change subsequent to inoculation invariably manifests itself at the point where the inoculation was performed; it remains for a considerable time limited to this point; its progress is essentially chronic—so much so, that when no treatment is employed, the first local affection remains until the appearance of the constitutional symptoms.

“3. The local affection appears in the form of tubercles which ulcerate after a time, and are generally accompanied with swelling of the lymphatic glands.

“4. The constitutional symptoms scarcely ever appear within a month of the local manifestations; they are generally delayed much longer.

“These phenomena differ widely from the symptoms of primary syphilis, whether contracted or communicated by inoculation, and would of themselves be sufficient to establish the contagious property of the secondary affections. The anti-contagionists maintain that a chancre is invariably the only characteristic symptom of syphilis at its commencement; that the typical venereal chancre, or, as it is now termed, the indurated or infecting chancre, is an ulcer generally preceded by a pustule

(which appears without any period of incubation); the ulcer becomes indurated more or less rapidly, but always within a week from the contraction of the contagion; so that, in the case of the primary chancre, we have absence of incubation, the elementary form pustular, ulceration, induration always consecutive to the ulceration. Whereas, in the communication of the secondary affection, we find a period of incubation of eighteen to twenty days or more, the elementary form papular, then tubercular, and finally conversion of the tubercle into an ulcer covered with a crust.¹

“These conclusions of the reporters are based upon the results of four experiments, taken in connection with the numerous observations already published. The subjects of the experiments were all individuals previously free from syphilis, but affected with lupus. This class of persons was selected, as it was thought better to choose them than to fix upon perfectly healthy persons, and because it was considered that the constitutional treatment adopted for the syphilis (in the event of its being communicated) might possibly have a good effect upon the lupus. The following may be taken as a specimen of these observations:

“An adult, affected from childhood with lupus of the face, was inoculated with syphilitic matter in the following manner: To a raw surface on the left arm, produced by the action of ammonia, was applied a piece of lint dipped in the purulent matter obtained from a condyloma near the anus. The condyloma was of fifteen days’ standing, and had followed a chancre which dated from fifteen months. Fourteen days after the

¹ There is an absence of incubation only in the soft or simple chancre. In the indurated or infectious the period of incubation is sometimes indefinitely prolonged, corresponding very closely with the appearance of secondary symptoms from inoculation; but then I look upon the induration of the infecting chancre as the first symptom of a constitutional taint. In the chapter on chancre several dates are given of the periods elapsing between exposure and the appearance of the induration.

See the Table of the period of incubation in 35 cases collected by Mr. Berkeley Hill, ‘On Syphilis and Local Contagious Disorders,’ p. 62. In these cases the shortest period of incubation was nine days, the longest thirty-two. I have seen one longer than this, if the statements given were truthful, and I have no reason to doubt it.

inoculation a slight degree of redness appeared. On the eighteenth day there appeared at the seat of inoculation a prominent papule of a coppery colour. On the twenty-second day the papule had increased in size, and there was a slight oozing from its surface; this oozing became purulent, and dried up into a thin crust. On the twenty-ninth day one of the glands in the corresponding axilla was enlarged. On the thirty-second day, after a vapour bath, the crust became detached, and a very superficial excoriation was brought into view. On the fifty-fifth day the papule had become elevated and indurated, and constituted a real tubercle, with a slight ulceration in the centre; at this time, too, several blotches and reddish papules were visible on the trunk; these papules became converted into pustules of acne, and spread over the palmar surface of the upper extremities, over the belly, the inner surface of the thighs, the groins, &c. Ten days later the patient was put under the specific treatment. At the date of the report, after six weeks of treatment, the tubercle of the arm was gone, and had left a superficial cicatrix; the axillary glands were still enlarged; the eruption on the trunk had begun to disappear.

“The other three experiments were attended by very similar results.

“Judging from these, and from similar observations recorded by others, the commission concluded that there could be no doubt of the contagiousness of secondary syphilis.

“The second question, regarding the contagiousness of syphilis in infants, admits of an equally explicit answer. All practitioners have seen, all authors have reported, cases where the nurse has been infected by the nursling: the opposite cases, where the nursling has been infected by the nurse, are less common, because, as can readily be supposed, nurses who show any symptoms of the disease will not easily find persons to commit their infants to their care. Still, instances of the latter class are undoubted, and some additional observations have lately been published.

“In conclusion, the commissioners recommended the Academy to return the following answers to the ministerial questions:

“1. Some of the manifestations of secondary or constitutional

syphilis are evidently contagious; at the head of these is to be placed the condyloma.

"2. The same rule applies in the case of nurses and infants as in other subjects; and there is no reason to suppose that in infants at the breast the product of these accidents has properties different from those which it possesses in the adult."—Quoted from 'Edinburgh Medical Journal,' September, 1859.

I introduce one or two cases by way of illustration. I have not here entered into the mode in which contagion has taken place; this I shall consider when speaking of the causes of secondary syphilis. I could multiply these cases, but it is unnecessary.

CASE III.

Syphilitic lepra, with alopecia in the husband; the same disease communicated to the wife; cure of both by moist mercurial vapour.

A gentleman contracted a superficial primary sore, which healed without leaving a mark or induration behind it. Being apparently in good health, he married. Three or four months after his marriage, he perceived on his body numerous red, smooth, elevated, scaly blotches; very shortly his wife broke out with an eruption of similar character; and the hair came off rapidly in both patients. In this state they were sent to me. Neither had any primary disease, and the lady had never had the slightest irritation in the genito-urinary organs. I examined them both frequently and carefully, and I am positive the wife had never suffered from sore, excoriation, or discharge. I placed them both on a regulated diet, and the use of the moist vapour of the bisulphuret of mercury. In about six weeks they were both apparently well, and have remained so for three years.

CASE IV.

Communication of secondary symptoms from the husband to the wife without the intervention of any primary disease.

A gentleman, who had suffered both from primary and secondary syphilis, married, after having been free from all symptoms for twelve months. Soon after this he had another

eruption and sore throat; his wife became affected with the same eruption, excavated ulcers of the tonsils, and was prematurely delivered of a dead child in the sixth month of her pregnancy. Both patients lost their hair and eyebrows. On account of the obstinacy of some of the symptoms in both these cases, they were sent to me from a distance to be treated by the moist vapour of mercury, under the use of which they both perfectly recovered. In this case the lady was more than once carefully examined: she was free from all evidence of any form of primary disease, and never had suffered from the least irritation in the parts.

There can be no doubt that in both these instances the secondary taint was communicated from the husband to the wife without a chancre having preceded it. It will be remarked that both were affected precisely with the same symptoms, both had the same character of skin disease, and both lost their hair and eyebrows—a very strong conviction to my mind of the mode of contagion. If the husband communicate a primary disease to the wife, and the primary disease in both be followed by secondary symptoms, it amounts almost to a certainty that the symptoms which accompany the constitutional taint will differ in each; but where secondary diseases are communicated without the intervention of a chancre they are generally, as far as the skin is concerned, alike, as the two cases detailed sufficiently prove, and as Dr. Wallace had already remarked, that all forms of syphilis produce their like.

In illustration of the first proposition of the constitutional symptoms being different, when primary diseases are communicated, I bring forward a case.

CASE V.

Primary disease (chancre), communicated from the husband to the wife;
secondary symptoms in each case, but different; in the husband a papular eruption, in the wife a pustular one.

A man, S. H—, and his wife, were admitted into the Queen's Hospital at the same time, under my care, for a syphilitic eruption on each. The husband had a papular eruption, the true venereal lichen, and the wife a well-marked pustular disease.

Twenty-three weeks before their admission the husband contracted chancre, and three weeks after his wife had primary symptoms, an ulcer on the inside of the right labia, with redness and tumefaction of the os uteri.

The husband here contracts primary disease, followed by secondary disease in the form of a papular eruption; he communicates the primary disease to his wife (*i. e.* a chancre), who suffers from a pustular eruption. If he had communicated the secondary form without the intervention of chancre, her skin disease would also have been papular.

M. Cazenave, whilst admitting the rarity of the contagion of secondary symptoms, says, "that it is impossible to deny its occurrence, but that certain local circumstances are indispensable to such a result; these are a humid or moist secreting surface and prolonged contact" ('*Traité des Syphilides*,' p. 385); and hence we see that these conditions are fulfilled in persons habitually sleeping together, as husband and wife, mother and child, &c. &c. Whilst these secondary symptoms are rarely capable of propagation by inoculation, they are frequently contagious under the circumstances mentioned, which the facts adduced sufficiently prove.

From these facts I make a few simple deductions which appear to me very important.

1. That it is wrong for one person affected with a secondary venereal taint to sleep with a healthy individual, especially if the former be affected with a form of disease in which there is a breach of the surface. This remark applies to husband and wife, and diseased children or healthy nurses, or the reverse.

2. A diseased child should never be suckled by a healthy nurse;¹ neither should a healthy child be placed with a diseased

¹ See 'Clinical Lectures' (No. 7, p. 332), by Dr. J. H. Bennett, of Edinburgh, for the details of a case where two nurses recovered compensation from a surgeon from a circumstance of this kind. A diseased child was placed with a healthy nurse, who was kept in ignorance of the fact, though the physician and the father were aware of the nature of the disease. In the space of two months the nurse had ulcerations on the nipples, ulcers in the throat, and lost her hair. She also exhibited symptoms of general cachexy; the symptoms were so marked as to be detected by the least experienced observer. The nurse sued the parties

nurse. We cannot be too careful in examining wet-nurses before their introduction into families; they are most commonly the mothers of illegitimate children, and therefore the greater need for caution. Not only the external parts, but the vagina and os uteri should be examined before a positive opinion as to the health of the woman be given.¹

who placed the child with her before the "Tribunal of the Seine," for damages done to her health in consequence of disease having been communicated to her by a child suffering from an hereditary venereal taint, the parties who placed the child with her knowing at the time the child was so affected. She recovered 5,000*fr.* damages. Five of the special medical examiners who gave evidence in this case were of opinion the disease was certainly communicated from the child to the nurse; the third thought it probable that the disease was so communicated.—'Archives Générales de Médecine,' Sept. 1856, p. 374.—Another case is recorded in the 'Journal de Médecine et de Chirurgie Pratique,' March, 1858. A diseased child was put to a healthy nurse; the child died from syphilis; the nurse became diseased; she recovered 320*l.* damages and all costs.

¹ Mr. Whitehead's (of Manchester) Cases, p. 368.

M. Waller, of Prague, published in 1851 an account of his researches on the contagion of secondary syphilis. This paper is published in M. Cazenave's 'Annales de la Syphilis,' 1850-51, t. iii, p. 174, &c. The results at which M. Waller arrives are the following:

1. Inoculation with the pus of a primary venereal ulcer produces, *under certain circumstances*, a primary ulcer of a like character; inoculation with the secretion of secondary syphilitic ulcers never produces ulcers having the characters of chancres.
2. Inoculation with the secretion of secondary syphilitic ulcers, on healthy subjects, produces in them secondary syphilis. Both primary and secondary syphilis, then, may be propagated by inoculation; the pus of primary syphilis produces primary syphilis, the pus or secretion of secondary syphilis produces secondary syphilis. (See p. 187 of the translation by M. Axenfield in the third volume of Cazenave's 'Annales.') See a valuable *résumé* of modern opinions, in two papers by Follen, in the 'Archives Générales,' for January and February, 1856. These papers contain many facts, distinctly demonstrating the contagious and inoculable character of many forms of constitutional syphilis.

It is singular how closely the results of these experiments coincide with the facts already detailed by me in the cases which I have related.

Added 1870.—There are many other modes in which general syphilis

may be communicated ; these will be noticed under the heads of "The Causes of Constitutional Syphilis : " the chief of these are the communication or inoculation of the patient by vaccination. Dr. Viennois has concluded from his investigations, and the opinion has generally been adopted by observers since he wrote, " that if the lymph from a vaccine vesicle be alone inoculated, the cow-pox alone will be produced, but if the blood of the person suffering from general syphilis be inoculated at the same time, then general syphilis may also be communicated." (See H. Henry Lee's 'Lectures on Syphilitic and Vaccine-Syphilitic Inoculation,' &c. Churchill, 1863.)

CHAPTER IV.

OF THE FIRST CLASS OF PRIMARY SYPHILITIC DISEASES¹—
GONORRHOEA, ITS VARIETIES, COMPLICATIONS, AND CON-
SEQUENCES.

OF BALANITIS. BALANO-POSTHITIS.

INFLAMMATION OF THE GLANS PENIS—BALANO-PREPUTIAL OR
EXTERNAL OR FALSE GONORRHOEA—CHANCROUS EXCORIATION,
GONORRHOEA SPURIA, ETC.

THIS disease is characterised by more or less redness, and a muco-purulent discharge from the surface of the glans penis, with or without excoriation. Balanitis rarely occurs alone, but is more frequently complicated with a similar condition of the internal surface of the prepuce (posthitis). It is then termed balano-posthitis. As it is rare to see the affections separate, I shall consider both under the title of balanitis.

This affection may have a purely venereal origin,² or may

¹ Synonyms:—“Affections non-virulentes.”—Ricord. “Maladies primitives à forme érythémateuse.”—Desruelles. “Catarrhal primary syphilis.”—Wallace.

² “It is denied by many that the present variety of disease ever arises from the venereal poison, or that it even leads to secondary symptoms; and it is affirmed to be the consequence of numerous causes of common irritation. Now it must be admitted, that causes of common irritation often produce excoriations of the glans, corona, and prepuce, for this is a daily occurrence. It is also notorious that such excoriations may be produced without sexual intercourse, from acrimony of the natural secretions of the part, &c. But I have often had equally conclusive proof that the present variety of disease may arise from the application of secretions containing the venereal poison.”—Wallace, p. 222. Vidal (de Cassis), p. 119, is of the same opinion, and states that in several

succeed to intercourse with women labouring under leucorrhœa, or other simply inflammatory affections of the vagina, when this part is covered with secretions of a more or less irritating character. The menstrual discharge will also frequently occasion balanitis; I have frequently seen great anxiety arise to married men who have suffered from balanitis, the result of intercourse with their wives in one or other of the above-mentioned states. Balanitis sometimes owes its origin to a natural conformation of parts, and hence subjects with a natural phymosis, or small preputial opening, may be considered as predisposed to it.

The treatment of uncomplicated balanitis is extremely simple. When the glans can be denuded, and the inflammation is not very acute, the solid nitrate of silver may be passed slightly over the surface, covering it with a piece of fine soft linen, and then bringing the prepuce forward over the glans. The penis should be covered with linen compresses soaked in cold water, or the liquor plumbi diacetatis dilut., and the linen between the prepuce and glans renewed twice in the day; at each renewal of

instances the pus of a balanitis, where there has not been the least breaking of the skin, has produced the characteristic pustule of chancre when inoculated. These, I believe, are rare cases, but they do happen. I have seen and treated one case where I believed the disease to be nothing more than balanitis; but the wife had secondary symptoms, scaly blotches, and nodes. I have lately treated two other cases, which had at the commencement only the symptoms of balanitis,—redness, purulent discharge of the under surface of the prepuce and glans penis, without ulceration. In a few days the prepuce began to thicken, and the glands in each groin became large and tender, but no disposition to suppurate. Both cases were followed by constitutional symptoms, both in the throat and on the skin. There is no doubt that diseases having altogether the character of balanitis are sometimes of a purely syphilitic nature. Fournier says (*Nouveau Dictionnaire de Med. et de Chir. Pratique*, t. 4, p. 524, art. Balanite) that in four fifths of the cases of balanitis at least the disease is not syphilitic, thus admitting that one fifth are at least doubtful; the existence and character of the inguinal glandular complication would go far to determine the nature of the disease and consequently the treatment. Should indolent glandular enlargement exist without any tendency to suppuration, I should conclude the disease (the balanitis) was syphilitic; if, again, the glands run on to suppuration, it must be regarded simply as a sympathetic glandular inflammation, and healed on general principles.

the linen, the parts should be washed with an astringent lotion.¹ It will be occasionally found that lotions of all kinds tend to keep up the irritation. When this is the case, the surface of the glans should be thickly dusted with an astringent powder;² this tends to allay the irritation, by absorbing the acrid secretions, and preventing any friction between the glans and prepuce. If the inflammatory symptoms accompanying balanitis run high, and are complicated with phymosis, the patient should be kept quiet, and live low. Weak astringent injections, or an aqueous solution of opium, may be thrown up between the glans and prepuce. Desruelles speaks highly of continued injection or irrigations in balanitis, or balano-posthitis, resorted to when these diseases are complicated with phymosis. To accomplish this, a small canula may be fitted to one of Weiss's self-acting enema syringes; the canula, which should be made of caoutchouc or elastic gum, is to be passed between the glans and prepuce, and thus, without removing it, a continued stream of some narcotic or astringent injection³ may be thrown gently up for some minutes together.

The causes of external gonorrhœa are to be sought for in the natural conformation of the penis on the part of the male, and various morbid conditions of the vagina or uterus on the part of the female. A natural phymosis predisposes the patient to contract this form of disease: for instance, a person having natural phymosis cohabits with a female having various morbid dis-

¹ R. Zinci sulph., gr. iv;
Aquæ rosæ, ʒviij. M. ft. lotio.

² R. Zinci oxydi, ʒj;
Hyd. chloridi. ʒj. H. ft. pulvis.

³ R. Decoct, papaveris, Oj;
Aluminis ust., gr. xx. M. ft. injectio.

Simple tepid water, with alum in the proportion of eight or ten grains to the pint, forms an exceedingly useful injection, particularly when large quantities are used.

R. Cerati simplicis, vel mellis,
Olei olivæ, aa ʒj;
Hydrargyri chlorid., ʒss;
Pulv. opii, ʒj. M.

The above preparation may be introduced between the glans and prepuce by means of a camel-hair pencil.

charges from the vagina; the discharge gets under the prepuce and is there retained, as the patient cannot withdraw it to wash the part; the discharge excites inflammation of a more or less active character, which would all have been avoided if the glans could have been retracted and the part washed with a little soap and water. The secretion of the *glandulæ odoriferæ*, as they are termed, also of itself produces a form of balanitis, without even exposure to impure connection. This secretion, which, in some persons, is extremely abundant and offensive, is retained by the elongated prepuce on the base and surface of the glans, there irritating and inflaming the parts, and ultimately producing adhesions between the glans and prepuce. Sometimes, when there is a very narrow preputial opening, and the discharge cannot make its way out, large collections of matter are formed, and the patient, unless an operation is performed, is only relieved by gangrene, or sloughing of the whole prepuce. I have seen several cases where such a termination has taken place.

CASE VI.

Balanitis, with occlusion of the preputial opening, and gangrene of the prepuce.

I was sent to see a young gentleman, about 17 years of age, whose disease occasioned the utmost alarm to his friends. On examining the patient, I found the penis enormously swollen and dark coloured, and a distinct gangrenous spot, about the size of a shilling, situated near its extremity, under which fluctuation was evident. The prepuce was long, and so swollen, deformed, and œdematous, that it was impossible to make out the situation of the preputial opening. I was convinced that it was a case of balanitis with occlusion of the preputial opening. I made a deep incision through the black spot into a collection of matter between the glans and prepuce, after which, with ordinary treatment, the patient speedily recovered. There are several morbid conditions on the part of the female which produce balanitis in the male; these are the menstrual discharge, leucorrhœa either cervical or vaginal, various forms of vaginitis and urethritis with purulent secretion, and secondary syphilitic

discharges from the uterus. In the cases where balanitis is distinctly of a syphilitic nature, as in some cases I have alluded to, I have no question that the disease is produced by secondary syphilitic discharges on the part of the female, and that it is a positive inoculation that takes place. I mention two cases which I think very important.

CASE VII.

Balanitis, followed by general syphilis.

A. B., a very healthy person that I well knew, who had never previously suffered from any venereal taint, consulted me with the following symptoms: profuse thick purulent discharge from the glans and prepuce, which, when washed off, left a red patchy surface underneath, but no ulceration. The prepuce was much thickened and swollen. The local symptoms disappeared after a week's treatment by astringent washes and aperients; but the prepuce remained thickened and hard—not a defined induration, but a diffused hard swelling, extending all round its under surface. Soon after, one or two glands in each groin enlarged, and were slightly tender, but showed no disposition to suppurate. Six weeks after this the patient had an excavated ulcer on each tonsil, and well-marked patches of syphilitic lepra on the forehead, on the head, and on the chest.

CASE VIII.

Showing that what is commonly termed balanitis, or external gonorrhœa, may be followed by constitutional syphilis.

A patient, previously in good health, who had never had either gonorrhœa or syphilis, consulted me concerning what he called an "échauffement." He had purulent discharge from the glans and prepuce; redness, swelling, and thickening of the prepuce; but no breach of surface, no ulceration. The glands in each groin enlarged, but did not suppurate. Within two months he was covered with patches of syphilitic roseola.

There can be no doubt about the syphilitic nature of these

cases; although the balanitis, which was here the primary symptom, did not differ in appearance from the same disease produced by causes which were not specific. The thickening of the prepuce might have been more marked in the syphilitic cases. Vidal, Blackman's translation, p. 169, quotes from the thesis of one of his *internes*, thirty cases where the pus of a balanitis was successfully inoculated. A cautious opinion should be given as to the consequences of a disease which resembles a non-specific balanitis.

Certain forms of vaginitis sometimes occur in patients of all classes, and under various circumstances, which are capable of producing balanitis in the male. I have seen one or two instances where an inflamed and irritable condition of the vagina in the female, during the latter months of pregnancy, has produced balanitis in the husband, and where a great deal of family distress has been occasioned by the circumstance.

CASE IX.

Showing that those discharges which sometimes accompany pregnancy may be productive of diseases very much resembling syphilis.

A lady, whom I well knew, the mother of seven children, in her eighth pregnancy, suffered from a white discharge, with swollen labia and much irritation. Her husband became affected with inflammation of the glans and prepuce, swelling of the penis, an abundant offensive discharge, and ultimately phymosis, the inflamed surfaces ulcerated to some extent. The case was obstinate, and occasioned much family annoyance. What is, however, very remarkable, and proved the nature and origin of the disease, was that with the accouchement the disease of the lady disappeared, and intercourse no longer affected the husband. In the ninth pregnancy the same symptoms occurred again in the wife, and produced a similar obstinate disease in the husband.¹

¹ Note added 1870.—The chief causes of balanitis are specific contagion, intercourse with females suffering from various forms of vaginal or uterine disease, or discharge, fluor albus, &c.; intercourse during the menstrual period or too soon after child-birth; masturbation, want of cleanliness, phymosis, the irritating or too abundant secretion of the

The symptoms of balanitis are heat, itching, and redness of the glans penis and the inner surface of the prepuce, the redness being disseminated in patches, as though the surface of the part had been slightly scalded with drops of hot water sprinkled over it. These symptoms are accompanied by a muco-purulent discharge from the preputial opening; and if the glans can be denuded, its whole surface, and that of the prepuce, are covered with an adhesive flaky matter looking like curd. This is the condition if the glans can be denuded; if it cannot, all we generally observe is a muco-purulent discharge from the preputial opening, though not from the urethra, with heat and swelling at the end of the penis. In fact, the balanitis itself is the most common cause of our not being able to denude the glans penis; the inflammation produces the phymosis, which was not present till the balanitis was contracted. Again, the phymosis may be congenital.

Discharges from the end of the preputial opening, however, with a natural or acquired phymosis, are not all dependent upon balanitis, as I have described it. They may result, and commonly do result, from a chancre or ulcer, situated either on the glans or prepuce, and producing the inflammation with the discharge from the preputial orifice. If an ulcer of any standing be the cause of the mischief, we can generally detect it from a partial induration felt at the same part of the prepuce under the skin, and a peculiar soreness and tenderness existing in this part, when the penis is pressed or rolled between the fingers. These would be the distinctive symptoms to guide us in a differential diagnosis between phymosis with chancre, and phymosis the result of pure balanitis, since both diseases would be characterised by the same, or pretty nearly the same general symptoms; viz. swelling and heat of the end of the penis, with phymosis and discharge from the preputial opening. A balanitis might again exist with a pure gonorrhœa; this is very common, but in this instance the discharge from the urethra can be seen. I mention these complications of

glandulæ odoriferae; drinking too freely of beer or champagne. A very common cause is a preternaturally long prepuce and the accumulation of the smegma between it and the glans. The disease is hardly known in members of Hebrew persuasion, owing to the absence of the prepuce.

balanitis, because their existence would materially modify the treatment.

Balanitis is in many instances complicated with phymosis, and the question naturally arises whether this is to be relieved by an operation or not. If the phymosis be a congenital one, and the patient have contracted a balanitis, in most instances the operation should be performed, as the continuance of the phymosis predisposes the patient to a number of those inconveniences mentioned before—adhesions between the glans and prepuce, and thickening of the latter from chronic inflammation. If the phymosis be an acquired one, produced by the disease, the operation should not be performed. Poultices, cold lotions, purgatives, and, above all, the calomel and opium pommade, will in a few days, in almost every case, enable us to retract the prepuce. An operation in the latter case is unwarrantable; whilst in the former it is not only justifiable, but highly advantageous. We shall have more to say of the operation for phymosis when speaking of primary venereal sores complicated with it; but in cases of uncomplicated balanitis, the rules I have given are safe, and have been proved by myself time after time in practice. Balanitis may, if neglected or badly treated, continue for an indefinite period of time; may run on into conditions of superficial ulceration; may produce adhesions of the prepuce to the glans, either partial or total; thickening of the prepuce, and, according to Roux, cancer of the penis. Again, it commonly produces enlargement of the glans in the groin, and bubo.¹ I have seen the latter in many instances.

Secondary symptoms may succeed to what appears a mere simple balanitis. I have already given several examples of this. If balanitis or chancrous excoriation is suffered to continue for an indefinite period of time, a thickening of the diseased surface always occurs, and a chronic suppuration is established

¹ The nature of the bubo, which complicates balanitis, throws light upon the nature of the disease itself: thus, if the bubo be sympathetic and go on to suppuration, the balanitis is doubtless a non-specific disease, but if the bubo be indolent and multiple the affection is most likely of a syphilitic character, and will be followed by a constitutional taint. (Note added 1870.)

from the abrasion covering the thickened part. In this state of things secondary symptoms will occur in the male, and may be produced in the female, when cohabitation is permitted under such circumstances. I have seen eruptions accompanied by a node on the forehead, loss of the hair, and other symptoms of constitutional syphilis, produced in the wife, where this species of abrasion, with thickening, were the only symptoms in the husband. Some cases have been brought forward in which constitutional symptoms, characterised by copper-coloured patches and papulæ, succeeded to balanitis or discharge from the external surface of the glans and from the prepuce, without ulceration or breach of surface. In the cases mentioned, this external gonorrhœa was followed by the falling off of the hair, and eruptions precisely similar to those which follow primary venereal sores. In the first case, the patient had never before any venereal affection till he contracted a balanitis characterised by redness, heat, and itching of the external surface of the prepuce, to which succeeded a purulent discharge.

The distinctions are perhaps not very clearly defined between a pure catarrhal inflammation of the glans and prepuce, and those very mild forms of syphilis which some writers have termed superficial. Dr. Wallace has recorded a case bearing upon this point, which, in a practical point of view, is so instructive, that I shall introduce it here.

CASE X.

Showing that what appears to be mere balanitis may be a form of primary syphilis, and followed by a constitutional taint.

“A lady was brought to Dublin on account of an eruption, and a state of general ill health. She had been some months married, and was pregnant. The eruption did not appear of a doubtful character. It was a syphilitic eruption, of a rubeoloid form, and was accompanied by its almost constant attendants, a superficial disease of the fauces, and a condylomatous state of the pudenda and of the orifice of the anus. There were also small condylomata in the axillæ. I communicated my opinion to the husband of the lady, who had accompanied her to town, and he denied that he had ever had any venereal disease; but

he at the same time admitted, that some months before his marriage he had got, in consequence of a suspicious intercourse, what he called a chafing; that he had consulted Mr. M., who directed for him a wash, by which the disease was removed; that he had been assured by this gentleman that the complaint was not venereal, and did not require mercury; and that he had taken the precaution of submitting himself to examination before marriage, with the view of making his mind sure that he had no venereal taint; but, on examining him, I found a very slight oozing at the corona, with a very slight thickening of the corresponding portion of the lining of the prepuce; and there existed on some parts of his body slight cutaneous desquamations of a suspicious character."¹ The lady miscarried of a dead child, and the husband and wife were placed under mercurial treatment, and recovered.

Balanitis is exceedingly liable to return, without any evident cause, after it has been supposed to be cured. It breaks out again and again, at uncertain intervals, showing the irritation still to exist which produced it in the first instance. Sometimes the irritation reappears in its original form, sometimes it gives rise to herpes preputialis, or to eczema of the glans, or to minute and superficial ulcerations, which, after repeated returns, leave behind them some thickening, which may give rise to mild constitutional symptoms, and is capable of producing disease in the female, as the preceding remarks and cases fully show. In such cases the patients must be put on general treatment, a mild mercurial course, the hydriodate of potass with sarsaparilla, and the mercurial vapour bath.

Should the reader wish for a fuller account of balanitis, its complications, consequences, &c., I refer him to the elaborate article by Fournier in vol. iv of the '*Nouveau Dictionnaire de Med. et Chir. Pratique*.' I think I have given a sufficiently full account of the nature and treatment of the disease for all practical purposes.

¹ Wallace, pp. 229-30.

CHAPTER V.

OF GONORRHŒA.¹

GONORRHŒA, or blennorrhagia, consists in an inflammation, more or less acute, of the mucous membrane of the urethra, or other parts of the genito-urinary passages, accompanied by the secretion of a muco-purulent fluid of a yellow or greenish appearance; pain, itching, or irritation in voiding the urine; with, in the male, repeated and involuntary erections of the penis.

Gonorrhœa, or blennorrhagia, in the male is an urethritis produced by the application of an irritant to the lining membrane of the urethra; and this irritant, in a vast majority of cases, is a discharge from some part of the sexual organs of the female. By referring to what I have already said on the varied character of these discharges in the chapter On Balanitis, it must at once be perceived that this irritant on the part of the female is of very different characters; at one time non-specific, and at other times of a specific nature. This might have been imagined from the great diversity in gonorrhœa, whether these

¹ "Urethritis, acute or chronic."—Desruelles. "Blennorrhagia."—Swediaur. "Venereal or syphilitic catarrh."—Wallace.

Varieties of gonorrhœa:—

First species—Gonorrhœa in the female:

Varieties, seated in $\left\{ \begin{array}{l} \text{the vulva,} \\ \text{the vagina,} \\ \text{the uterus,} \\ \text{the urethra,} \end{array} \right\}$ may exist alone, or variously combined.

Second species—Gonorrhœa in the male:

Varieties, seated in $\left\{ \begin{array}{l} \text{the urethra,} \\ \text{on the prepuce, or} \\ \text{the glans penis,} \end{array} \right\}$ may exist alone, or variously combined.

relate either to their symptoms, duration, complications, consequences, or mode of cure. I am perfectly persuaded, both from observation and from experiments, that in addition to the causes of urethritis, hereafter mentioned, that the syphilitic virus is occasionally, if not frequently, the cause of a gonorrhœa, and I believe that very commonly the discharges from the uterus which are due to secondary syphilis produce this effect.¹ (See the chapter On Syphilis of the Uterus.) This opinion will explain the occasional occurrence of unmistakeable constitutional syphilis after a gonorrhœa. I admit that these cases are comparatively rare, but every surgeon of moderate experience in the treatment of syphilis must have observed them. I do not mean to deny the existence of discharges which are owing to the presence of a chancre in the urethra; but there are cases of gonorrhœa, which are due to the action of the syphilitic virus on the lining membrane of the urethra, which are distinct from these, acting as simple irritants; and such diseases are most probably occasioned by the pus of a primary or secondary syphilis.

Discharges from the male urethra, accompanied by heat and scalding on making water, may succeed to connections with women suffering from what is commonly termed fluor albus.² Such discharges generally subside much more quickly than an ordinary gonorrhœa. I have frequently been consulted by persons labouring under discharges of this character, which have been communicated by females with whom they had been in the habit of cohabiting, and who had never perceived any disease till they visited their mistresses after dining out and drinking freely; then a discharge, with scalding on micturition, has been set up, which has continued a few days, been rendered worse by specific remedies, and yielded to low diet, aperients, and an injection.³

¹ Note added 1870.—The pus of a chancre may act as an ordinary irritant, and produce a sore (Cullerier). I have long maintained the doctrine, but am glad to see it maintained by one of so much experience as the surgeon of the Midi. (See Cullerier, p. 41.)

² See a remarkable case recorded by him, vol. i, p. 425, of his Treatise on the Venereal Disease.

³ "Both sexes are liable to complaints that very closely resemble the gonorrhœa. This occurs to men who have an irritable stricture, or at

Women are frequently said to have communicated a gonorrhœa, who themselves have no symptoms of the complaint. In the chronic condition women pay little attention to vaginal discharges. If they have ever had gonorrhœa the acute stage may have passed; and they suffer little or nothing during coition. They have only what they believe to be whites, but this is actually a chronic gonorrhœa of the uterus, and although attended with no appreciable symptoms on the part of the female, is a frequent source of the disease in the male.

CASE XI.

A gentleman contracted a gonorrhœa in South America, which disappeared under treatment. On returning to this country he perceived, the day after intercourse, a profuse purulent discharge from the urethra, which at first had many of the characters of gonorrhœa, though unaccompanied by scalding or chordee: the disease disappeared in a few days. The same discharge appeared frequently after intercourse, especially if the patient had been drinking wine previously. No disease was communicated to a healthy female by this discharge after repeated intercourse. It always disappeared with a few days' low diet and a mild aperient.

This is the type of a class of cases which are common, and which generally yield to the treatment mentioned, to which a weak astringent injection may be added should they prove obstinate.

Gonorrhœa, though most commonly due to promiscuous intercourse, and termed a venereal disease, is an affection of a totally different character to the primitive syphilitic ulcer. I have already explained the circumstances under which the syphilitic virus may act as a specific irritant on the urethra.¹

least an irritable urethra, who find on some excitement a sudden appearance of copious discharge; and, if it appear after intercourse, it may be as soon as twelve hours, is at once of a purulent character. The symptoms of this spontaneous complaint usually remain a short time without increasing, and then cease without any apparent cause, or decided course of treatment."—J. P. Vincent, 'Observations on some Points of Surgical Practice,' p. 328.

¹ See Ricord, and the authors quoted by him in his work already

The causes of gonorrhœa are various; one of the most frequent is cohabitation with a female affected with the same disease.¹ It is certain, however, that inflammation, with mucoreferred to; also Cullerier, in Lucas Championnière's work, p. 384, &c., &c. The whole history of the pathology, consequences, terminations, complications, and the effects of remedies in the treatment of gonorrhœa, mark it as a disease distinct from chancre. This was the universal belief in this country, with few exceptions, prior to the time of Ricord, who confirmed what British surgeons already believed and acted on; yet, with all this, there do occur from time to time cases of secondary syphilis, in no way to be distinguished from those which succeed to chancre, which own as their source and origin discharges from the urethra only, which discharges apparently in no way differ from common gonorrhœa, and on examination of the urethra after the disappearance of such discharges, no vestiges of contraction or stricture, or any condition incompatible with a healthy organisation, can be detected: surely if a concealed or urethral chancre (which is evident enough in most cases where it exists) has been present in such instances, its healing must have left some mark behind. I do not deny the existence of urethral chancre, I have seen it frequently, but I say that in all the class of cases I have alluded to, the existence of chancre has been presumed, not demonstrated.

¹ The secretion from a healthy female will sometimes produce in certain individuals discharges closely resembling gonorrhœa; in fact, an urethritis. Hence some authors have believed in the spontaneous origin of this disease. (Skey's 'Lectures on Venereal Diseases,' p. 174.) Mr. H. J. Johnson has recorded three remarkable cases of this kind ('On Gonorrhœa and its Consequences,' p. 32). I have frequently examined females in whom I could detect no disease, who were said to have communicated a gonorrhœa. This is also M. Ricord's opinion. In these instances, either there is some peculiar irritant in the ordinary normal secretions of the female inimical to certain persons, or the female becomes the deposit or vehicle for the virus, which not affecting her, nevertheless poisons her lover. Thus, a perfectly healthy female has intercourse with a diseased man: soon after this she again has intercourse with a healthy man, to whom she communicates disease; but, on examination, she is found perfectly healthy, although she has diseased another. It so constantly happens, both with regard to chancres and gonorrhœa, that women who, on the most careful examination, are found apparently free from disease, have caused disease in others, that the doctrine of "mediate contagion" must be admitted. This doctrine had been already taught by Astruc, Swediaur, and a host of other writers on syphilis; but some recent experiments by M. Cullerier appear to set the matter at rest. I refer the reader for full details on this subject to M. Cullerier's memoir, 'Quelques Points de la

purulent discharge from the urethra, may be the result of intercourse with women who labour under other various forms of disease, such as inflammation of the vagina, the lochial or menstrual discharges, fluor albus,¹ ulcerations of various kinds

Contagion Médiat, &c., and to the sixth note in Ricord's Lectures on Chancre, by Fournier, Maunder's translations.

Note added 1870.—It must have occurred to every surgeon practically acquainted with gonorrhœa, to have constantly noticed that women who exhibit no signs of gonorrhœa are said to have communicated the disease. There are numerous cases when the cause is evident, but there are also numbers of cases when this is not the case. Ricord and Fournier strongly assert their opinion, that venereal excess and the abuse of alcoholic stimulants are more frequently the cause of gonorrhœa than direct contagion; it is certain that they are generally so. I may, perhaps, allude to a case which strongly supports this opinion. "A young gentleman took to London a healthy servant girl, on pleasure, both being perfectly well at the time; they were away three weeks; they ate and drank of the best, and were not sparing in sexual enjoyment. When they returned they consulted me; they were both suffering from gonorrhœa in the most acute form. Their case amongst many others leads me to support the doctrine that excessive intercourse with a healthy woman will produce all the symptoms of contagious gonorrhœa in its most acute form; more especially if to this be added at the same time the abuse of alcoholic stimulants. These views, very important, are very strongly maintained by Ricord, Fournier, Langlebert, Bumstead, and myself. I have no doubt of their correctness. I refer the reader to the excellent article *Blennorrhagie*, by Fournier, in vol. v of the '*M. D. de Médecine et Chirurgie Pratique*,' p. 132, for further details and arguments in support of these opinions.

These experiments distinctly prove that the female may be the vehicle of diseases, yet not herself be diseased; that the vagina may be the receptacle of virulent pus, which it may retain a longer or shorter period (the question of time not having been settled), which shall produce disease in another person, whilst the tissues upon which the virus has been originally deposited have escaped contagion. These facts are more frequently observed in gonorrhœa than in cases of chancre, although the mode of contagion is essentially the same in each.

¹ "It sometimes becomes a question of considerable interest, and of no little importance in married life, to determine whether leucorrhœal discharges in the female are capable of producing the assemblage of symptoms in the male constituting the ordinary phenomena of gonorrhœa. If questioned on the subject, I should have no hesitation to return an answer in the affirmative, in all cases where the discharge in the female exhibits decidedly purulent properties, having myself

not syphilitic, secondary syphilitic ulcers of the os uteri, and other morbid conditions, amongst which Cullerier and Ratier specially mention the cancerous ulcer. It appears to me evident that, in the present state of science, it is impossible with certainty to ascertain what may be the true cause of that gonorrhœa which succeeds to cohabitation, unless the female be submitted to examination with the speculum: and hence little confidence is to be placed upon any statements of this character, unless the speculum have been employed as a means of confirming our diagnosis; the condition of the constitution also at the time of exposure to infection must be ranked as a predisposing cause. Urethritis is also due to other causes apart from sexual intercourse, as masturbation, habitual costiveness, inflammation of the prostate gland, certain morbid conditions of the bladder or ureters—particularly the presence of calculi in these parts—piles, the excessive or immoderate use of wine or fermented liquors generally, and the warmer spices, more particularly cayenne pepper. (Added 1870.) Certain articles of diet sometimes produce discharges from the urethra resembling clap, amongst these I especially mention asparagus. I am perfectly certain from what I have seen that this vegetable has such power in certain constitutions. In children this affection is sometimes dependent upon teething or intestinal worms. It also recognises for its cause a gouty or scorbutic diathesis, or succeeds to the suppression of habitual discharges or the cure of old-standing cutaneous eruptions. In addition to all these causes, which are strictly internal, gonorrhœa is produced by external violence or injuries to the penis, and the operation of a second class of causes of various kinds which are external.¹

Gonorrhœa consists in an inflammation more or less diffused of the mucous membrane of the urethra, &c.² This inflammation witnessed several incontrovertible instances of the kind.”—Whitehead, ‘On Abortion and Sterility, and Morbid Conditions of the Uterus, with reference to Leucorrhœal Affections, &c. &c.’

¹ I have in several instances seen the introduction of instruments into the bladder produce a disease precisely resembling gonorrhœa, with a swelled testicle. I have seen this after the operation of lithotomy, from the simple introduction of the staff.

² Hunter, Sir A. Cooper, and M. Ricord have recorded dissections of patients who have died during the continuance of a gonorrhœa. The

tion, from its diffused or erratic character, has been thought erysipelatous; hence Desruelles terms it "inflammation érythémateuse." The inflammation does not commonly affect the whole surface of the urethral mucous surface; when it does so, it is generally accompanied with some symptomatic fever. The points in which the inflammation remains most commonly fixed, or in which it is manifested with greatest intensity, are the fossa navicularis, and the vicinity of the bulb: this arises from the anatomical disposition of the mucous membrane, which, in this situation, is much more intimately adherent to the erectile tissue beneath it. Gonorrhœal inflammation may be diffused over a wide surface, and "may involve the whole of the urethra, the bladder, the testicles, the glans and prepuce, in the male, but this is very rare; and in the female, the nymphæ, clitoris, labiæ, vaginæ, &c.; and thus commencing at the preputial end of the penis, in the fossa navicularis, it not unfrequently creeps slowly on to the posterior parts of the urethra, to the bladder, or to the testicles, while it decreases or ceases entirely in the parts first affected."¹ It may be confined to the mucous membrane itself, or extend to the tissues beneath it; in the latter instance, the irritation constantly determines a flow of blood into the cells of the erectile tissue of the corpora cavernosa and corpus spongiosum, which occasions a continual tension of the penis. Occasionally the inflammation becomes located in some part of the canal, producing thickening, effusion into the submucous cellular tissue, and in some rare cases ulceration; in these forms the disease assumes more of a local character, and is not much disposed to spread by continuity of tissue.

The first symptom of a gonorrhœa is commonly the glueing together or adhesion of the lips of the meatus, as though a thin film of gum had been placed over them; on tearing this open, a small drop of muco-pus exudes, and the lips are slightly puffy and swollen; as the disease progresses, and the inflammation becomes more acute, more or less pain is felt on micturition, and the discharge increases in quantity, and is almost urethra was found more or less inflamed, without ulceration or breach of surface; and these appearances were most marked within two inches of the meatus and at the bulb.

¹ Wallace, pp. 337-8.

altogether purulent. When the disease is confined to the fossa navicularis, it is only in this portion of the passage that uneasiness or pain is felt when the patient voids his urine; the glans is more or less swollen, and its lips tumefied and red. On pressing and rolling the urethra between the thumb and finger, a distinct thickening is felt, as though a portion of a sound had been introduced into the urethra; the pressure is also painful to the patient. The greater and more marked the thickening of the urethra in this situation, the stronger is the presumption that the disease is localised there, and does not extend to other portions of the canal. The discharge, under these circumstances, is trifling, though very teasing to the patient; it is constantly presented at the orifice of the urethra. When the inflammation predominates, or is fixed in the straight portion of the urethra, between the glans and the bulb, the patient has no pain in the perineum; but he experiences severe pain in making water, has frequent erections of short duration, and the discharge is more copious than when the disease is confined to the fossa navicularis.

If the disease be located in the bulbous portion of the urethra, the patient has pain and tenderness in the perineum, increased by pressure, a constant desire to void his urine, with frequent erections of the penis. The discharge is flocculent, mixed with the secretion of the prostate and accompanied with great pain, and the stream of urine is diminished. When the membranous portion of the urethra is chiefly affected, the pain is severe in the perineum and the neighbourhood of the anus; the desire to void the urine is in many cases constant. The prostate and testicles are commonly enlarged and painful, the spermatic vessels congested, as well as the vasa deferentia. Consecutive diseases of the bladder, prostate, and testicles are more frequently to be feared when the gonorrhœa occupies principally the two last-mentioned seats.

During the course of a gonorrhœa the patient is not unfrequently tormented with pains and stiffness in the groins, weight and dragging in the testicles, irritation in the rectum, tenesmus, with retention and incontinence of urine. These depend chiefly upon the localisation of the primitive disease, and are easily explained by the anatomical relations of the

urethra. Fever of an inflammatory or intermittent character is sometimes present, and affections of the joints, which have been described by some authors under the title of gonorrhœal rheumatism.

Gonorrhœa is not always confined to the organs of generation, or their dependencies; hence varieties in its seat, owing either to the sympathies of other parts during the presence of an urethral gonorrhœa, or from the direct application, from accident or carelessness, of the matter to a healthy mucous surface. These varieties in the seat of gonorrhœa I have chiefly observed in the eye and the rectum.

The more acute forms of gonorrhœa may terminate in resolution, or chronic discharges simply, a mere supersecretion, without ulceration or breach of surface. To ascertain this, however, when a discharge continues indefinitely, without being materially influenced by remedies, the canal of the urethra in the male, or the vagina in the female, should be carefully examined. The other more ordinary terminations of gonorrhœa are ulceration of the urethra, stricture, and diseased conditions of the bladder, prostate, or testicles.

Gonorrhœa can hardly be confounded with any other disease except a primary venereal sore situated in the urethra. From this it is to be distinguished by inoculation, the character of the discharge, which, in the latter instance, is serous, sanious, or bloody, and less in quantity than in the former, and by the presence of a circumscribed induration in some part of the urethra. The lips of the urethra may be everted, and when a sore exists in this situation it can occasionally be seen. In many instances, however, the ulcer is further down the passage, and then the latter mode of examination fails.

Gonorrhœa is divisible into four stages, to each of which a distinct treatment is applicable; and it is owing, perhaps, to prescribing for the first stage what is only suited to the second, or the second what should have been employed in the first, that the disease is so often and so long protracted.¹ The first stage

¹ Gonorrhœa naturally divides into four forms or stages, which, although they do not all follow each other with perfect regularity, yet when a case is presented to us, it must assume one of the following varieties:

of gonorrhœa is characterised by the absence of acute inflammation; there is slight pain or heat in micturition, puffiness and redness of the lips of the meatus urinarius, which are sometimes everted and sometimes stuck so fast together by an adhesive muco-pus that we have some difficulty in separating them there is also a slight muco-purulent discharge, and a flattening in the stream of urine. This is the first stage of gonorrhœa and when these symptoms occur wholly or in part from four to ten days after a suspicious intercourse, we may be pretty sure a gonorrhœa has been contracted, and, if not cut short, will run on quickly to the second or inflammatory stage. It is to the first stage only that the abortive treatment about to be spoken of is limited.¹

The treatment calculated to cut short a gonorrhœa in its first stage should not, as a general rule, be resorted to after twenty-four hours from the first invasion of the disease, and is then not in all cases successful. Yet when the protracted character of discharges of this kind is considered, their frequent, various, numerous, and even dangerous complications, and sometimes their disastrous consequences, we cannot but do right to recommend this treatment when the patient applies in proper time, and there is nothing to contra-indicate its employ. An additional reason that this treatment, under such circum-

¹ 1. The first stage is marked by slight puffiness and adhesion of the lips of the meatus, with slight discharge of an adhesive muco-pus, variable in its duration from two to forty-eight hours. To this stage the abortive treatment is limited.

2. The inflammatory stage, characterised by more or less heat and pain in micturition, swelling and redness of the penis, with purulent discharge. This stage ordinarily continues from seven to twenty-one days; whilst it lasts, a strictly antiphlogistic treatment is to be adopted, and neither injections nor specific remedies used, although there are here one or two exceptions.

3. The stage of discharge without inflammation, or marked complications. In this stage injections and specifics are generally safe and beneficial.

4. In this last stage, known by the name of blennorrhœa or gleet, the general inflammatory symptoms have altogether subsided, and the discharge has diminished to a drop or two in the day. The treatment must be regulated by the pathological conditions of the urethra, and the state of the general health or constitution of the patient.

stances, should be employed, is the constitution of certain patients: the scrofulous, the rheumatic, the gouty, and those troubled with chronic diseases of the skin, always suffer much from gonorrhœa; and if the disease once becomes established, it is sometimes very difficult to cure.¹

When a patient seeks advice before the inflammatory symptoms of a gonorrhœa are set in, an attempt may be made to extinguish the disease by what has been called abortive treatment; but if there be decided marks of inflammation, or any pain in micturition, or if the disease have existed more than twenty-four hours, this treatment will be attended, to say the least, with risk, if not with injury, and under the most favorable circumstances it will not always succeed. This plan consists in the use of injections, and the administration of smart purges, or large doses of fresh-ground cubebs or copaiba. I prescribe a dessert-spoonful of freshly ground cubebs every three or four hours, and hot fomentations to the penis three times a day. This plan sometimes succeeds, if the patient is in

¹ Note added 1870.—The abortive treatment of gonorrhœa consists in attempting to cure or cut short the disease in the commencement, and this attempt is to be made by remedies given internally and by injections. With regard to the latter (especially by means of injection of the nitrate of silver), I have already expressed my opinion "*that it is dangerous and unsatisfactory.*" I may say that I have hardly ever seen it successful, and its results in many cases have been very disastrous. The abortive treatment by means of large doses of specifics, such as copaiba and cubebs, may be resorted to. In this case the patient takes large doses of copaiba and cubebs, either together or separate, according to some of the forms annexed. If this treatment be adopted no injection of any kind must be used with it, merely fomentations of the penis and perinæum twice or three times a day with hot water. This treatment is more likely to succeed than that by injection; if attempted, the remedies are better used separately, from one to two drachms of copaiba every three or four hours, in a little mucilage or with an alkali. In some rare cases this may succeed, but it much more commonly fails, and it does this in two ways—1st, the patient cannot bear it; and, 2ndly, it fails to cure the disease. If the circumstances are favorable it may be continued for five or six days.

The cubebs in large doses are generally much more certain in their effect, and much less injurious to the patient, than the copaiba; a large teaspoonful may be given every four hours in a little water for five or six days.

a condition for its adoption; and it is perfectly safe, and does not aggravate the succeeding stages, should it not succeed. The cubebs are safer than large doses of copaiba,¹ and either of these remedies more certain than the treatment by injections. It is the practice of many to employ one, or even more, injections of strong solution of nitrate of silver in this stage of gonorrhœa, varying in strength from five grains to a scruple, or even more, of the salt to an ounce of water. I have seen the most disastrous consequences from this practice. It occasions severe pain, which is the least evil; very commonly lays the foundation of organic stricture, or pains and discharges from the urethra, which harass the patient for years, or for ever. It frequently fails, prolongs and renders more severe the subsequent stages of the complaint; and its employ has been followed by death.

CASE XII.

Illustrating the evils resulting from the abortive treatment of gonorrhœa by injections of nitrate of silver.

A student of medicine, previously in good health, contracted a gonorrhœa, for which he used in the early stages a strong solution of the nitrate of silver. An intense urethritis succeeded, with pains in the groins and abdomen; and on the third day of the attack I was sent for to see him. There was great tenderness over the lower part of the abdomen, and a large abscess forming in the right groin. He died within the week from peritonitis, and the abscess in the groin contained more than a pint of matter.²

¹ The treatment of gonorrhœa in the commencement by large doses of copaiba, is a dangerous, uncertain, and unsafe practice, more especially if the patient pursue his usual avocations or his accustomed diet during its use.

² Mr. Henry James Johnson details another fatal case, and a third where the consequences were very disastrous. "On the whole," says he, "this plan is open to grave objections, and I am neither disposed to practise nor to recommend it." (Op. cit., p. 60.)

Dr. Multhez relates a case where a strong injection of nitrate of silver produced intense suffering, convulsions, and perineal abscess; where prolonged discharges, stricture, and abscess, and urinary fistula

The first stage of gonorrhœa speedily passes into the second, in which the inflammatory symptoms are more marked, and the discharge altered in character. The penis is red and swollen, the urethra feeling like a cord when rolled between the fingers; micturition is frequent, and attended with severe pain; and the patient is tormented with frequent and involuntarily erections of the penis. Under some circumstances, if the inflammation run high, severe symptomatic fever may be present. In the third and fourth stages all these symptoms have subsided, and there only remains slight discharge, with varied pathological conditions of the urethra.

It is of immense importance, from reasons already adduced, that gonorrhœa should be cut short in its commencement, since its duration in many instances is almost indefinite, and its consequences so serious. Patients, in a state of alarm after a suspected connection, frequently seek the advice of their surgeon with the following symptoms: slight irritation in the urethra, dragging of the penis and testicles, uneasiness in voiding the urine, with redness and tumefaction of the lips of the meatus, followed the use of such injections. ('Edin. Med. and Surgical Journal,' Sept. 1st, 1861. 'Gazette des Hôpitaux,' Aug., 1861. 'American Journal of Medical Science,' Jan., 1862. "Je rejette complètement cette méthode."—Cullerier, Chirurgien de l'Hôpital du Midi, 'Maladies Vénériennes,' Paris, 1866-68, p. 39.)

Vidal (de Casis) says that he tried nitrate of silver injections for a whole year, and succeeded but in one case. He thinks, and with justice, that we are rarely consulted sufficiently early to attempt abortive treatment with safety or a probability of success. (Op. cit., p. 27.)

The American surgeons generally condemn the abortive treatment by means of strong injections of the nitrate of silver; I endorse the practice most fully. (See Gross's 'Surgery,' vol. ii, p. 977.) Mr. G. advises very weak injections of the acetates of zinc or lead, or two grains of tannic acid to the ounce of water; or thin mucilage, with a few drops of laudanum, weak green tea, or even tepid water; abstinence from meat, condiments, and fermented liquors, and frequent fomentation of the penis with hot water. These are the principles already inculcated in this book in reference to the abortive treatment. Mr. Skey says he cures cases of recent and bad clap in two days with the ferro-citrate of quinine in 12-grain doses, and frequent injections of sulphate of zinc, half a grain to the ounce of rose-water. (?)—Clinical Lecture reported in 'Medical Circular,' Sept. 9, 1857.

and a slight increase in the natural secretion of the mucous membrane of the urethra itself. These symptoms do not indicate that a gonorrhœa has been contracted, since an excessive excitement of the organs of generation, without infection, might produce them; but in the positive absence of any means of a differential diagnosis between this and the commencement of actual gonorrhœa, it behoves the patient to be careful. In such cases, which are the first symptoms of an urethritis, the patient should use hot fomentations to the penis and perineum, and take large doses of cubebs, but on no account use an injection. Some are of opinion that many gonorrhœas might be avoided, and the symptoms cut short on the onset, if the patients did not commit errors or excesses in diet at this period, and continue to expose themselves to all kinds of excitement. This opinion is deserving of the more attention, since we commonly see a discharge from the urethra set up and continue for some days after a debauch, and then of itself subside. When the symptoms we have indicated make their appearance, the patient should strictly adopt and adhere to the lowest possible diet, repose as much as possible in the recumbent position, and adopt the treatment already recommended.

Gonorrhœa may be either acute in its commencement, or ushered in with symptoms so mild, and apparently so trivial, as to be termed chronic. The disease also may assume a variety of shades of intensity, varying between these two extremes. Against the first form a pure antiphlogistic treatment should be adopted, though it does not always succeed. Aperients, alkalies, low diet, with local bleeding, by means of leeches¹ from the perineum, with the warm bath, or hot fomentations to the penis, and repose of the organs affected, constitute the remedies especially applicable to the stages of acute gonorrhœa. I cannot too strongly insist on the value of hot fomentations to the penis in all stages of gonorrhœa, but especially in the more

¹ Local bleeding from the perineum in the earlier stages and acute forms of gonorrhœa, so extensively practised on the Continent, has always disappointed my expectations. I may say it never gives relief at all proportionate to the trouble and annoyance of the practice.

acute forms and those secreting pus profusely. At this period the preparations of potass and soda, with diluents, are most serviceable.¹ The gonorrhœal discharge may be ushered in with symptoms less acute than those just described; and then a different mode of practice must be resorted to. It is necessary to state that local bleeding is not to be resorted to for the removal of discharge merely; nor without the symptoms of inflammation on some point of the urethra are evident. If employed when the membrane is lax, and no inflammation is present, where the disease is merely a blennorrhœa and not an urethritis, we shall prolong the affection instead of cutting it short.

An antiphlogistic treatment, although calculated to facilitate the action of other remedies in the cure of gonorrhœa, is not calculated of itself, at least but rarely, to accomplish this object.² Hence another plan of treatment has been framed,

¹ R Sodæ carbonat., gr. xx;
Sodæ potass. tart., j. M.

Bis terve die sumend. ex aquâ tepidâ; or added to half a bottle of soda water.—Carmichael.

Mr. Milton ('On Gonorrhœa,' p. 38) prefers the preparations of potass to those of soda, and they are certainly very valuable in this stage of the complaint. Mr. Milton's forms are the following:

R Potass. chlorat., ℥ij;
Potass. acetatis, ℥ss;
Liquor. potassæ, ℥iij;
Pulv. rhæi, ʒj—℥ss;
Aquæ dest., ℥viij.

M. ℥j ter die.

The distilled water is to be boiled, and poured on the chlorate of potass, and the other ingredients subsequently added.

Or the following mixture, very valuable in some acute forms of gonorrhœa:

R Sodæ carb., ℥ss—℥j;
Spirit. ætheris nit., ℥iij;
Mucilaginis acaciæ, ℥j;
Tinct. hyoscyami, ℥iij;
Aquæ destillatæ, ℥viss.

M. ℥j 3tis v. 4tis horis.

² Gonorrhœa is sometimes more than an urethritis. Though it would be, as a principle, unsafe to adopt any other than an antiphlogistic

which is termed "revulsive." This consists in the employment of remedies which are supposed, by producing a specific action of their own on the lining membrane of the urethra, to supersede that of gonorrhœa; these remedies are principally copaiba, cubebs, turpentine, the preparations of iron, iodine, and cantharides, with injections. Every practitioner must daily witness the uncertainty of the revulsive treatment of gonorrhœa employed alone, and the change from remedy to remedy, with but partial benefit to the patient. In this uncertainty many authors have endeavoured to lay down certain rules at what period the revulsive treatment may be resorted to with the most certain hope of realising its full and curative effects.¹ "When the acute stage has ceased, although the patient may yet continue to be troubled with erections, and although the penis may be heavy and uneasy, and the glands and lips of the meatus still red and slightly swollen, recourse should be had to those remedies which are termed 'par excellence' anti-gonorrhœal, which, however, should be abandoned again to return to antiphlogistics, if their employment occasion the increase of inflammation."² The use of specific remedies should be limited to the purulent stage of gonorrhœa, when the more acute symptoms of inflammation have been subdued.³

treatment in the earlier stages of this complaint, where the inflammatory symptoms run high, yet such a treatment does not always succeed in subduing them. I have known cases where the patient has been confined to bed, lived on nothing but tea and gruel, taken aperients, &c., for a fortnight together, and yet the inflammatory symptoms have hardly yielded at all; whilst under such circumstances, with the cautious use of specific remedies and mild injections, the symptoms have very quickly abated. If the acute symptoms of a gonorrhœa do not yield in ten or twelve days to antiphlogistic treatment, the so-called specific remedies should be cautiously administered.

¹ They should rarely be employed before the tenth day of the disease.

² Ricord, pp. 725-6.

³ It has lately been very much the practice to condemn the use of specific remedies altogether in the treatment of gonorrhœa. This is something like saying that mercury should be banished altogether from the treatment of syphilis. It is the abuse of the remedy, and not its judicious employment, that does the mischief. I am quite free to admit that great evil is done by the employment of specific remedies at improper times and without proper precautions; but there are certain

Copaiba should never be administered in the early stages of gonorrhœa, except as an abortive remedy, before the inflammatory symptoms have set in; nor till the inflammatory symptoms have been subdued by an antiphlogistic treatment and regimen; when the disease continues unchecked by such treatment, it may be employed. It finds its especial application in purulent discharge without inflammation. Here sometimes its benefits are rather delusive than real; it suspends discharge during its administration, but when it is discontinued the discharge soon returns as bad as ever, and this may take place time after time. If such a return of complaint after the discontinuance of copaiba occur two or three times, its use should be abandoned, as it is more likely to protract disease than cure it in such cases. It is over the urethral varieties of gonorrhœa only that copaiba has any influence; it exerts little action on the vaginal or uterine forms of this disease.¹ Many surgeons think it is much more effectual given alone than in a state of combination with other remedies, and recommend it to be given, as the most pleasant way and least likely to disturb the stomach, on the surface of a glass of white wine or lemonade. Its effects are more marked in a state of combination, at least the com-

states and stages of gonorrhœa in which the proper use of specific remedies is certainly to be recommended.

¹ Note added 1870.—The curative action of copaiba in gonorrhœa depends on its mixture with the urine. This appears to have been proved by the following case:

A patient came under M. Ricord's care having a traumatic hypospadias, and having contracted a gonorrhœa affecting the whole of the urethral surface. He was directed to take copaiba. That portion of the canal over which the urine flowed was cured by this; the other part remained unchanged. M. Ricord directed the patient to inject the portion of the canal remaining uncured with his own urine charged with copaiba. At the end of some days that was cured also. Other facts of a similar nature have been noticed. Owing to this it has been supposed that injections of urine, charged with the principles of copaiba and cubebs, on surfaces suffering from gonorrhœa, might be of service. M. Hardy, of the Hôpital St. Louis, tried this in females. He found the vaginal disease cured by it in some cases, whilst the urethral variety remained unchanged. On the contrary, if copaiba be administered by the mouth to women suffering from gonorrhœa, it is only over the urethral varieties that it has any power.

bination is more beneficial than the balsam taken singly.¹ It may be given by way of enema when the stomach will not bear it; but, when so employed, the dose must be much larger than when given by the mouth.² The copaiba has likewise been administered with success in large doses at the very onset of gonorrhœa, however acute, and without any preparatory treatment, as an abortive remedy, in the first onset of the disease, before the inflammatory symptoms set in. Monteggia and Fuller administered from half an ounce to an ounce of the balsam for a dose night and morning, at all periods of the disease.³ M. Delpech succeeded in curing four hundred cases by administering two drachms and upwards for a dose three times a day; if the inflammation was acute, general bleeding preceded its employ.⁴ Rossignol was successful in three hundred cases of gonorrhœas of all kinds. He employed large doses of the medicine uncombined, and did not submit his patients to any preparatory treatment or any dietetic regimen.⁵ The method we have just described must be employed with caution. M.

- ¹ R Bals. copaibæ, ʒss;
 Pulv. cubebæ, ʒvj;
 Liq. potassæ, ʒiij;
 Pulv. acaciæ, ʒss;
 Aquæ destillat. Oss. M.

² Note added 1870.—When there is an invincible repugnance to copaiba taken by the mouth, it may be given by way of enema. It is of incontestable benefit so given. It may be used during the most acute stage of the disease. If it does not cure the disease in a week, when administered by the rectum, its further employ should be abandoned. Opium and camphor may be added if painful erections are present. When used as an enema the dose should be from half an ounce to an ounce. Another mode of using copaiba, &c., has been recommended, and said to have been used with success. I mention it here chiefly as a part of the history of my subject, as I have as yet not tried it. It consists in submitting the organs of generation to the action of the vapour of copaiba and cubebs. Nineteen cases of success are given by the author, Raoult-Deslongchamps, "Vapeur balsamique du Copahu et du Cubèbe dans le traitement de l'urethrite," *Mém. de Chirurgie Militaire*, 1861.

³ 'Bulletin de la Société Médicale d'Emulation,' 1822. Sometimes, but rarely, successful; dangerous and uncertain.

⁴ 'Revue Médicale,' t. vii, p. 403.

⁵ 'Dictionnaire de Merat et Delens.'

Lallemand, in repeating the experiments of M. Ribes,¹ concludes that, although the large doses of copaiba succeed sometimes in cutting short an acute gonorrhœa, they sometimes augment the inflammatory symptoms and the discharge. I have seen one or two patients in which an incontinence of urine has been brought on by large doses of copaiba. It is a hazardous and dangerous practice to administer large doses of copaiba during the inflammatory stages of gonorrhœa. Although some patients may escape the pernicious consequences of such a proceeding, there are others who suffer more or less severely from it. Even the use of smaller doses of this drug for a length of time, without proper precautions, disposes to consecutive diseases of the bladder and kidneys. I have seen a number of cases which bear out this remark. The use of large doses of copaiba, on the onset of disease, should never be sanctioned when inflammatory action has been once set up; and even before this, its administration must be carefully watched. This remark does not so much apply to the use of the piper cubebæ, which is a much more safe remedy in such states.

The balsam of copaiba may be administered alone in wine or lemonade. It may also be given in various forms of combination.

The essential oil of copaiba, the resin of copaiba, the balsam enclosed in capsules, the copahine mège, the alkaline solution, and a soluble extract, have been employed with the view of getting rid of the unpleasant smell and taste of the balsam: these remedies, however, are none of them entitled to the same confidence as the latter remedy.² Copaiba is very commonly

¹ 'Mémoire sur l'Emploi de Baume de Copahu à haute dose dans la Gonorrhée et l'Engorgement consécutif du Testicule.'

² *Particular Forms for the administration of Copaiba.*

℞ Balsam. copaibæ, ʒj;
 Liq. potassæ, ʒij;
 Mucilaginis acaciæ, ʒj;
 Liq. morphis hydrochloratis, ʒj—ʒij;
 Pulv. cubebæ recent., ʒvj;
 Aquæ cinnamomi, ad ʒx.

M. Cap. cochlear. j ad iij larg. bis terve die.

There is no better form for the administration of the specifics than

adulterated; in the ordinary capsules of commerce, sold at the shops of some druggists, linseed oil is frequently substituted for copaiba. It is also commonly adulterated with castor oil and the oleo-resin of turpentine.

The piper cubebæ may be employed in the revulsive treatment of gonorrhœa, after the same manner as the copaiba. It may be administered in moderately large doses on the onset of an acute affection, with a view of at once cutting it short; when employed, however, under these circumstances, the same rules must be observed as those we laid down for the administration of copaiba. The cubebs may also be given in chronic gonorrhœa, and in gleet, separately, or combined with copaiba, or soda, or united with some preparation of iron or alum. The piper cubebæ soon loses all its medicinal properties when ground. In order to derive any benefit from it, it should be ground as it is wanted.

This is very important. When so prepared it may be united with soda or iron with great benefit, but it must be fresh.

Trousseau has found cubebs useful in the simple urethritis of women, characterised by a frequent desire to make water, smarting during micturition, and a species of vesical tenesmus lasting some minutes afterwards. ('Bulletin générale de Thérapeutique,' &c.)

this. In the abortive treatment from one to three table-spoonfuls may be taken as frequently as the stomach will bear it. When it is to be persevered in in ordinary purulent gonorrhœa, much smaller doses must be taken, from a dessert- to a table-spoonful three times a day. The mint or cinnamon water should be distilled, and not made with the oil, which is commonly done.

℞ Balsam. copaibæ, ℥vj;
Acid. sulph. dil., ℥ij;
Mucilaginis acaciæ, ℥j;
Infus. rosæ co. ad ℥viij.

M. ℥j bis terve die.

℞ Balsam. copaibæ, ℥iij;
Solutionis alkalinae (Brandish), ℥iss;
Olei limonum, ℥ss;
Syr. simplicis, ℥iij.

M. Cochlear. j parv. bis terve die ex aquâ. (Neligan.)

Cubebæ may be used in the abortive treatment of gonorrhœa in doses from ʒss to ʒiss . Its action is rendered more certain by the addition of 10 grains of sodæ carb. to each dose; and in chronic or subacute cases alum much increases its efficacy. Pulv. cubebæ recent., ʒiij ; alum. exsicc. ʒss . M. A teaspoonful of this powder for a dose two or three times a day.

The best form for its administration is the fresh-ground powder. Capsules, the oil, the oleo-resinous extract, the tincture, &c., and other forms for its administration, are all of inferior efficacy. To render it more pleasant it has been recommended to take it in effervescing lemonade. It is useful in the affections of the genito-urinary apparatus strictly due to gonorrhœa, such as chronic cystitis and incontinence of urine; here it must be given in smaller doses, 10 grains two or three times a day. Like copaiba, cubebæ may be used in form of enema.

When the inflammatory action of gonorrhœa has subsided, and the discharge continues unabated, and takes place without pains, or scalding, or chordee, and the action of specifics appears to be expended, a direct treatment by means of injection may be tried. Injections are remedies commonly employed in the treatment of gonorrhœa; without care and judgment in their application, they become uncertain and hurtful remedies, sometimes prolonging and aggravating disease, instead of curing it. The following are some indications for their successful employ:—In the early stages of gonorrhœa, as abortive remedies, before the discharge has become purulent, or pain in micturition exists, *i. e.* as a rule, during the first twenty-four hours. Here they should be used weak, and should be frequently repeated; and in such states the sulphate of zinc and the diacetate of lead are the best. I have already condemned the use of strong injections of the nitrate of silver in the abortive treatment of gonorrhœa. Again, injections are useful and proper when the purulent stage has become chronic, when inflammation has subsided, and the discharge continues apparently uninfluenced by internal treatment. In the perfectly chronic stage, sometimes one strong injection answers better than a continuance of weak ones.

Many surgeons object to the use of injections in gonorrhœa, fearing that they frequently occasion stricture, and other morbid conditions of the urethra. I am, however, of opinion that a

long-continued irritation or inflammation of the urethra is much more likely to give rise to these evils, and hence it is of consequence to cure a gonorrhœa by the means which will accomplish this object most quickly, at the same time that they do it safely. It is true that injections require great caution in their use, and their injudicious employment is frequently followed by serious consequences. Injections should generally be used from three to six times in the day, and the fluid injected should be made to remain in the urethra a minute or two before it is discharged.¹ In the acute forms of gonorrhœa, injections are inadmissible; they should be employed as soon as this stage is passed, and in cases chronic or indolent from the commencement they may at once be used.

To cut short a gonorrhœa at once, when a patient applies before the acute stage has commenced, injections of the nitrate of silver have been, and still are employed. I have already expressed my opinion as to its use.

A vast variety of injections have been employed in the various forms of chronic gonorrhœa. I mention those which are most successful and from which I have derived most benefit and which are most to be depended on.²

¹ The manner of using injections is important, and the patient should be instructed by his surgeon how to inject the urethra, if he do not perform this operation himself. The whole surface supposed to be diseased should be brought into contact with the injection, and for this purpose syringes with a long point or nozzle should be used, or again, a small catheter perforated at the sides may be introduced into the urethra, and the injection poured through it; in other chronic forms of the disease, when the prostatic or membranous portions of the urethra are implicated, a catheter should be passed into the bladder itself, and the injection thrown through it into the bladder; the instrument must be then withdrawn, and the injection poured out through the urethra, the whole urethral surface of which is thus in contact with the injection, as it is forced out by the contraction of the bladder. In chronic cases, where the seat of the complaint is uncertain, this is the most efficacious mode of using injections that I have ever practised.

² 1. The liq. plumbi diacet. in distilled water, from one to three drachms to the ounce.

2. The sulphate of zinc alone or combined. In the former condition from one grain to four to the ounce of distilled water.

3. The chloride of zinc, from one to three grains to the ounce of distilled water.

Injectations should never be used sufficiently strong to cause severe pains in the urethra; they should just occasion an agreeable warmth, not quite amounting to uneasiness; this is the best test of their strength. They should be used after micturition, and suffered to remain in the urethra for half a minute. Two syringefuls are understood to mean one injection. * When the disease has become perfectly atonic, and all morbid sensibility has disappeared, or when the patient is merely teased with a drop or two of mucous discharge oozing from the urethra once or twice in the day, injections of wine or brandy more or less diluted are very agreeable. New claret with as much water is very useful. One table-spoonful of brandy to six ounces of water, or as circumstances may dictate, is also good.

The trisnitrate of bismuth has lately been much employed as an injection in the treatment of gonorrhœa, even in the inflammatory forms; it is much better and safer used when the inflammation has subsided or is about to do so. MM. Caby,¹ Mourlon de Comdorse, and others, have recorded several cases of success. It should be washed

4. ℞ Plumbi diacet., gr. xvij;
Zinci sulph., gr. vj;
Tinct. catechu, ʒj;
Tinct. opii, ʒj;
Aquæ dest., ʒvj. M. ft. injectio.
5. ℞ Zinci sulph., gr. xvj;
Bol. armenian., ʒj;
Aquæ camphoratæ, ʒvj. M. ft. injectio.

Excellent injections for ordinary use.

6. ℞ Plumbi diacetat., ʒss;
Zinci sulph., āā gr. xv;
Camphoræ, ʒss;
Opii dur., ʒj;
Aquæ bullientis, Oss.

Macerate for an hour, and strain. An excellent ordinary injection.

7. ℞ Zinci acetatis, gr. xij—ʒj;
Aquæ, ʒviij. M.

¹ See Caby, "Traitement des écoulements de l'homme et de la femme par l'emploi de la sous-nitrate de bismuth," &c., 'Bull. générale de Thérapeutique,' t. 47, p. 200, &c.

before using till it no longer reddens litmus paper. Two injections daily after micturition. The injection should be made as thick as it will pass through the syringe. It gives no pain, and is in a great measure free from many of the objections which attach to the use of other remedies of this class.¹

It will often be found of great service to vary the character of the injection, when one appears, from continued use, to have lost its effect: we shall also find that some patients bear one kind of injection better than others.

It has been supposed that gonorrhœa is kept up occasionally from the contact of the two sides of the urethra; and hence it has been proposed by Fricke to introduce, by means of an elastic gum catheter or bougie, a fine piece of lint into the urethra, and let it remain there, removing it only at each period of making water; the lint may be employed dry, or soaked in any astringent injection. The practice has been followed by occasional success.²

Sometimes all our remedies are unsuccessful in checking the discharge; it then becomes necessary to examine carefully the urethra, to discover upon what pathologic condition the continuance of this depends. In cases of morbid sensibility of one portion of the canal only, the solid nitrate of silver has been directly applied to it, by means of the "port caustic" of

¹ R Bismuthi trisnitratis, ʒj—ʒj;
Pulv. tragacanth. co., ʒij;
Aquæ destillatæ, ʒviij.
M. ft. injectio, bis die utend.

² See Ricord, op. cit., p. 745, and in the 'Gazette des Hôpitaux;' also Desruelles, op. cit., and Fricke, 'Lettres au Dr. Desruelles,' &c. Form for an injection which was successful in a chronic urethral discharge which had lasted three years:

R Liquor opii sed., ʒj;
Tinct. catech., ʒss;
Infus. krameriæ, ʒviiss. M. ft. injectio.

M. Gamberini ('Championnière's Journal') recommends the following in obstinate chronic urethral discharges:

R Aquæ destillat., ʒiiiss;
Tinct. aloës, gr. xv—ʒj. M.
Two injections daily.

At times these discharges can only be forced out by squeezing the urethra between the fingers. When they succeed to the flow of the last drops of urine, they are either seminal, prostatic, or vesical, and are forced away by the increased muscular exertion necessary to its expulsion. Gleet is sometimes associated with stricture, and to ascertain its nature the urethra should always be carefully examined before framing a plan of treatment for the patient. At times no change can be detected in the urethra, and a bougie of full size passes freely and without pain into the bladder; at other times there is a peculiar soreness or tenderness at one point, generally in the vicinity of the membranous or prostatic portion of the urethra; the passage is occasionally irregular and uneven, and when stricture exists discharge always takes place on withdrawal of the bougie after it has passed through the stricture. Some have placed the seat of gleet in the lacuna magna; no doubt chronic discharges have frequently their seat in the lacunæ of the urethra, and sometimes small hard lumps corresponding to the seat of these lacunæ can be felt externally. Gleet may have its seat also in the spongy or membranous portions of the urethra, or the follicles of the prostate. In all gleety discharges of long continuance, the condition of the urethra behind the scrotum and that of the prostate should be ascertained, since some forms of gleet are frequently dependent on chronic mischief in the latter organ.

In some forms of gleet, although of long continuance, little constitutional or sexual debility is produced, but this is not commonly the case; a certain amount of sexual weakness almost always succeeds to a long-continued gleet, in which the viril power is more or less weakened, or even altogether impaired or destroyed. This is especially the case if the gleet depend on causes situated in the prostatic portion of the urethra, or be complicated with discharges of semen, or the "*liquor prostaticus*,"¹ which is sometimes the case. In lax

¹ The exact nature of these discharges is at once rendered evident, by submitting them to microscopic examination. In a complication, such as I have just alluded to, we find the peculiar globules of the liquor prostaticus mixed commonly with a few spermatozoa and ordinary pus-globules.

and irritable systems, where a gonorrhœa becomes implanted on a constitution where the sexual powers have been weakened or rendered irritable by excess, these complications are not uncommon, and in such cases the virility of the patient sustains a fearful shock.

Gleet is the termination of a gonorrhœa, an inflammatory disease, and hence it may happen that the discharge results from chronic inflammatory mischief, localised in some part of the urethra, commonly in one of the lacunæ. Should this be well marked, an abstinence from stimulants, three or four leeches, and a blister may be of service: unless, however, the inflammatory action be well marked, bleeding must be used with great caution, as it frequently tends to prolong a gleet. Blisters to the urethra or perineum, or on the inside of the thigh, are occasionally or frequently successful.

If the discharge appear to come from a point of the urethra anterior to the bulb, injections will in most cases be of service; they should be weak, and frequently repeated. If injections are to succeed, the whole mucous surface must be brought into contact with the remedy, and this is perhaps the reason why injections often fail. If the disease be confined to one or more of the lacunæ anterior to the bulb, an injection as commonly practised is useless, for it does not reach the seat of the disease: should they be practised in the ordinary manner, for any complication behind the bulb, they are still more inefficacious. They are good remedies if properly applied. In order to inject the whole urethral surface anterior to the bulb, a small electro-gilt catheter perforated at the sides in its whole length, and about six inches long, should be passed into the urethra; the point of a syringe, holding about four ounces, should then be applied to its extremity, and the injection gently pressed in through the catheter; the injection passes through the foramina, and comes in contact with all the mucous surface, and acting laterally, injects the cavities of the lacunæ themselves; the injection runs out by the sides of the catheter, so that the action may be kept up as long as it may be required.

I adopt a different plan in affections of the deeper-seated portions of the urethra. I pass a catheter into the bladder itself, and throw the injection through it to the extent of four

or six ounces; then withdraw the catheter, let the injection remain a few minutes, and desire the patient to force it out. The bladder should be emptied before the injection is used. In this manner weak solutions of the sulphate, or chloride of zinc, diacetate of lead, or nitrate of silver, and other remedies, may be used, with perfect safety and a very great amount of success.

Bougies are valuable remedies in the treatment of many forms of gleet. They may be used simple or smeared with various kinds of ointments,¹ and in many cases succeed where injections fail. They are especially useful if this complaint be combined with stricture, or that uneven condition of the urethra already alluded to, which is so common in many forms of gleet and spermatorrhœal discharges. A bougie is useless if too small, injurious if too large: it should moderately distend the urethra, but not unduly stretch it. A bougie should be suffered to remain in the urethra till some amount of irritation is produced by its presence. It is a good plan to pass the bougie at night, desiring the patient to retain it for an hour or more. In such instances it is well to retain the bougie by a piece of tape; should the patient fall asleep, it might slip down the urethra. Metallic bougies are preferable to wax or elastic gum in the treatment of gleet.

From the time of Hunter and Benjamin Bell to Mr. Milton, blisters have been applied to the perineum and penis for the cure of gleet. I have used them often, with a variable, but certainly at times with a gratifying amount of success. They are useful chiefly when the disease is located in some spots anterior to the bulb. One rarely cures. In the deeper seated forms of disease, blisters to the perineum may be advantageously combined with the bougie and injections.²

¹ R. Argent. nitratis, ʒj;

Unguent. cetacei, ʒj. M.

R. Ung. hydrargyri fort., ʒj;

Ext. belladonnæ, ʒij. M. (Vidal de Cassis.)

² Other counter-irritants may be used along the under surface of the urethra in cases of simple atonic gleet. Mr. Acton recommends the tincture of iodine and a solution of cantharides in chloroform, 'Lancet,' Oct. 16th, 1854.

Mr. Miles ('Lancet') recommends blistering the thighs, both in

Internal remedies alone are rarely successful in the cure of gleet. It generally happens that, when the surgeon is consulted first, the patient has been ringing the changes on all kinds of specific remedies. In such cases it is well to abstain for a time from everything of this kind, to regulate the diet according to the constitution of the patient and the peculiarities of the disease, and exhibit a smart mercurial, followed by a saline aperient, repeating the remedy once or twice.

Specific remedies rarely succeed in curing a gleet. Should they be indicated, I generally prescribe them with tonics. Combinations of iron and copaiba are often useful. Sexual intercourse frequently cures gleets that have resisted other remedies; I have known a fit of intoxication cure a gleet; so occasionally will a prolonged abstinence or a course of aperients. In fact, cures have occasionally been due to the most opposite remedies: but these are accidents that are of little or no use to us in practice.

If gleet be dependent on stricture, a surgical operation which divides the stricture may succeed in curing the gleet, and may be adopted, but only after other remedies have failed.

CASE XIII.

Profuse muco-purulent gleet, of two years' standing; failure of ordinary treatment; cure by surgical operation.

A gentleman, of weak constitution, consulted me for a profuse discharge from his urethra, which had existed for upwards of a year. It had the appearance of a recent gonorrhœa; the discharge was more purulent than mucous; it was very profuse, to the extent of several teaspoonfuls in the day, and was not contagious. It had resisted all the usual means of cure, under various surgeons and treatments, for upwards of a year. On examining the urethra, a slight contraction was evident in the neighbourhood of the bulb; but a No. 6 bougie passed with acute and chronic urethral discharges. Mr. Miles is an army surgeon; he confines his patients to bed, keeps them on low diet, and purges them with ant. tart., sulphate of magnesia; and blisters the upper and inner parts of the thighs and penis; occasionally one injection of nitrate of silver 6 grs. to the ounce.

great facility. For several months after I was first consulted, the disease remained much in the same state. The patient was willing to submit to anything to get rid of the disgust which his malady occasioned. I at length determined to divide the contracted portion of the urethra, and let the urine flow through the perineum for a time. A grooved staff was passed into the bladder, and the contracted portion of the urethra, with a good part of the membranous portion, divided freely upon it. The urine was suffered to flow through the wound in the perineum for a time, with the view of removing all irritation from the urethra. The former gradually contracted and healed, and at the end of about a month had quite closed. No discharge appeared when the urine again resumed its natural course; the patient has remained in good health since the operation, now four years ago.

Added 1868.—The chief remedies which experience has taught me to place reliance on in cases of gleet, are :—

1. Injections.—Uncertain remedies, they only cure by causing the chronic stage to become acute. In addition to those already named, the tincture of iodine may be used, a drop to an ounce of water, gradually increased; the perchloride of iron, one drop to the ounce, gradually increased. A solution of bismuth, suspended by mucilage, and made as thick as it will run through the syringe.

2. Bougies, gradually increased in size, till Nos. 13 or 14 can be passed, should be suffered to remain as long as the patient can bear them in the urethra; generally good remedies.

3. *Meshes*, portions of dry lint, passed as far as possible into the urethra, and changed only on micturition; they may be smeared also with various ointments.

4. Counter-irritants, blisters, sometimes very efficacious, applied to the inside of the thigh, or along the under surface of the urethra.

5. Coitus, an uncertain remedy, though it sometimes cures; occasionally, however, it changes a mere gleet into what appears very like a clap.

6. Cauterisation.—This also is an uncertain remedy, but as it sometimes cures, it should be tried in obstinate gleets that resist other modes of treatment. It is a case frequently of

double or quits; sometimes the disease becomes acute, and the discharge much increased by it, but when these symptoms disappear, which they will in a few days, the original complaint is found much improved or altogether cured. Sometimes gleet depends on a chronic lacunitis, especially of the lacuna magna; if the orifice of the lacuna can be seen, a fine-pointed crayon of nitrate of silver passed into it sometimes cures.

7. Diet.—The diet in gleet should as a rule be good and nourishing, and stimulating. A gleet will commonly disappear under port wine and bitter beer, which would run like a mill-stream under tea and toast and water.

8. Necessity for curing it.—It may seem superfluous to take so much trouble, and to encounter so much difficulty in attempting to cure a disease which appears so trivial; but it is imperative that a gleet should be cured. No single man suffering from gleet, however slight, should be permitted to marry. I have seen more than once a very slight gleet produce the most severe gonorrhœa.

CHAPTER VI.

OF DISEASES WHICH COMPLICATE OR SUCCEED TO
GONORRHOEA IN THE MALE.

THE diseases which complicate, and succeed to gonorrhœa in the male, are exceedingly varied and numerous, and very frequently of much more consequence than the original affection which caused them.

These diseases are either local or constitutional; the first arise from the extension of the urethral malady to neighbouring organs or parts, and the second affect the economy at large. Amongst the first are: 1, alterations in the natural elasticity or contractile power of the urethra, or parts about the neck of the bladder; 2, urethral pains or neuralgia of the urethra; 3, adenitis of the inguinal glands—sympathetic bubo; 4, inflammation of the lymphatics of the penis; 5, of Cowper's glands; 6, of the prostate gland, peri-urethral inflammation and abscess of the bladder, and peri-urethral phlegmon or abscess. To these must be added also some forms of spermatorrhœa or involuntary discharge of semen. I have seen numerous cases in which the origin of this complaint has been a gonorrhœa of long standing, or one difficult to cure; the affection itself is also generally complicated with gleet and stricture; 7, general inflammation of the prepuce and integuments of the penis generally, with anasarca or hard œdema; 8, retention or incontinence of urine; 9, hæmorrhage from the urethra; 10, epididymitis, orchitis, or swelled testicle. Balanitis, with phymosis or paraphymosis, and strictures of the urethra, either spasmodic or organic. Such are the formidable group of diseases to which gonorrhœa gives rise; and although in a great majority of cases these are not present to any great extent, still there are few cases of gonor-

rhœa in which one or more of these complications is not present in a greater or lesser degree.

The second group affect the economy at large or dispose it to take on certain morbid actions. These are purulent ophthalmia without contagion, and gonorrhœal rheumatism.

Occasionally, when a patient has suffered from gonorrhœa, and when the more prominent features of the disease have altogether subsided, the patient, after micturition, finds that he has not completely emptied the urethra, although he fancied that he had done so; the water comes away in drops, or in a stream, for some minutes or even longer, wetting the linen, and rendering him extremely uncomfortable. This I attribute to an alteration in the natural elasticity of the urethra, for on examination no stricture is to be found. The proper remedy is the bougie; one of large size should be introduced three times a week, and suffered to remain in the urethra for an hour, if no irritation be produced.

Strictures in the urethra are almost always the consequence of protracted gonorrhœal inflammation, seated in one or more points of the urethra, which, ultimately extending to the subjacent tissues, occasions thickening, induration, or vegetation. These are the diseases which, in the expression of Desrullès, an imprudent youth bequeaths to adult age, and which, in certain instances, at more advanced periods, render the patient's life miserable. In the advanced stages of chronic gonorrhœa, recourse should be had to the bougie, which should occasionally be passed, with a view of preventing contraction or thickening of the passage, and promoting the absorption of any submucous deposit, or effusion, that may have taken place.

When a gonorrhœa is seated in the deeper parts of the urethra, in the membranous or prostatic portions, the rectum is sometimes sympathetically affected, and the patient very often suffers from severe pain in the fundament, and a very troublesome tenesmus. This sympathetic irritation is carried in some cases so far, particularly if the patient have used much exercise during the course of his disease, that inflammation is set up in the subcutaneous cellular tissue surrounding the anus, and abscesses form. If circumscribed swelling, with heat and tenderness in the vicinity of the anus, come on during the course of

gonorrhœa, the patient should be subjected to the recumbent position, and perfect quietude. Supposing these means have little or no influence over the circumscribed induration, and the presence of matter be suspected, this should at once be discharged by a very free incision; if a puncture instead of an incision be made, the matter in all probability will not get free vent, may burrow up by the side of the rectum, and a true "fistula in ano" may ultimately ensue. I have seen two or three instances in which such a result has taken place.

Added 1868.—During the course of a gonorrhœa abscesses in the cellular tissue surrounding the urethra are very apt to form. In some patients this is habitual, they never get a clap but they also get a peri-urethral phlegmon: they form in two situations, in the neighbourhood of the fossa navicularis, just below the frenum, or in the vicinity of the bulb; the latter the most common. This may arise from sympathy, or from perforation of the urethra. In the latter case a drop or two of urine escapes into the cellular tissue surrounding the urethra, inflammation is set up, and an abscess forms. The natural tendency of these abscesses is to suppuration if they are complicated with stricture, and infiltration of urine thus appears inevitable. Time is generally lost in attempting to disperse them; and in spite of leeches and lotions and antiphlogistic treatment, suppuration generally goes on. The moment the presence of matter is certain the abscess should be laid freely open; should there be no communication with the urethra it soon heals and the induration disappears. If caused by infiltration of urine it is almost always complicated with stricture, and the bougie should be used in addition to other treatment. In these latter cases, apparently of a formidable character, the abscess frequently heals without leaving a fistula in perineo behind.

If the gonorrhœal discharge is suddenly arrested, either by specific remedies or injections, troublesome symptoms also occasionally arise, which are due to inflammation of the prostate gland or parts in the vicinity of the neck of the bladder, especially the "trigone vesicale:" in the former instance there is pain immediately in front of the anus, sometimes very acute when the perineum is pressed; often there is a sense of trickling in the urethra, as though a drop of urine remained in

the passage, with a feeling of weight and swelling in the rectum. On examination per anum, the inflamed gland can be felt swollen, and extremely tender to the touch: partial or complete retention of urine may accompany these symptoms; if the bladder participate more or less in this mischief other symptoms are added; the patient is tormented with a frequent or constant desire to micturate; the urine is voided in small quantities, and its passage is accompanied by an acute burning pain; and in addition to the pain in the perineum, there is often a tenderness above the pubes; the urine is bloody or purulent, and commonly there is complete retention.

In such states, all specific remedies must be abandoned, especially copaiba, which frequently produces them; leeches should be applied to the perineum, and full doses of opium, with or without calomel, administered; the warm or hip bath should be used once or even twice in the day, and in the intervals warm fomentations or poultices to the perineum; the bowels should be kept free by enemata of warm water, or the administration of castor oil: but purging should be avoided; it rarely relieves, and frequently aggravates, the patient's symptoms. Rest in bed is imperative, with a broth diet. Relief is also found from the administration of alkalies, especially soda, with hyoscyamus and belladonna.¹

These symptoms sometimes quickly and spontaneously disappear, should the urethral discharge again make its appearance. The sudden or even gradual arrest of the gonorrhœal discharge is also occasionally followed by complete retention of urine, accompanied by the symptoms just described. I have known complete retention follow the use of a simple injection. I have known it occur after very moderate doses of copaiba, which had suppressed a discharge of many weeks' standing; and I have seen retention in the early stages of gonorrhœa, where none of these remedies had been used.

In cases where the discharge has been suddenly arrested,

¹ R. Sodæ carb., ʒj—ʒij;
Mucilaginis acaciæ, ʒj;
Tinct. hyoscyami, ʒiij;
Tinct. belladonnæ, ʒj—ʒjss;
Aquæ dest., ʒvij.

and retention of urine follows, the bladder rarely recovers its tone till the reappearance of the gonorrhœa, whatever remedies are employed. I have frequently known opiates, bleeding, enemata, the warm bath, iron, and other remedies fail, and the symptoms subside of themselves on the reappearance of a discharge which had been arrested for three weeks. This fact has led to the idea of attempting to restore the urethral discharge, in many diseases which depend on its suppression, by the introduction of bougies smeared with gonorrhœal matter; a fallacy in practice, however plausible in theory. The catheter will of course require to be used once or twice a day, according to the amount and degree of retention, whether partial or complete. When small quantities of urine are frequently voided, the bladder may not be completely emptied, although it may appear to be so. A careful examination should be made of the region of the bladder from time to time; and if there be a suspicion of the accumulation of urine, the catheter should be employed either to ascertain the fact, or to unload the bladder.

Added 1870.—Although these symptoms are most commonly referred to the bladder, the parts adjacent are frequently implicated, and more especially the vesiculæ seminales.

The symptoms which appear to characterise inflammation of the vesiculæ seminales are deep-seated and dull pain in the perineum, increased by the action of the bowels; the pain shoots towards the testicles, which are tender and sensitive, and slightly swollen or congested. There are also present frequent erections and seminal discharges streaked with blood. If an examination be made "*per anum*" two distinct tumours can be detected, which are tender to the touch, the disease is generally amenable to treatment, but does not yield quickly; but, judiciously managed, gets entirely well; in severe cases the semen is either streaked with blood, or contains a considerable quantity of it.

Hæmorrhage from the urethra is a common complication of gonorrhœa; it frequently relieves the congested or inflamed state of the parts, and so far is an effort of nature to relieve herself; should, however, the bleeding continue beyond proper quantity, the patient should keep the recumbent posture, apply

ice or cold compresses to the perineum and lower part of the abdomen, and inject the urethra with iced water or a solution of the perchloride of iron.

In extreme cases it may become necessary to introduce a full-sized catheter or sound into the bladder, and roll the urethra tightly round it (see the chapter "On Some Diseases and Accidents to the Sexual Organs not of a Syphilitic or Venereal Character.")

Inflammation or apoplexy of the corpora cavernosa is sometimes, but very rarely, a complication; it is described in the chapter alluded to above.

Occasionally the gonorrhœa locates itself in some of the small follicles or lacunæ of the urethra; when in such cases this is handled, small bodies like large shots are felt near the fossa navicularis. The lacuna magna is sometimes also the seat of a separate action, and forms a distinct abscess (follicular abscess). Gonorrhœal inflammation of Cowper's glands is also a very rare complication of gonorrhœa. M. Ricord has observed it very rarely, I have seen a few cases; sometimes it runs on to suppuration. The most prominent symptoms consist in a well-marked swelling behind the scrotum in the centre of the perineum; more or less pain is felt, and more or less difficulty in micturition. The treatment should be rest in the recumbent position, hot fomentations, and leeches in bad cases. If matter forms it might burst internally, and find issue by the urethra, or it might make its way externally. If the presence of matter is certain, a free external incision should be made as soon as this takes place, or the pressure on the urethra might totally prevent the flow of urine. (See Gubler (A.) "Des glandes de Méry (vulgairment glandes de Cowper) et de leurs maladies chez homme." 'Thèses de Paris,' No. 172.)

Although gonorrhœa is not generally followed by secondary symptoms, properly so called,¹ it appears to dispose the economy,

¹ Constitutional symptoms sometimes succeed to discharges from the urethra, when the discharge is suddenly suppressed. (See 'Causes of Constitutional Syphilis.') The following case illustrates the affection.

CASE.

A very healthy young man contracted gonorrhœa, which was marked by profuse discharge. He consulted a druggist, who prescribed for him

either from sympathy, metastasis, or other causes, to several diseases of a very important nature. One of these is gonorrhœal rheumatism, which makes its appearance under two forms; the first seated in the joints, and resembling very much synovitis from other causes: the second confined more to the muscles and aponeuroses, and affecting the fleshy parts, such as the shoulders or hips. In some instances these diseases are owing to a sudden suppression of the gonorrhœal discharge, whilst in others they bear a strict relation to the condition of the local disease, the rheumatic symptoms yielding as the discharge lessens, and returning with increased force when, from any circumstances, the gonorrhœa becomes worse. When these forms of rheumatism complicate gonorrhœa, or appear to be produced by it, the gonorrhœa itself is generally very troublesome to cure. The treatment will depend altogether upon the form under which the rheumatism is manifested. If synovitis be present, it may be necessary to blister the affected joints, whilst the patient takes, in combination with the ordinary specific remedies, colchicum, camphor, or opium.¹ If the disease be owing to a sudden suppression of the discharge, it has been recommended to bring it back by introducing a bougie, smeared with gonorrhœal matter, into the urethra. This is a

an injection, which he used very freely, and dried up the discharge. Soon after its suppression a bubo formed in the right groin; and its appearance was succeeded by an eruption of red blotches over the whole body, and superficial redness of the fauces. The skin disease was an acute roseola; the redness died away into a marked copper-coloured mottling, which soon disappeared without specific treatment. Although closely resembling the roseola which accompanies an infecting chancre, this eruption appears to be of an entirely different character, and in a vast majority of instances requires no specific treatment. (See the chapter on the 'Causes of Constitutional Syphilis.')

Cazenave says, "This is the form of skin disease (roseola syphilitica) which generally appears when a gonorrhœa has been suddenly suppressed, either by injections or large doses of copaiba." This is also commonly called the "copaiba rash."

¹ R Hyd. chloridi, gr. j ad gr. ij;
Ext. colchici acetic., gr. j ad gr. iij;
Camphoræ, gr. iij;
Pulv. opii, gr. ss ad gr. j. Ft. pil.
Ter die sumenda.

fallacy. The treatment of gonorrhœal rheumatism consists in large doses of potass, nitrate and carbonate, with colchicum and opium, and blisters and iodine to the affected joint; of course, much depends on the condition of the patient. Mr. Barwell ('Diseases of the Joints,' p. 88) recommends quinine in eight or ten grain doses.¹

Pure gonorrhœal ophthalmia may arise—1st, From the direct application of gonorrhœal matter to the eye; 2ndly, From metastasis; and, 3rdly, It has been supposed to be due to sympathetic irritation merely, without either the direct application of gonorrhœal matter or from metastasis. Some writers have denied that the direct application of gonorrhœal matter to the eye of the same individual has power to produce the first form of the disease, and this was the opinion of Dr. Vetch. Numerous cases, however, establishing the fact that gonorrhœal matter produces the most destructive form of inflammation of the eye, have fallen under my own notice, and under that of all modern surgeons who have written on the disease. In the second form of the disease, the eye is supposed to suffer from metastasis, analogous to those successive attacks of different parts which are observed in gout or rheumatism.² That this form of ophthalmia is not caused, like the preceding, by the direct contact of matter from without, is demonstrated by the fact that it has been observed to occur more than once in the same individual, although every means had been most carefully employed to protect the eyes from contamination.³

¹ There are many important symptoms that enable us to distinguish between gonorrhœal rheumatism and ordinary rheumatic gout. In the first place, it is associated with the urethral discharge rarely observed in females; unaccompanied by fever; the local disease confined to a few joints, or tendons, or bursæ; no cardiac complication, and very commonly associated with gonorrhœal ophthalmia. See for a complete account of this complication of gonorrhœa, the admirable description given by Rollet, '*Nouvelles Recherches sur le Rhumatisme Blennorrhagique.*' Paris, 1865.

² Lawrence, on the Venereal Diseases of the Eye, p. 34.

³ Wallace, *op. cit.* There can be no doubt of the correctness of this opinion. Mr. France ('*Lancet*,' March 3, 1855) gives several cases of gonorrhœal ophthalmia which were successfully treated by local depletion, cupping the temples, and leeches to the inner surface of the

Bleeding must not be too exclusively relied upon in this disease, which is in many cases, in its commencement, purely local; and Mr. Lawrence himself is dissatisfied with the results of the cases treated exclusively on this plan, although he attributes its want of success to its not having been employed to a sufficient extent. However, he mentions a case (Case 5) in which blood was taken very largely, both locally and generally, and other powerful antiphlogistic means were resorted to, yet the eye was lost. Mackenzie says, "bleeding alone must not be depended on;" and O'Halloran is of opinion that, if an inquiry were instituted amongst army surgeons, it would be found that those who had used the greatest depletion were the least successful practitioners. The treatment of gonorrhœal ophthalmia consists in local depletion by means of leeches or cupping; the application of the lotion or pomade of nitrate of silver to the whole of the oculo-palpebral surface; poppy fomentations, the alum lotion, and the use internally of calomel and opium with or without colchicum. The atropine lotion should be dropped into the eye every second day if the iris participates, or there is any disposition to contraction of the pupil.

Directly after the system has been depressed by loss of blood, we must have recourse to local, astringent, or specific remedies. Among these may be mentioned, as entitled to most confidence, the solution or pomade of nitrate of silver. The former may be employed in the proportion of ten grains to the ounce of water, dropped into the eye at the very commencement of the disease. "Astringents should be used, not only in the early stage of the disease, but when the purulent discharge and chemosis are fully established. The sulphate of copper in substance may be rubbed on inner surface of the eyelids after everting them, or the ten-grain solution of the nitrate of silver."¹ Mr. Lawrence eyelids; calomel, opium, and tartar emetic; with nitrate of silver lotion, four or six grains to the ounce, and poppy decoction with alum. It is remarkable that in many of these cases the causes are not stated—that is, the disease was said to arise soon after a clap had been contracted, but it is not stated whether any direct infection had taken place, in the majority of cases, and in one it is distinctly said the patient was not aware of having conveyed any discharge to the eye.

¹ Lawrence, p. 44.

mentions two cases where this treatment was successful. Most modern authors are agreed upon this plan of treatment, and use as astringents a solution of the nitrate of silver, of the sulphate of copper, &c., or a pomade of the first-named salt. I have seen one case in which a solution of the sulphate of copper was completely successful, when the nitrate of silver in the same form appeared to do little good. In the intervals of the dressings the eye is to be covered with a compress soaked in the liquor aluminis compositus diluted.¹ If the chemosis be great, a portion of it is to be removed with a pair of scissors; a practice of which Dr. Mackenzie speaks in very high terms.²

It is perfectly useless, not to say criminal, in such cases, to waste the time, so precious to our patient, in administering the remedies looked upon as specific in gonorrhœa, such as copaiba and cubeb, recommended by Dr. Wallace. "The anti-gonorrhœal remedies, properly so called, have absolutely no action upon the disease, whatever be their mode of administration." The testimony of modern experience is against the use of mercury in the acute forms of this disease; we lose time, and compromise the vision of the patient, by relying upon it in this stage; in the chronic forms it may be employed with a reasonable prospect of success.

Those authors who support the view of gonorrhœal ophthalmia being produced by metastasis place great stress upon the restoration of the urethral discharge; it is also recommended in cases where this ceases during an attack of disease of this character. Swediaur, Richter, Beer, and Scarpa recommend the introduction of a bougie smeared with the discharge from the eye, or with gonorrhœal matter taken from another patient. In spite of the authorities of these names, I think their advice rather the result of preconceived theoretical notions than the deductions from the results of treatment. Mr. Lawrence supports the latter opinion, and the modern writers of greatest experience agree with him. "If," says Ricord "the discharge from the

¹ R. Aluminis extr., gr. iv.

Aquæ rosæ, ʒj. M. ft. lotio.

To be injected frequently between the lids, especially in young children.

² I have done this in several instances; the patient requires to be placed under chloroform.

urethra is for a short time diminished during an attack of gonorrhœal ophthalmia, it is never completely suppressed, and we can affirm, in spite of contrary opinions, that not the least benefit is to be expected from attempting to increase or restore it." (p. 763.) Swediaur appears to have been successful in some chronic cases of this character by the restoration of the urethral discharge; but I cannot find in any late writer, neither have I ever seen, a case supporting the efficacy of this treatment. It is a mere fallacy.

Many modern surgeons admit a true gonorrhœal inflammation of the iris. This generally occurs in scrofulous patients labouring under gonorrhœa or gleet. Sometimes it succeeds to gonorrhœal inflammation of the conjunctiva or the sclerotic, or occurs with that peculiar species of rheumatism which sometimes accompanies a gonorrhœa. It very commonly alternates with affections of the joints, and an acute attack of synovitis frequently cures or very much relieves the inflammation of the eyes. The frequency with which this species of disease succeeds to mild gonorrhœal ophthalmia, and the facility with which adhesions of the iris take place, render it necessary that in the various forms of gonorrhœal ophthalmia we should adopt the plan of keeping the pupil dilated by the external application of belladonna, or the atropine drops. "This affection of the eye is exactly the same as rheumatic inflammation of the sclerotic and iris occurring independently of gonorrhœa. Both this and the mild purulent inflammation of the conjunctiva are to be regarded as rheumatic affections of the organ excited by gonorrhœa; that is, they take place in individuals in whom this constitutional disposition is shown by inflammation affecting either the synovial membranes or the fibrous structures of several joints."¹ Dr. Vetch has given cases of this disease. In one instance the gonorrhœa was well marked and violent, and was succeeded by a swelled testicle; rheumatic inflammation of the joints and of the external proper tunic of the eye followed. They terminated in an irregular and contracted pupil, some opacity of the capsule of the lens, adhesions between it and the iris, and a considerable loss of vision. Generally, however, the prognosis is favorable, and the disease very much more under the control of art than

¹ Lawrence, p. 57.

the more acute forms of purulent ophthalmia. "The gonorrhœal is generally more rapid in its progress than any of the other varieties of iritis, and is one of the most severe and formidable while it lasts; but it yields more promptly to decided treatment than any of the rest, and affords examples of perfect recovery even when the aqueous chambers are filled with lymph."¹

The treatment must consist, in the onset, of general and local bleeding, suited to the urgency of the symptoms; calomel and opium, so as rapidly to affect the system; and the application of the extract of belladonna. Our chief reliance is to be placed upon mercury united with opium and antimony; and if there exist a rheumatic state of the system, colchicum and turpentine will be useful. Sir B. Brodie places great reliance on colchicum. As local applications, warm decoctions of poppy are generally agreeable to the patient's feelings, on account of the great pain that sometimes attends the disease. "When the inflammation is checked, blisters may be advantageously employed, and the cure may be completed by Plummer's pill, with mild aperients and regulated diet."

One of the most frequent diseases which succeeds to or complicates a gonorrhœa is an inflamed testicle, known also by the name of epididymitis (from the constant pathological changes found in this part), orchitis, and hernia humoralis. It is not often that an opportunity is afforded of seeing the changes which take place in the testis, or its envelopes, in consecutive gonorrhœal inflammation; nevertheless, dissections of testes which have been the seat of such diseases have been recorded by M. Gaussail,² Mr. Curling,³ Sir B. Brodie,⁴ and Sir A. Cooper.⁵ The epididymis, in such instances, is enlarged to twice or thrice its natural size, this enlargement being produced

¹ Mackenzie, p. 476.

² 'Mémoire sur l'Orchite Blennorrhagique,—Archives Générales de Médecine,' Jan., xxvii, p. 210.

³ 'On Diseases of the Testes,' p. 254, &c.

⁴ 'London Medical Gazette,' vol. iii, p. 219.

⁵ 'Anatomy and Diseases of the Testes.'

Note added 1870.—Mr. Beany, surgeon to the Melbourne Hospital, says, "That whilst serving in the Mediterranean he had dissected twenty cases of acute gonorrhœal epididymitis in the bodies of persons

by the effusion of a brownish deposit between the convolutions of the duct. The indurations felt on handling the epididymis are generally the result of adhesions only, and not due to an effusion into the interior of the duct. This, I think, is proved by the fact, that the viril power is not impaired generally after ordinary attacks of gonorrhœal orchitis.¹ The coats of the vas deferens are thickened and injected, and an albuminous deposit is found in the cellular tissue around the tortuous part of the vas deferens and tail of the epididymis. Marks of inflammation are also found in the tunica vaginalis, consisting of effusions of lymph and bloody serum, loose adhesions, and general vascularity of the membrane. It is owing to the extension of inflammation to the tunica vaginalis that are due the intense pain and tenderness which accompany consecutive orchitis. The body or glandular structure of the testis is frequently affected; and in instances where testes which have been previously the seat of consecutive gonorrhœal examination have been examined, the tubular or proper secreting structure has been more or less disorganised: in the case dissected by Sir B.

who had died from cholera whilst suffering from that disease. He found the tunica vaginalis in a state of inflammation, distended with turbid serum; the epididymis was thick and indurated; the testicles slightly enlarged, and their vessels injected. Mr. Beany considers a swelled testicle from gonorrhœa to consist in acute inflammation of the tunica vaginalis, and proposes as the remedy *par excellence* puncture of the sac of the tunica vaginalis. He gives several cases where the relief was immediate. Mr. Beany recommends strapping of the testes after the puncture — ‘Australian Medical Record,’ June, 1863. ‘Rankin’s Abstract,’ vol. xxviii, p. 259.

Velpeau also recommends puncturing the tunica vaginalis, however small the effused fluid may be. “It gives immediate relief to pain, shortens the duration of the disease, and takes the place of leeches and other troublesome remedies. It is a perfectly safe procedure; the slight pain which it occasions may be entirely prevented by a few jets of ether spray used before the incision is made.”

¹ Mr. Curling is of opinion that after attacks of epididymitis the convolutions of the vas deferens act temporarily and may be permanently obstructed, and that in cases where both glands are attacked, this may become a source of sterility. It is, however, in most cases perfectly curable.—‘Proceedings of Royal Medical and Chirurgical Society,’ June, 1863.

Brodie and Sir A. Cooper, one third of the tubules had become converted into a white fibrous substance, and "were rather cords than tubes." On handling testes which have been the seat of consecutive orchitis, although little change appears in the body of the gland itself, the epididymis is always found enlarged to a greater or less degree, and I believe this condition seldom entirely disappears.

The disease generally commences in the epididymis, which forms a hard tender lump at the bottom or side of the testis; the inflammation spreads to the substance of the gland and to its envelopes in acute cases; hence the severe pain from distension of the tunica albuginea. The tunica vaginalis is also sometimes affected, and fills with fluid, as in hydrocele;¹ the inflammation runs along the vas deferens and the spermatic cord. The duct feels like a wire in the cord; and sympathetic pains extend to the groin, the back and loins, and across the pubes. The whole of the epididymis and spermatic cord are sometimes very hard; and when this part alone is affected, the epididymis may be traced distinctly apart from the testicle all down the side and back of it, whilst the gland itself is quite free from swelling, or even tenderness.

This disease hardly ever occurs during the first,² or even in the second week of a gonorrhœa, more commonly in the third.³ The disease has been supposed to originate from the direct propagation of inflammation from the ejaculatory ducts to the vesiculæ seminales, and through the vas deferens to the epididymis. Cullerier believes that it is owing to the direct propagation of disease along the seminal passages, and not to metastasis. The longer the continuance of a gonorrhœa, the more likely it is to be thus complicated; the best way to prevent it is to cure the disease as quickly as possible.⁴ Amongst

¹ These are the cases in which the puncture is of service.

² Not once in three hundred times. (Ricord.)

³ Out of 222 cases collected by Fournier, 34 occurred in the third week, 30 in the fourth, and 29 in the eighth; whilst there were only 13 in the tenth day and 18 in the second week.

⁴ In many instances where gonorrhœas have continued any length of time, first one testis inflames, and then the other; these attacks last for three or four days, and then subside; there is always a tendency to the secondary affection as long as the urethritis continues.

other causes are exercise, constipation, the neglect of the suspender, free living, and the use of stimuli during the course of a gonorrhœa. Amongst the predisposing causes of this affection may be enumerated fatigue, violent exercise, repeated sexual intercourse, and any circumstances producing excitement of the organs of generation. Various occupations predispose to it, as those of weavers, turners, grooms, and all trades where the testes are exposed to frequent friction. "A flaccid state of the scrotum is also to be ranked amongst the predisposing causes: a strong cremaster and firm scrotum are rarely met with in individuals suffering from swelled testicle."

It is generally believed that the discharge of a gonorrhœa is diminished, or disappears altogether, when the testicle becomes inflamed: this, though most commonly the case, is by no means a constant occurrence. Hunter a long time ago remarked, that there were cases in which the discharge rather increased than diminished when the testicle became inflamed. In the cases analysed by M. Gaussail and M. d'Espine,¹ the discharge was generally lessened when orchitis supervened, although in many of the cases it underwent no change, and in some was increased. A patient is never free from the risk of a swelled testicle as long as a gonorrhœal discharge remains; I have known it occur where disease had existed six months, and Fournier mentions cases where it occurred in the second and third years.

A swelled testicle may be caused by the use of injections, or the quick suppression of the discharge, but much more frequently, by the extension of the inflammation in the manner already named.² The tables of M. Gaussail show that swelled testicle is much more frequent in the fourth and fifth weeks of the disease; hence the quicker the primary affection is cured, the less chance there is of consecutive inflammation of the epididymis and affections of the testicles.

The judicious use of specific remedies certainly does not, with

¹ 'Mémoire Analytique sur l'Orchite Blennorrhagique,—Mémoires de la Société Médicale d'Observation,' tom. i, p. 494.

² The use of injections may in many irritable subjects and uncertain conditions, dispose the patients to an attack of swelled testicle; there can be no doubt that this is frequently the case, since we find that the introduction of a sound or catheter where there is no urethritis, will frequently produce the same effect.

common prudence and in ordinary cases, produce an inflamed testicle. More risk of this is seen by suffering the discharge to continue week after week, than by the employment of specific remedies and injections, after the tenth or twelfth day.¹

It is not improbable that in certain positions of the testes, and where an irreducible scrotal hernia is present, a swelled testicle may be mistaken for a strangulated hernia. I attended a gentleman for gonorrhœa who had an irreducible scrotal hernia of the right side. In the third week of the disease, after a long walk, he became affected with swelled testicle on the ruptured side; this was accompanied by constipation, vomiting, tenderness of the abdomen, and other symptoms common to strangulation of the bowel; for two days the case had a very formidable aspect. Mr. Acton² has recorded a curious and instructive case bearing upon this subject. "A young man, 24 years of age, was in the habit of amusing himself, when a boy, by pushing his testicles into the abdomen. Two months previous to his admission into the hospital, he contracted a gonorrhœa which discharged profusely; he continued, notwithstanding, his employment. In about a fortnight after, he felt a painful sensation in the left groin; and this becoming worse, he entered the hospital a month after the commencement of his complaint, suffering under great pain in the inguinal region, which was greatly inflamed, whilst pressure on that part produced that peculiar feeling, but in a greater degree, which is excited when the testicle itself is compressed. On examining this patient, no testis was found on the left side of the scrotum, but on passing the finger into the left inguinal canal, a rounded body was distinctly felt, resembling the testis in shape, and the patient stated that when this body was handled he experienced a similar pain to that felt when the testicle on the opposite side was squeezed."

¹ In many cases, however, if the patient be not careful, or if he indulge in stimuli or take much exercise, especially dancing or skating, whilst taking specific remedies, a swelled testicle may be produced. Copaiba does this more than cubebs. There are cases where an inflamed testicle appears to be benefited by specific remedies; but their use during the course of an orchitis is not generally to be given up.

² 'On Venereal Diseases,' p. 95.

This case was recognised as one of ordinary swelled testicle, notwithstanding the unnatural position of the organ. It is not improbable that such a case might be mistaken for strangulated inguinal hernia, more particularly when such symptoms as vomiting, constipation, and tenderness of the abdomen are present. The history of the concomitant affection, and the absence of the testes in the scrotum, are the chief points which should decide the surgeon. Should such a case co-exist with a strangulated hernia, it would form a curious and puzzling complication, and one which would render an operation extremely embarrassing.¹

If gonorrhœal epididymitis occur with any degree of intensity, the disease soon involves the neighbouring tissues of the testicle; and hence we observe speedily succeeding to it, or complicating it, diseases of the tunica vaginalis or testicle itself, and very commonly hydrocele, œdema, erysipelas, phlegmon of the scrotum, or even suppuration of the testicle.

The treatment of gonorrhœal inflammation of the testicle and its envelopes must be at first antiphlogistic. The patient should rest in bed if possible, and be put on the use of calomel, opium, and tartar emetic; the testicle should be fomented with hot water or hot poppy decoction, or covered with a bread poultice into which has been put one or two teaspoonfuls of liquor plumbi. If the disease be very acute and painful, the application of leeches on the scrotum or in the track of the spermatic

¹ A. L—, æt. 32, was admitted into the Queen's Hospital with gonorrhœa; he had a large painful tumour in the inguinal canal, and only one testicle in the scrotum. This was a case of orchitis, the testicle being fixed in the inguinal canal.

A boy was admitted into the Queen's Hospital, having a tumour in the right inguinal canal, hard, tender, and inflamed; it was clearly an undescended testicle, there being but one gland in the scrotum.

A gentleman, æt. 23, consulted me respecting some functional sexual disorder. He had one well-developed testicle in the scrotum. About the situation of the internal abdominal ring, a large hard body could be felt. This, when pressed upon with the finger, occasioned exactly the same sensation as when the other testis was gently compressed. When he became excited, or during erection of the penis, he experienced a considerable amount of uneasiness in the same spot. The testis was in the abdomen; it had not entered the inguinal canal.

cord may be necessary; or a vein in the scrotum may be opened with a lancet, and the flow of blood encouraged by warm applications. Warm applications very frequently aggravate the sufferings of the patient. The bowels must be kept free by castor oil or saline aperients, but active cathartics are unnecessary. In addition to the local remedies I have alluded to, lotions of various kinds are useful, especially if the parts are too sensitive to bear the weight of a poultice. Those containing lead¹ or the hydrochlorate of ammonia² are the best; they should be warmed before applying. Ice has been recommended; pounded and put into a bladder and laid over the inflamed gland, it frequently gives great relief. A lump of ice added to either of the lotions 1 and 2, answers well as a local application. It would be difficult to improve it. To relieve the pain consequent upon inflammation of the body of the testicle, which is produced by the unyielding nature of the tunica albuginea, Vidal recommended a slight incision to be made into or through this covering. He speaks of it as innocuous, and giving speedy relief after the failure of other remedies, having practised it in many hundred cases. Some untoward results have once or twice followed this plan. Dr. Hutchinson, of the Brooklin City Hospital, New York, gives three cases where he resorted to this practice in aggravated cases of orchitis with complete success, and instant relief to pain ('American Medical Times,' June, 1864). Mr. H. Smith ('Lancet,' August 6th, 1864) speaks highly of this practice. The relief obtained, which is immediate, is due to the withdrawal of the tension from the body of the testes by the division of the unyielding tunica albuginea.

When the acute symptoms have in some measure subsided, a very efficacious process is compression of the testicle by strapping. This practice has succeeded in curing many forms of epididymitis in five or six days, and has the advantage of not

- ¹ ℞ Liq. plumbi diacet., ʒiij;
Acet. destillatæ,
Sp. vini rect., āā ʒj;
Aquæ rosæ, ʒvj. M. ft. lotio.
- ² ℞ Ammoniae hydrochlorat., ʒj;
Acet. destillatæ, ʒj;
Aquæ ad ʒvij. M. ft. lotio.

confining the patient. I have occasionally employed it from the very commencement of the disease with complete success: in such instances it must be associated with an antiphlogistic treatment, such as low diet and the use of the tartar emetic with opium.¹

The plaster is to be cut into thin strips, and applied in a circular manner round the testicle, drawing this organ, as far as can be done without pain, to the bottom of the scrotum, and taking care not to pucker the skin in applying the plaster. The first strap is placed circularly round the testicle at the insertion of the cord, compressing the organ as much as the patient can bear; a succession of straps are then applied till the organ is covered: and a second series of straps then placed over the circular ones from below upwards, and over these again a few more circular ones to keep the whole in place. If the pressure of the plaster occasions pain or irritation, the straps are to be removed till the inflammation or sensibility is diminished; in many instances the patients experience relief

¹ The emplastrum "de Vigo" is generally employed for this purpose in the French venereal hospitals; it resembles much, though is in some respects superior to, the Emp. ammoniaci cum hydrargyro of the London Pharmacopœia. The form is as follows:

℞ Hydrargyri, 95 parts;
Styracis liquidæ, 48 parts.

These are to be rubbed together till the globules of mercury disappear; then melted together in a separate metal pot,—

Emp. plumbi,	312 parts;
Ceræ flavæ,	16 "
Terebinthinæ puræ,	16 "
Picis Burgund.,	16 "
Gum. ammoniaci,	10 "
Olibani,	5 "
Myrrhæ,	5 "
Croci in pulv.,	3 "

These ingredients are to be well mixed—first among themselves, and then with the mercury and styrax. The plaster thus made is to be spread upon linen, calico, or thin leather, and then cut into strips of convenient thickness.

The best plaster for strapping the testis is composed of soap, belladonna, mercurial, and lead plasters, in about equal proportions, carefully spread on thin firm leather, and then cut into thin straps. The mercurial plaster alone sometimes irritates the scrotum.

directly the testicle is supported by the plaster. In spite of the sneers of a modern writer, strapping the testis is a very valuable remedy in consecutive gonorrhœal orchitis. I have tried it in syphilitic sarcocele, and other chronic diseases of the testis, without benefit. As a general rule, it should not be employed till the more acute symptoms have somewhat yielded. The size of the testis rapidly diminishes under it, so that the straps want re-applying at the end of about the third day.¹

A chronic enlargement of the testis, sometimes occurring alone, and sometimes complicated with hydrocele, occasionally remains after the subsidence of the more acute symptoms accompanying a swelled testicle. For this affection compression is of little use. I believe the proper remedy to be the hydriodate of potass, with alterative doses of mercury, and the external application of tincture of iodine, or the iodide of lead ointment. Mercury pushed to salivation is occasionally of great service in these consecutive diseases of the testicle and its envelopes.²

In some constitutions gonorrhœa leaves behind it a general weakness and irritability of the organs of generation, and an

¹ It must not be supposed that strapping or compression of the testicles is free from inconvenience: it is not so. I have had an extended experience in its use. It occasionally increases pain, even when employed after the acute symptoms have subsided. When it succeeds, the testicle shrinks rapidly in size, the straps requiring removing and renewing on the second or third day; this is attended with great annoyance, from the straps sticking to the hairs of the scrotum. I now never use plaster for strapping the scrotum after the acute symptoms of orchitis have subsided. I spread the compound recommended above on fine soft lint, and place it in strips over the scrotum; there is no pain on application, and no difficulty in removal. A little olive oil or glycerine may be added, if the plaster is too hard.

² Note added 1870.—It is generally supposed in cases of gonorrhœa that when the discharge has disappeared, the patient is considered well; but this is not so, it occasionally bequeaths to the sufferer a series of annoyances which, although not alarming, are exceedingly troublesome to the patient: amongst the most troublesome of these are pains, and an unnatural feeling along the urethra (urethralgia), the erections are painful, the ejaculation of semen quick and unnatural. The urine is not perfectly parted with, a drop or two remains or seems to remain in the urethra after the bladder is supposed to be emptied.

alteration in the character of their secretions. The semen is scanty and devoid of its characteristic smell; it is thin and watery, and ejected languidly during coition; very quickly, and without sensation. When the bowels are evacuated, there is occasionally forced from the urethra a thin substance like gum, which has a soapy feeling when rubbed between the fingers. This is, no doubt, a vitiated hyper-secretion which hangs about the relaxed mucous membrane of the urethra, the lacunæ, and the ejaculatory ducts, and which is forced from the urethra by the action of defecation.¹ At the same time, the penis and scrotum are flaccid, and the reflex actions of the erector and ejaculatory muscles are with difficulty excited. With these symptoms there commonly exist weakness and trembling of the legs, and a general lassitude of the whole system.

The balsams and turpentine, with the preparations of steel, and cantharides, are very useful in such states as general remedies. Tonic and stimulating injections should also be practised with a syringe perforated on the sides so as to inject the lacunæ of the urethra, or follicles of the prostate, which are commonly the principal seats of disease. Pain, heat, and various forms of irritation sometimes affect the penis after an attack of gonorrhœa. Many of these symptoms are disordered sensations merely. They may or may not be associated with the various forms of discharge already alluded to; or they may again be indicative of some pathological change in the urethra, such as stricture, upon the earlier stages of which they are occasionally dependent. In all cases, before forming a plan of treatment, the passage should be carefully examined by the bougie, which is, in such cases, very commonly the most efficient remedy in their cure. Great caution, however, is necessary in the employment of bougies in an irritable urethra. I have been consulted by several unfortunate patients who have suffered

¹ This fluid, though chiefly composed of vesical or prostatic mucus, sometimes, but not always, contains spermatozoa. I have examined it in a great number of cases. It is occasionally altogether composed of peculiar corpuscles, with which at times a few spermatozoa are mixed. The remedies are injections, practised through a catheter passed down to the prostatic portion of the urethra.

from these neuralgic conditions of the urethra, who have wandered from surgeon to surgeon; and where the too frequent and perhaps injudicious use of instruments has terminated in perineal abscess, in chronic orchitis, or irritable testis.

Many writers have alluded to gonorrhœa of the rectum, a disease happily rare in this country at least. I have seen but one well-marked case, in which the cause and nature of the disease were frankly admitted by the patient. The first symptoms were those of acute inflammation; the anus was swollen, red, exceedingly tender and painful, and the seat of a profuse purulent discharge; the symptoms are sufficiently severe to confine the patient to bed for several weeks. They were slowly subdued under rest, a low diet, leeches, fomentations, and weak astringent injections. I have seen this patient, at intervals, for seven years, and even now much irritation remains, with occasional discharges of pus; the fæces also occasionally being more or less covered with purulent matter. On examination with the speculum, the mucous membrane of the rectum appeared vividly and generally red, but no ulceration was present. In cases like the present an antiphlogistic treatment appears the only one applicable, combined with injections of cold water, or weak solutions of the sulphate of zinc, the acetate of lead, or nitrate of silver; these should be thrown up in large quantities by a common enema syringe. Specific remedies are useless; it is a singular fact that it is only over the urethral form of gonorrhœa that the so-called specific remedies appear to exert any influence.

CHAPTER VII.

OF GONORRHŒA IN THE FEMALE.

Nature.—Gonorrhœa in the female is for the most part a disease of a very different character to that in the male; the anatomical structure and functions of the organs implicated modifying the affection both in its seat, its course, its treatment, and its terminations.

This disease recognises for its pathology, acute or chronic inflammation of the vulva, vagina, canal of the cervix uteri, or urethra. Pathologists have as yet failed in establishing any differential diagnosis between a specific or an ordinary inflammation of the parts mentioned. "It is a singular pathological fact, that although the existence of a specific and contagious form of vaginitis is generally admitted, yet it is difficult, if not impossible, to point out any decided characteristic by which it may be distinguished from ordinary vaginitis. Like all those who have preceded me, I am unable to indicate satisfactorily any absolute means of distinguishing between simple inflammation of the vagina and gonorrhœal inflammation, though I believe the difference does exist."¹ When urethritis complicates other forms of gonorrhœa in the female, it may pretty generally be presumed that the disease is due to contagion; but there is no microscopical or chemical test that will enable us to detect the difference. In the female, gonorrhœa is not confined to the urethra; it is seated in the mucous membrane reflected over the neck and mouth of the uterus, in the vulva, or the vagina and its follicles, and the vulvo-vaginal gland.²

¹ 'A Practical Treatise on Inflammation of the Uterus, its Cervix and Appendages, &c.,' by James Henry Bennet, M.D., 3rd edit., p. 218.

² Huguier, 'Mémoires de l'Académie de Médecine,' vol. xiv.—J. H. Bennet, op. cit., p. 213.

Varieties.—The chief varieties of discharges in the female are:—

Urethral gonorrhœa, the type and model of gonorrhœa or blennorrhagia properly so called; eminently contagious.

Vaginal discharges, termed gonorrhœal or blennorrhagic, much more common than the preceding, particularly in females of loose character, the precise nature of which it is often very difficult to determine; nevertheless the vagina may be the seat of gonorrhœa, either alone or complicated with uterine or urethral gonorrhœa.¹

Uterine gonorrhœa or blennorrhagia capable of producing disease in the male. The uterine discharge continues long after the other forms have been cured, and is contagious, although it resembles mere leucorrhœa.²

Pathology.—The ordinary pathological changes found in females who are known to have produced gonorrhœa in the male, are found in the labia, in the vulva, the vagina, the meatus urinarius, and the canal of the neck of the uterus, more rarely in the uterus itself, and in the ovaries. The labia majora are generally more or less swollen; on inverting them, their internal or mucous surface is red and inflamed, uniformly, or in patches; or again it has an aphthous patchy appearance, especially in old cases: this surface is sometimes studded with

¹ See the chapter 'On Syphilis of the Uterus,' for a further account of the varieties of vaginal and uterine discharges.

² See Tyler Smith 'On Leucorrhœa,' chap. vii, 'On the Relations of Leucorrhœa to Gonorrhœa in the Female, and Urethritis in the Male.'

The discharges from the female which produce various forms of disease in the male, such as urethritis, gonorrhœa, balanitis, and superficial ulcerations of the penis, are due to one of three causes: these are leucorrhœa, gonorrhœa, or constitutional syphilis. The latter may be suspected when the patient has exhibited for a longer or shorter period a well-marked constitutional taint. The effects produced by such discharges are—

1. Balanitis, occurring constantly after intercourse with certain females so affected.
2. Urethritis, subsiding after a few days without any specific treatment.
3. Urethritis, running the ordinary course of gonorrhœa.
4. Ulcerations, more or less superficial, rarely indurated, or requiring any specific treatment for their cure.

warts, and occasionally the whole labia are converted into a condylomatous mass, which runs backwards along the perineum to the margin of the anus, which is surrounded by similar growths. Sometimes a similar condition of the mons veneris exists, but this is comparatively rare. If the seat of the complaint affect the vulva, the lobia minora are also red and swollen, and the entrance to the vagina contracted, red, and intensely tender in acute cases; between the folds of the labia, a white sticky secretion is found, like that under the prepuce in balanitis in the male. The irritation, itching, and pain are intolerable in gonorrhœa, where the vulva is especially affected, particularly in cases where a newly-married female, previously healthy, has been diseased by the husband, who has married with an uncured blennorrhœa, a circumstance not very uncommon.

Seat.—When the vagina is affected in gonorrhœa, it is contracted, red, and painful, and the rugæ red and elevated; the inflammation rarely affects the whole vaginal surface at once, that part under the arch of the pubis being most frequently the seat of disease. In acute gonorrhœal inflammation of the vagina, the speculum should not be used till the more acute symptoms have subsided.

The labia and os uteri, and the canal of the cervix, are very frequently the seat of gonorrhœa. Gonorrhœal inflammation of the vaginal surface of the uterus is very commonly combined with affections of the vagina, and hence these forms have commonly been described as utero-vaginal. In some cases the canal of the neck only is affected, without participation of the vaginal portion of the uterus; and these are the cases in which some Continental practitioners have proposed injections into the uterine cavity itself. When we consider the elaborate organisation of the mucous membrane lining the canal of the cervix, as revealed by the dissections and microscopical examinations of Dr. Tyler Smith,¹ we must be quite aware that local treatment is essential in this form of disease. Intra-uterine injections may be employed with advantage in uterine gonorrhœa, in fact, without local treatment the disease may remain for years,

¹ 'Med.-Chir. Transactions,' vol. xxxv.

or degenerate into leucorrhœa, whites, or other chronic mischief. These injections have, however, been followed occasionally by serious accidents. These appear to depend on two causes—1. The quantity of the injection used; and 2. Its nature. Dr. Tilt prefers the tincture of iodine diluted, one drachm of the tincture to 3j of water, and of this one drachm only to be injected at a time. The solid nitrate of silver may also be used with safety.

The urethral form of gonorrhœa in the female is rarely met with alone; it sometimes complicates the other forms. In addition to the pathological conditions just mentioned, abscesses occasionally form in the vagina and perineum; and a gland in the groin may inflame and suppurate, constituting the so-called sympathetic bubo.

Treatment.—In the more acute forms of the disease, a strictly antiphlogistic treatment and regimen must be adopted: aperients, the warm bath, emollient fomentations and poultices, and injections, or rather continual irrigations of the parts, by means of a self-acting syringe, with sedative, demulcent, or slightly astringent fluids.

In the earlier and acute stages of gonorrhœa, vaginitis, or vulvitis, nothing gives more relief than injections with hot water, as hot as the patient can comfortably bear it. A decoction of poppy heads, with liq. plumbi, is a soothing application to the parts externally.¹

In the earlier and more acute stages of the disease, it is not prudent to have recourse to the speculum to ascertain whether the gonorrhœa is complicated with venereal ulcerations or not; our first duty is to subdue the acute inflammatory symptoms, and then, if the chronic stage be protracted, or do not yield to treatment, and there is reason to suspect the existence of deep-seated ulcers, the speculum may with propriety be used to clear up our diagnosis.

The internal treatment of gonorrhœa in the female is very limited. The remedies which are considered specific in this disease in the male, as copaiba, cubebs, &c., are here almost inert. Their action upon the vaginal forms of the disease is

¹ R. Decoct. papaveris, 3 parts;
Liq. plumbi diacet., 1 part. M. (Bumstead.)

very feeble; their exhibition must be limited to the urethral varieties. Aperients, alkalies, sedatives, with diluent and demulcent drinks, constitute nearly the whole of our resources under the head of internal treatment.

The local treatment of acute vaginitis or urethritis in the female consists in the use of emollient and narcotic fomentations and injections, such as decoction of poppies, tepid water, &c., used alone, or rendered slightly astringent by the addition of the diacetate of lead or sulphate of zinc, in the proportion of from two to four grains to the ounce. This treatment, however, should not be long continued, if ineffectual; for we frequently find rest, emollient and narcotic applications of little use, the patient still continuing to suffer from severe pain and an abundant puriform discharge, whilst the mucous surfaces of the vagina, &c., continue red, and turgid with blood. Under these circumstances, or when the acute stage has in some measure given way, we may have recourse to astringent injections, with a view of preventing the discharge assuming the chronic form, and thus continuing for an indefinite period. The preparations of lead,¹ alum,² zinc, or the nitrate of silver,³ may be employed for this purpose.

¹ R Plumbi diacet.,
Zinci sulph., āā ʒj—ʒj;
Aqua, Oj. M.

² R Aluminis exsiccata, ʒij ad ʒij;
Decoct. papaveris, Oj.
M. ft. injectio.

³ Solutions of the nitrate of silver are amongst the best applications in gonorrhœal vaginitis or vulvitis; but the patient cannot apply it herself with any chance of success. Being placed on her back and the parts well washed out with tepid or warm water, a glass speculum of proper size should be introduced so as to include the os uteri in its field; a glass syringe full of the solution, 40 grains to the ounce, should be injected; the speculum should then be slowly withdrawn to the vicinity of the vulva, the fluid should be suffered to remain in contact with the walls of the vagina for three or four minutes, when the speculum should be withdrawn, and the injection received into a small cup of convenient shape to protect the linen. The surgeon may, if the canal of cervix uteri be affected, pass a stick of the nitrate of silver into it and rub it over the whole mucous surface. (See Dr. Tilt, 'Lancet,' Feb. 3, 1861.)

When the more acute stages of disease are passed, and the chronic form continues but little influenced by remedies, it will be well to examine the mucous surfaces of the vagina, &c., by means of the speculum. These may be found in several pathologic conditions; simply red, turgid, and hypertrophied, or covered with red isolated patches, aphthæ, vesicles, pustules, or superficial ulcerations. After the continuance of the disease for some time, the os uteri is always more or less affected; its lips are turgid, red, and everted, and generally covered with small ulcerations, granulations, or other changes, the result of chronic inflammation.

In the chronic forms of the disease, unattended by change of structure, as local applications or injections, we may employ solutions of tannin,¹ the decoctions of oak bark, tormentilla, or the walnut-tree leaf, or the tincture of iodine more or less diluted. The solutions of the chloride of soda or lime are of use when the discharges are offensive and accompanied by ulceration.² When the gonorrhœal discharge is secreted by the

- ¹ R̄ Aluminis exsiccatis, ʒij;
 Acid. tannic., ʒj;
 Aquæ, Oj.
 M. ft. injectio. (Dr. Tyler Smith.)
- ² R̄ Infus. rosæ co., ʒxivss;
 Tinct. myrrhæ, ʒj;
 Solut. sodæ chloridatæ, ʒss. M.

M. Bonnet ('L'Union Médicale,' Sept. 1853) speaks highly of the tincture of iodine applied to the mucous membrane of the vagina in the gonorrhœa of women; it is chiefly indicated in mucous or mucopurulent discharges without much vaginitis. MM. Becquerel and Rodier recommend tannin dissolved in equal parts of distilled water.

As females require injections in larger quantities, and of greater strength than men, it is sometimes advisable to furnish a powder which the patient can dissolve herself as she may require it. This is a great saving of expense where this is an object.

- R̄ Alum., ʒij;
 Zinci sulph., ʒij;
 Zinci acetatis, ʒiss;
 Plumbi acetatis, ʒiij,
 Tannin, ʒss.

M. A teaspoonful or more into a pint of water for an injection night and morning. (Bumstead.)

mucous surfaces of the vagina only, these applications may be thrown up with an ordinary female syringe; when, however, the os uteri or the canal of the cervix is the seat of the disease, it becomes absolutely necessary to use a syringe, by which a continual irrigation can be kept up; in this way a pint or several pints of injection may be thrown slowly up, without removing the pipe or tube of the syringe. For this purpose the syringe

Another good injection in chronic gonorrhœal vaginitis.

℞ Vini rub.,
Sp. lavend. co., āā, ℥v;
Tinct. opii, ℥ss;
Aquæ, ℥iiss;
Tannin, ʒj—ʒj.

M. two tablespoonfuls to half a pint of water as an ordinary injection in chronic or sub-acute forms of the disease.

Pledgets of cotton wool, charpie, and lint, rolled into a convenient shape, and saturated with some astringent solution, or dusted over with an astringent powder, answer sometimes better than injections. "The best method of preparing these pledgets or tampons, is to take a thin layer of cotton wool about the size of the palm; pour on to it one or two scruples of alum or tannin, and catch together the edges with a piece of thread wound round them; the end of the thread should be about twelve inches long that it may be easily caught hold of when the thread has to be withdrawn. A fresh plug should be passed every third day, and whilst it is in the vagina syringing with warm water should be practised night and morning . . . Tannic acid, oxide of zinc, bismuth, &c., may be used in the same way." (See Berkeley Hill, *op. cit.*, p. 459, &c.)

Many of the injections spoken of coagulate the mucus of the vagina; before using them, the parts should be well cleansed with tepid or cold water, to remove all the clots formed by the preceding injection. In fact, in all cases the parts should be well washed out with water before the injection is used: it is in vain to attempt a cure without a proper syringe, such as I have recommended; and in many cases the injections or applications must be made through the speculum, or the parts affected will not be reached. Of these remedies, the concentrated solution of tannin is one of the best. It should be applied every three or four days, and in the intervals injections of cold water should be used. In estimating the value of injections in the treatment of the various forms of gonorrhœa or vaginitis in the female, I should say that the preparations of lead or zinc with cold or tepid or hot water are suited to the acute stage: tannin more or less concentrated in the subacute, and the tincture of iodine in the purely chronic.

known as Higginson's answers very well, fitted with a vagina tube. In gonorrhœa of the uterus, injections of small quantities of the remedies already mentioned may be required to be made into the canal of the cervix itself; and in such case the injection must be made through the speculum, and only a few drachms used. The only effective treatment of gonorrhœa in the female is a local one, chiefly by means of injections; and this cannot properly be effected by the female herself. It should be done by her surgeon. There are three distinct varieties of the disease: the uterine, the urethral, and the vaginal. Injections cannot properly be applied except through the medium of the speculum. Whatever injections are used should be applied in this way. In the uterine varieties a strong solution of nitrate of silver may be injected, or the solid nitrate introduced within the os. In the vaginal form the remedy may be thrown through the speculum at the vagina, and the speculum then gradually withdrawn. As this is done the injection follows it, and the whole surface of the part comes in contact with the remedy; the solid nitrate may also be passed into the urethra, but it gives great pain and excites much irritation. I do not recommend it. I like to cure the patient without annoying her. The injection from which I have found most service in the various forms of gonorrhœa in the female, whether uterine, vaginal, or urethral, are solutions of nitrate of silver, from twenty to sixty grains to the ounce of water; and the liq. hyd. nitrat. acid, from ten to twenty minims to the half a pint of water. Some other injections may be used with advantage.¹

When the chronic state of gonorrhœa in the female is accompanied by any alterations of tissue, these changes demand our first attention, since it is useless to attempt to check the discharge as long as these conditions remain upon which it depends. Ulcerations or papulous granulations should be cauterised with

¹ R. *Aluminis exsic.*, ℥iv;
Ferri sulphatis,
Cupri sulphatis, āā gr. xv;
Aquæ destillatæ, Oij. M.

"The use of this injection," says M. Jeunell, of Bordeaux, "cures leucorrhœa and erosions of the cervix; if too astringent water may be added."

the nitrate of silver, or, what is better, with the liquor hydrargyri nitratis acid. (B. P. 1867.) This caustic is to be applied by means of a camel-hair pencil, or a small roll of lint, to touch the diseased surfaces, these having been previously cleansed by dry lint or a soft sponge. When ulcerations themselves have destroyed the tissues more or less deeply, caustics must be employed with extreme caution. In these cases, the surface of the ulcers may be covered with calomel, upon which may be placed some dry soft lint, and afterwards passed into the vagina some lint soaked in one of the astringent or tonic injections previously mentioned. Where the disease has extended more or less into the canal of the cervix, and has assumed the form of uterine gonorrhœa, the solid nitrate should be introduced, and the mucous surface lining the neck well rubbed with it.

A true vaginal gonorrhœa may be confounded with vaginitis arising from other causes ; and hence arises a question of great delicacy and importance, whether we are in possession of any facts which will enable us to establish a correct differential diagnosis between the two diseases.

In gonorrhœa the discharge is generally more abundant and more purulent, and the inflammation more acute, than in ordinary leucorrhœa. In the former disease, the glans of the groin are more frequently enlarged, tender, and painful ; and in gonorrhœa the affection extends to the urethra in about two thirds of the cases. Guérin maintains that gonorrhœal vaginitis is the only one form capable of producing urethritis. '*Maladies des organes genitaux externes de la femme*,' p. 303 ; see also, Berkeley Hill, p. 456.

Many causes contribute to render the treatment of gonorrhœa in the female tedious and unsatisfactory, and a disease more difficult to cure in this sex than in the male. The recurrence of the menstrual period is constantly interfering with the success of treatment ; and a gonorrhœa that has been almost subdued in the interval, is renewed with all its intensity at the time of menstruation.

Gonorrhœal diseases in the female very commonly become chronic, and degenerate into what is called leucorrhœa. This, in many cases, arises from the want of a careful examination of

the parts affected, and an appropriate local treatment.¹ If Mr. Whitehead's notion be correct, that the canal of the cervix is the first part affected, and the vaginal or urethral mucous surfaces are only secondarily diseased, the malady is not likely to be cured without topical applications to the primary seat of complaint. Many modern writers have described gonorrhœal affections of the ovaries, and carrying out an anatomical to a pathological analogy, have considered a gonorrhœal ovaritis in the female as the analogue of a swelled testicle in the male.

Acute gonorrhœal ovaritis has been noticed by Ricord, Vidal de Cassis, and others, as a result of gonorrhœa; also by Dr. Tilt ('On Diseases of Women and Ovarian Inflammation,' 2nd edit., p. 220), who, with Dr. Simpson, thinks it a rare disease. I have frequently noticed women who have been under treatment for gonorrhœa complain of pain and tenderness in the region of the ovary; this has been especially marked when discharge has diminished under the use of astringent injections. These pains are not in the groin, and must not be confounded with the symptoms produced by an inflamed inguinal gland. They generally yield to one or two relays of leeches, low diet, and gentle aperients, and diminish altogether should the discharge re-appear or become more abundant. These symptoms are doubtless due to inflammation of the ovary of a more or less acute character, the symptoms of ovaritis are pain deeply seated in the vaginal region, augmented on pressure. If the patient be made to turn on the side on which the pain exists, the pain is diminished; if on the contrary side the pain is increased. If examined per vaginam and the patient lie on the affected side, whilst pressure is made in that direction, increase of pain and weariness are experienced. A vaginal examination in these cases is hardly necessary, unless some unusual complication exist, as the nature of disease is pretty evident without it. When the ovary is inflamed the vaginal, or

¹ Intra-uterine injections have been employed in these cases with advantage; but they have occasionally been followed by serious accidents. These depend on two causes: 1. The quantity of the fluid injected; and, 2. Its nature. One drachm of the tincture of iodine diluted with one ounce of water is a safe strength; of this one drachm may be used for one injection, rather than strong solutions.

uterine discharge, generally diminishes or altogether dries up, and the analogy here between the relative condition of the urethral discharge in the male to the state of the testicle, to the vaginal or uterine discharge, and the condition of the ovary in the female is very striking.

The treatment of gonorrhœal ovaritis consists in local depletion, hot fomentations, the hot bath, rest in the recumbent position, gentle aperients, &c. &c. It is possible that the use of specific remedies may be, in some cases, of use, in the purely atonic or chronic condition, if the discharge has re-appeared, not else. In the event of the acute or sub-acute inflammation of the ovaries, succeeding to a sudden suppression of the vaginal discharge, remedies should be used to restore this: it being one of the most important indications to fulfil.

Gonorrhœa generally ends in resolution in the vast majority of cases, if properly treated. It is possible it might, in rare cases, terminate in abscess, which might discharge itself into the uterus or vagina. Melchior Robert tells us that the consequences of an ovaritis are not positively known, but he thinks it may be the cause of those cysts and dropsies, the removal or cure of which is amongst the greatest triumphs of modern surgery.

Other minor complications occur in gonorrhœa in the female; a rather important one is abscess of the glands of Bartholin. These abscesses frequently complicate vulvitis; the symptoms are swelling and redness of one or both of the labia majora; situate as these glands and their duct are in the substance of these parts, gonorrhœal vulvitis frequently extends along the duct to the substance of the gland, which ultimately gathers and breaks. If these abscesses attain a great size, they are sometimes very troublesome; but when the matter is discharged either spontaneously or by incision they generally heal up, and the cure is complete. See Huguier, *op. cit.*; Cullerier, 'Affections Blennorrhagiques,' &c., Paris, 1861.

The entrance to the vagina, like the orifice of the urethra in men, is beset with a number of mucous follicles, into which the irritation from the vulva sometimes extends, and acute or chronic inflammation or abscess are the result. The 12th plate of

Cullerier's 'Iconographie' gives an excellent illustration of both these forms of disease.

Young female children, too, are exceedingly liable to forms of vulvitis and vaginitis, which closely resemble gonorrhœa; if these diseases occur towards seven or eight years of age, it has not unfrequently happened that men perfectly innocent have been charged with attempts at violence, and of having communicated a contagious gonorrhœa. They may generally be distinguished by the absence of any marks of violence. There are simply present the marks of inflammation; if the labia be unfolded they are covered with a sticky secretion like white paint, with a peculiar smell; the inflammation is more marked in the vulva than in the vagina; and the hymen presents its peculiar form and shape. I think an ordinary observer can hardly go wrong in forming a correct diagnosis. Such cases may occasionally be traced to direct but accidental contagion; or again they may arise from condition of the bodily health, from excess of animal food, want of cleanliness, digital manipulation, or other causes totally independent of any attempt at violence.

CHAPTER VIII.

OF THE SECOND CLASS OF PRIMARY SYPHILITIC DISEASES,
CHANCRES, THEIR VARIETIES AND CONSEQUENCES.

THE effects produced by the application of the syphilitic poison or virus upon healthy tissues are very dissimilar; and this difference is so marked, that it has given rise to an opinion, prevalent amongst many modern surgeons, that there exists more than one syphilitic poison. Many distinguished men have lately maintained the duality of syphilis; though differing from each other in the explanation of the circumstances under which the double symptoms are manifested. Whether the different symptoms which are seen to follow the application of the syphilitic poison upon different persons, are due to the nature of the poison itself being different; or whether the difference is produced by the constitution of the individual to whom it has been applied; or whether, again, the variations are due to a mere local pathological condition on the part of the recipient, is difficult to say, each of these theories having found supporters in writers of great experience on the disease in question.¹

¹ See Bassereau, 'Affections de la Peau Symptomatique de la Syphilis,' Paris, 1852; also, Ricord, 'Leçons sur le Chancre, par Fournier,' Paris, 1858. The 'Lettsomian Lectures on Syphilis,' by M. de Méric, contain a very good and full account of these various theories: London, 1858, Churchill.

It has been supposed by some that the soft chancre is due to the virus being implanted on a subject previously tainted with syphilis, and that it is not, *per se*, a primary uncomplicated manifestation of syphilis. This is a mere theory. Chancres generally produce their like: a soft chancre produces a soft chancre, and an indurated chancre gives rise to an indurated chancre. To this rule there are some exceptions, which seem to favour the truth of the theory just mentioned. M. Ricord believes it probable that—

Two great classes of primary syphilitic sores are met with in practice, differing widely from each other in their appearance, their symptoms, their complications, their effects on the economy, and the influence of remedial agents upon them.¹ Both these

1. The simple or soft chancre of virgin subjects, *i. e.*, of subjects not previously afflicted with syphilis, is transmitted under the same form, that is, as a soft or simple chancre.

2. The indurated chancre is also transmitted as an indurated chancre to virgin subjects, *i. e.*, subjects previously free from syphilis.

3. The indurated chancre is transmitted to subjects already tainted with syphilis under the form of a soft or simple chancre.

4. The soft chancre of subjects tainted with syphilis is transmitted either under the form of a soft or an indurated chancre. It seems probable that the form under which it is reproduced depends on the nature of its origin, *i. e.*, on the character of the chancre which originally produced it.—‘*Leçons sur le Chancre*, par Fournier,’ pp. 203, 204.

“There is probably no question more practically interesting connected with the subject of syphilis than that which relates to the period at which the constitution becomes involved by the absorption of the poison from a specific sore. It is in evidence that neither excision of the hard sore, nor its entire destruction by escharotics can give immunity from constitutional disease. At what date or period after intercourse is the constitution involved? No positive answer can yet be given to this question. Intimately connected with this subject is the question, How is the syphilitic virus introduced into the system? General opinion assigns it to the presence of a minute wound or lesion of the part through which the poison is admitted. This wound or lesion may be supposed to be either caused by the act of intercourse itself, or to have existed previously. There is another explanation of this phenomenon; *viz.*, that the poison remains in contact with the folds, whether of mucous membrane or integument, and becomes soaked or infiltrated through it. (Mr. Ceeley supported this view in reference to vaccine inoculation.) Hence the greater frequency of primary sores on the thinnest investing membrane; hence multiple sores; hence the duplication of sores by the contiguity of opposing surfaces; hence the deposition of induration by what appears unbroken integument, &c. ‘*Evidence of Venereal Commission*,’ pp. xii and xiii, paragraphs 9 and 10.

¹ These two classes of chancre are now universally known as the soft and non-infecting, and the hard or infecting chancre; they are entirely different from each other in their period of incubation, in their appearance, their pathology, their complication, and consequences, and their mode of treatment. Many modern surgeons have treated of them as separate and distinct diseases. (Fournier, ‘*Le Dictionnaire de Méd. et*

classes of sores are due to the action of a specific poison; but there are other ulcers which are met with on the penis, which are the result of promiscuous intercourse, which are not specific, and which result from the application of irritating discharges not of a specific character; these ulcers very commonly closely resemble chancre; such ulcers very frequently follow also the rupture of the vesicles of "*herpes preputialis*." The following classification will be found useful in practice.

1. Simple sores, following sexual intercourse, without hard, elevated, or everted edges, and without any hardness of the base, not inoculable; in ordinary cases unaccompanied by bubo, and never followed by any constitutional disease.

2. Simple or non-indurated chancres, edges more or less hard or everted, no induration of the base or skin on which the sore rests; secreting pus more or less abundantly, inoculable with a lancet puncture; accompanied or followed by bubo which is either of a specific or merely of an inflammatory character; secondary symptoms occasionally, but rarely following, if the bubo suppurates, especially specifically.¹

de Chir. pratiques,' art. Chancre and Syphilis.) I think, however, that the mode of considering the subject is somewhat too exclusive, for it happens in practice that these chancres assume a mixed character, both in their primary and secondary aspects; the soft one, in its progress, putting on the character of the hard and being followed by a constitutional taint, and the chancre, apparently of the indurated kind, not being followed by secondary mischief.

It will not always be found in practice that the distinctions between the hard and soft chancres are as clear and as well defined as they are made to appear by many modern writers on syphilis and chancres, whether we test the nature of the chancre by the degree of induration which surrounds it by the state of the glands in the groin, or by the secretions from its surface. All these doubtless furnish very valuable guides with respect to prognosis and treatment; but they are not infallible, for it will sometimes be found that chancres which secrete pus are surrounded by a considerable amount of hardness, that the bubo of the indurated chancre sometimes suppurates, and that suppurative sores are occasionally followed by secondary symptoms, I do not mean to assert that exceptions to the general law are common, they are not so; but there are exceptions which from time to time are met with in practice and which I have often witnessed.

¹ This is the pure simple, or soft chancre. The chancroid of M.

3. The same chancre may assume an indurated form, after the lapse of some days, from the effusion of lymph round its edges and at its base; this is phlegmonous, or inflammatory induration, which sometimes resembles specific induration so closely that a correct or positive prognosis in reference to constitutional infection is difficult. The state of the glands in the groin may assist in giving an opinion.¹ The phlegmonoid inflammation resembles the base of a boil, and seems to be an integral part of the tissue on which the chancre is situated.

4. Chancres specifically indurated, secreting sparingly, or not secreting pus at all, non-inoculable commonly with a lancet puncture or inoculable with extreme difficulty; several indurated glands in one or both groins; no suppurating bubo; constitutional symptoms all but inevitable and certain.

Clerc, and the chancrelle of M. Diday, the local contagious ulcer of Mr. Berkely Hill.

Whatever may be our opinions on the point of dualism, practically the course is to treat these two forms of chancre as separate and distinct diseases, the plan of treatment suited to one being altogether unsuited to, or even injurious to the other. The Venereal Commissioners have no alternative but to express their belief in the non-identity of the two processes.

Inoculability.—The soft chancre is auto-inoculable, *i. e.*, it can be reproduced, *ad infinitum*, on the patient who is the subject of it. The Venereal Committee thus express themselves in reference to the constitutional taint following the soft chancre. "However definite (*in appearance*) may be the laws that determine the history and progress of primary sores, a degree of obscurity (uncertainty) always attaches to their future influence on the constitution, arising from the frequent, apparent, deviations from the laws which govern them. Hard sores do not necessarily contaminate the constitution, whilst on the other hand, constitutional symptoms occasionally follow the presence of a sore which might have been regarded as a simple local sore by a practised observer. Too much caution, therefore, cannot be exercised in giving an opinion as to the future safety of the patient."—'Report, &c.,' p. ix. The glands on the groin may or may not be affected; in many cases one gland only enlarges, but does not suppurate. In cases where the glands are not at all affected, when the local condition of the sore is such as I have described, secondary symptoms may follow; but in cases where a single gland enlarges and does not suppurate, they are most likely. Should the gland suppurate, the occurrence of secondary symptoms is less probable.

On the Soft Chancre.—The simple, soft, or so-called non-infecting chancre,¹ is in most cases an ulcer more or less circular, covered with a yellow matter; the edges more or less elevated, everted, and irregularly broken; the ulceration appearing to burrow under the edge; it secretes pus abundantly, which is easily inoculable on the patient bearing the ulcer with a lancet puncture.² It has no limited duration; although commonly healing in a few weeks, it may continue slowly to spread for months; it is that form of primary sore which most commonly becomes phagedenic. The skin or base upon which the chancre is situated may be as soft and as healthy as in the natural state; or it may assume a condition of hardness, due to the effusion of lymph into the cellular tissue around and under the sore, which I have already mentioned as inflammatory or phlegmonoid, but not specific induration.

It then assumes the character of a mixed chancre, and if this condition of induration be accompanied with an indolent adenitis, it is very difficult to diagnose; it then closely resembles the true syphilitic chancre; the character of the secretion, however, and the nature of the glands in the groin will serve to guide us. The phlegmonoid condition of the soft chancre depends much on its seat.

The simple or soft chancre may or may not give rise to bubo. Should it do this, the bubo may be one of two kinds: the first is a sympathetic, simple glandular inflammation, a non-specific adenitis; the second is produced by the absorption of a specific

¹ M. Clerc denominates the soft or simple chancre, 'chancreoid,' limiting the term chancre to the indurated or infecting sore.

² The soft chancre divides itself into three stages—the period of ulceration or spreading, of indolence, and of reparation. Of these three the first and last are the chief to remark: the first is the longest; when this is arrested, the period of reparation or healing is commonly very quick. A soft chancre rarely heals in less than a month; but they may extend to three; these in ordinary cases are the two extremes: these periods are modified most materially by treatment, constitution, and the situation of the chancre. There is, however, no certain limit to the duration of a soft chancre. It may assume, so to express myself, a state of chronic indolence in which the second stage is indefinitely prolonged, or chronic phagedena, where it slowly spreads in one place and heals in another. This I have seen frequently extend over a period of one, two, or more years.

pus, and if punctured, or when broken, ends in an inguinal sore, precisely similar in its nature to the chancre which occasioned it, differing from it merely in its seat.¹ The pus from the specific bubo is inoculable, like that of the chancre which produced it, and, like the chancre, commonly becomes phagedenic, and ends in burrowing sores which run over the abdomen and thigh. I have seen these sores, unhealed twelve and eighteen months after the opening of the bubo, still spreading and still furnishing an inoculable pus. The simple chancre sometimes takes a long time to heal; indeed, the time is sometimes unlimited. I have known sores open four, six, and eight months, and even two years. In such cases the sore assumes varied appearances: sometimes it looks clean and healthy, and disposed to heal: at others it is covered with an ash-coloured slough. It ulcerates in one place and heals in another; but, in some cases, it runs over the whole body of the penis, and produces serious mutilations: this may be termed ulcerative phagedena. The ulcer is sometimes indolent, at others very sensitive and painful; it frequently resists the most varied treatment, both simple and mercurial. The skin on which the ulcer rests is generally quite healthy, and not at all indurated: the edges of the sore, however, are commonly hard, round, and elevated; and under these hard edges the ulceration frequently burrows. By raising the edge, we commonly find a creeping ulceration under it.

¹ The forms of bubo which are developed as the result of the simple chancre are of two kinds—simply inflammatory, the gathering resembling an ordinary phlegmon in other parts, and a virulent specific bubo, produced by the direct absorption of the pus from the chancre. In attempting to establish a differential diagnosis between the two kinds of bubo, one or two points are essential to be borne in mind. The simple adenitis occurs rarely in the disease; it resembles an ordinary abscess in other parts; a smooth uniform swelling, hot, and tender to the touch, subsequently reddening on the surface, pointing, and breaking. The specific bubo (the chancrous bubo) occurs later on in the history of the disease, sometimes even after the chancre is cured or has healed, and in most instances affects one gland only, not the whole mass. The first kind may in the origin be arrested, the second never; it must go on to suppuration, and when broken or discharged it assumes the form of an inguinal or ganglionic chancre. For further details on this point see the chapter on Bubo.

One of the most important, serious, and even fatal complications of the soft chancre is phagedena (see the chapter on "Phagedena"). Why the soft chancre should become phagedenic, or rather what are the causes of phagedena, it is not easy to say. It does not depend on a special virus, although it is not prudent to test a phagedenic chancre by inoculation, since the chancres thus produced have themselves become phagedenic. One or two causes of phagedena, however, appear like pretty evident. 1, A peculiarity of constitution; 2, excesses in diet, &c.; and 3, irritating dressings to the chancre, and particularly ointments. All the fatty dressings, as a rule, should be avoided in the treatment of the soft chancre, more especially if there be any tendency towards phagedena. In addition to phagedena, there are some other complications of the soft chancre which are important to notice, as they modify, in some measure, the treatment. Many of these complications are due to the situation of the chancre; thus, chancres situated near the frenum, under the prepuce, in the fossa navicularis, on the neck of the uterus, or on the verge of the anus, necessitate some variation in treatment, due to situation alone. The soft chancre, again, is frequently complicated with œdema and inflammation of the other structures of the penis, with constrictions or strangulation, or with phimosis or paraphimosis. These complications, variously combined, give rise to those formidable symptoms and grotesque appearances, which are depicted in the illustrations to various works on syphilis. In the "*Précis Iconographique*," of M. Cullerier, the 22nd, 23rd, 24th, 25th, and 32nd plates, give admirable illustrations of these complications. The complications with phimosis and paraphimosis are amongst the most important we meet with, and the question of the propriety or impropriety of the operation in the first of these has to be considered. If the phimosis be congenital and there is reason to suspect the existence of chancre under it, the operation should be at once performed; if it is acquired, or the result of the disease, it may be commonly reduced by appropriate treatment, and the operation only performed as a last resource. In the latter case, before œdema or adhesions are formed or take place, frequent immersions of the penis in hot water, with mild astringent

injections¹ thrown frequently between the glans and prepuce, with rest, and a regulated diet, will generally reduce the paraphymosis, and the chancre thus exposed may then be treated on ordinary principles.

There are cases, however, of acquired phymosis where it becomes difficult and even impossible to reduce the prepuce; the preputial opening gradually narrows, the prepuce becomes distended with pus and the secretion from the chancre, fresh inoculations and adhesions take place, spots of gangrene appear on the skin, and the whole prepuce commonly sloughs. In cases, then, where a reasonable time has been spent in attempting to reduce the prepuce without effect, the operation should be performed. Again, in other forms of phymosis an inflammatory thickening with hard œdema takes place, and here it also becomes impossible, from the alteration in structure, to reduce the prepuce. The operation should be performed, the prepuce should be divided. A simple incision is, in such cases though not in others, the best operation, and when the knife is used it is like cutting through a piece of cartilage. In such cases the parts are sometimes long recovering themselves, but they do eventually get well and very good cures may be made; but whatever time may be required to accomplish a cure, the division of the prepuce is the only hope for the patient.

Some other important modifications of the soft chancre take place, owing to its situation; those situated on the frænum, in the fissure between the glans and prepuce, in the fossa navicularis or meatus urinarius, and on the verge of the anus in the male, and on the uterus, vagina, and fourchette in the female, demand a passing notice on this account.

Soft chancres on the frænum commonly arise from matter lodging in deep pits or depressions found in some subjects on either side of the frænum, this part being also in some subjects very thick. "The virus lies here undisturbed in chinks, owing to the irregular surface of the frænum."—Hunter.

¹ R. Zinci sulph., gr. vj;
Liq. plumbi, ℥xl;
Glycerine, ʒij;
Tr. opii, ʒj;
Aquæ dest., ʒvi. M. Ft. injectio.

The chancre in these cases is difficult to treat; in the great majority of them it burrows under the frænum or eats into it; in some cases, again, it burrows deeply into the structure of the penis, under the frænum, and sometimes perforates the urethra, the ulceration going on, burrowing unperceived, and even unsuspected. It is always advisable, if the chancre have burrowed under the frænum, to divide the remainder either with the bistouri or scissors. There is a great advantage in this; it facilitates the healing of the chancre; it enables us to apply local remedies to it and to discover the depth to which it has extended. The operation gives little or no pain; the artery of the frænum may bleed freely; if so, it may be tied or twisted, or a piece of lint saturated with the liquor ferri perchloridi may be applied to the bleeding surface.

Soft chancres situated under the prepuce, or in the fissure between the glans and prepuce, are productive of some particular symptoms dependent on their situation. They commonly give rise to phymosis, and, if so, this symptom must be treated on the principles just laid down.

I detail the following case as an illustration of the mode of treatment to be pursued under such circumstances:

CASE XIV.

Soft chancre, with phymosis.

A young man, æt. 19, contracted three or four soft chancres which were situated in the fissure between the glans and prepuce. After the lapse of a few days the prepuce began to inflame and thicken, and shortly after a complete phymosis resulted, the whole integument of the penis became red and swollen, and the preputial opening so contracted that it would only admit the end of a moderate-sized bougie. There was a considerable discharge from the original sores, which oozed out in large quantities at the preputial opening; this discharge inoculated the end of the penis, over which it ran, and this part also became covered with a crop of small soft chancres to the number of ten or twelve. I pencilled the whole skin of the penis and the soft chancres over with a solution of argent. nit. ʒj to ʒj every other day. I introduced, also, a small camel-

hair brush into the preputial opening saturated with the same solution. I directed the penis to be well fomented with hot water night and morning; a weak solution of the red wash to be thrown up under the prepuce two or three times a day, and directed him to take internally small doses of tartar-emetic with an opiate. In six days the prepuce could be drawn back, and in three or four weeks all was well, and the patient was not laid up from his business.

If these chancres are not productive of phymosis and are not attended with much inflammation of the other structures of the penis, the mucous membrane of the prepuce above them sometimes gradually thickens and swells, so that a line of red swelling is formed above the chancre, extending more or less all round the penis; this inflammatory swelling or hard œdema, resembles very closely specific induration, and if accompanied by bubo it is sometimes very difficult to give a correct diagnosis of the nature of the chancre or predict with certainty whether the chancre will be followed by a constitutional taint or not. The nature of the bubo and the secretion from the sore must here guide us. This pseudo-induration, as Melchior Robert calls it, is due to many causes; in some cases to the peculiar constitution of the patient, or, again, to the use of irritating dressings, and this is the most frequent cause; amongst the latter may be mentioned ointments of all kinds, especially those containing mercury, strong lotions, black wash, tannic acid, nitric acid, chromate of potass, and various other remedies. Any local application to a soft chancre which gives pain, which causes the structures around it to inflame and swell, or increases the purulent secretion from the sore, does not agree, and should at once be changed.

Soft chancres are occasionally followed by secondary symptoms or a constitutional affection, and this is more to be feared in those varieties of the soft or suppurating sore, which indurates during its progress, than those which do not do so; and although this is rare, still it unquestionably does sometimes occur. I have witnessed it not unfrequently, and the highest authorities on syphilis have also been of the same opinion. Cullerier,¹

¹ 'Précis Clinique Iconographique des Maladies Vénériennes,' &c., par Cullerier, Chirurgien de l'Hôpital du Midi. Paris, 1866.

Melchior Robert,¹ Langlebert, and Sigmund, the reporter of the Venereal Committee, &c., all support this view, which I have always maintained.

Should a simple chancre have been followed by a virulent bubo in the groin, the latter puts on a character resembling the chancre, spreading by a creeping ulceration, not only in the groin, but occasionally upwards on the abdomen, and downwards on the thigh. These sores are jagged and irregular, sometimes clean and covered with granulations, the next day foul and covered with slough, the edges, generally raised and hard, appearing to present a barrier to the healing the ulcer; when these ulcerations run in the track of large blood-vessels, the coats of the latter may become involved in the ulceration, and a serious, if not fatal, hæmorrhage follow. These ulcerations following suppurating buboes are purely virulent; they may occasionally be inoculated after they have been in existence for months or even longer. Mercury has very little influence over the simple chancre with the soft base; it is to this species of sore that the non-mercurial treatment is especially applicable; it generally yields to this treatment in a few weeks. Should this fail, mercury may be tried. In the phlegmonoid variety mercury is more strongly indicated, especially if, after a reasonable time spent in pursuing the non-mercurial plan, the sore still continues open and the hardness undiminished.

On the infecting, indurated, or syphilitic chancre.—The chancre specifically indurated differs in many particulars from the varieties just described. This is the “chancre infectant” of the French, the infecting sore of English writers; the true syphilis or Hunterian chancre. Hunter’s classic description of this chancre in the fourth book of his treatise on the venereal disease has been recognised and followed by all modern writers on syphilis, both British and foreign. B. Bell, of Edinburgh, also gave a very correct account of this chancre. Long before Hunter’s time, however, this chancre was most correctly de-

¹ ‘Nouveau Traité des Maladies Vénériennes apres les documens puises dans le service de M. Ricord,’ par Melchior Robert, Chirurgien en chef des Hôpitaux de Marseilles, &c. One of the best treatises on syphilis extant.

scribed by Jean-de-Vigo, physician to Pope Julius II,¹ and also Thierry de Héry,² a writer whose views regarding the pathology of syphilis are remarkably correct, considering the period at which he wrote. The true indurated chancre is a sore which secretes but little ; its surface is red, glazed, and sometimes quite dry ; the secretions from the true indurated or infecting chancre, if not artificially irritated, when examined under the microscope are seen to " consist of epithelial débris floating in a serous fluid, or of globules of various sizes and shapes, which do not, upon the addition of acetic acid, yield the well-defined nuclei characteristic of pus." (Henry Lee, 'Medico-Chirurgical Transactions,' vol. xlii.) The induration which marks the character of this form of chancre is termed specific ; it is movable under the skin, and does not, like phlegmonoid hardness, appear to form a part of the tissues on which the chancre rests. It appears like a foreign body under the skin, the hardness terminating abruptly in the tissues on which it is situated. This induration is placed under and around the ulcer, occasionally at the side of it ; and in some instances it does not come in till the sore has healed, and here it appears under the cicatrix of the original sore, or at its side. The chancre in such cases, although apparently healed, ulcerates again into the depths of this induration ; and thus we have the excavated ulcer, cut out, as it were, from the substance of the part underneath it. The infecting chancre assumes several original forms which have led surgeons to describe it under various names. Sometimes the ulcer is thin, laminated, and superficial, resembling a strip of dry parchment, and hence this form has been called the parchment chancre ; again, it feels like a piece of cartilage deep under the skin, or raised above it ; in a third form the induration is at the side of the chancre, or this is hollowed out into the substance of the induration. At or about this period glands in one or both groins become enlarged, hard, and tender, but have no tendency to suppurate. The condition of the glands of the groin is one of the best tests of the character of the sore, if the nature of the induration should deceive us.

¹ Jean de Vigo, 'De Morbo Gallico tractatus,' &c., Rome, 1514.

² Thierry de Héry, 'De la Methode Curatoire de la Maladie Vénérienne,' &c., Paris, 1552.

The bubo symptomatic of the infecting chancre is an indolent tumefaction and induration of the glands in the groin corresponding to the chancre; they form a series of small tumours, independent of each other, and movable in the parts which surround them. They give to the finger the same sensation as the base of the chancre; it is an elastic induration, feeling like a piece of cartilage.¹

The glands in the groin enlarge and harden at or about the period that the base of the chancre becomes indurated. The account I have given of this sore in the 'Association Journal,' and that now published by M. Ricord, in his 'Lectures on Chancre,' are substantially the same. Mr. Porter, in some excellent papers that have lately appeared on syphilis, in the 'Dublin Journal,' ignores the condition of the groin as a test of the nature of the infecting character of the sore.² I lean,

¹ Ricord, 'Lectures,' by Fournier, p. 115. The adenitis, or glandular enlargement symptomatic of the infecting chancre does not always correspond with the description here given of it. The bubo sometimes appears in the shape of one large, hard, tender gland (monadenitis,) not as a series or chain of small indolent glands; sometimes one may be red and tender, and threaten suppuration, although this rarely takes place. I have observed more than one case of this kind where suppuration has appeared inevitable, and one or two where this has actually taken place. The occurrence, however, is rare, and in such cases both simple phlegmonous and specific indurations exist in the groin in separate glands at the same time. There are also other cases where the situation of the chancre is peculiar, where no marked induration exists in the groin at all.

² 'Dublin Journal,' &c., Nos. 45 and 46. In some forms of infecting chancre the state of the glands in the groin affords little information as to the nature of the chancre. For instance, infecting chancres of the glans penis and infecting chancres of the lower part of the abdomen at the root of the penis must be mentioned as examples of this. This, in my opinion, is due to the course of the lymphatics, which do not in such instances go from the chancre to the glans in the groin, consequently these are not swollen, as no morbid matter passes through them. I call to mind two examples of infecting chancres. Each of these sores were situated at the root of the penis; part of the integument of the penis was involved, and part of that on the lower part of the abdomen; they were deep excavated sores, with thickened and everted edges, secreting pus profusely, and no induration of their base, and no enlargement of the glands in the groin. In both instances, long before the sores were

however, very strongly to the opinions of M. Ricord on this point; and, in fact, my own published opinions on this head correspond very closely with his.—See 'Association Journal,' November, 1856.

The indurated or infecting chancre, now described, is in a vast majority of cases followed by constitutional infection, unless a proper treatment be adopted. This induration under the sore and in the groin is the transition state between the local and constitutional disease, and these indurations mark the constitution as already infected.¹

The indurated chancre is very difficult to inoculate;² it is healed, the face and abdomen were covered with patches of syphilitic lepra.

¹ What renders this almost a matter of certainty is the identity of structure described by Lebert, 'Traité d'Anatomie Pathologique,' vol. i, p. 179, and Virchow ('Syphilis Constitutionnelle,' par Picard, p. 181), as existing between the induration of the infecting chancre and the morbid products or alterations produced by many forms of constitutional syphilis.

² The infecting or indurated chancre is, however, inoculable, although with difficulty. I have already detailed an experiment by Professor Faye in reference to this point. Diday, M. Clerc, and others, have succeeded in producing a characteristic disease by inoculation with the secretions from an indurated sore; but whilst the effects produced by the inoculation of a soft chancre are immediate, those succeeding to the inoculation of the infecting chancre are not seen till periods very remote. M. Diday gives as the average in twenty-nine cases 14 days; M. Dron mentions a case where 19 days elapsed from the time of the introduction of the virulent pus under the epidermis till the appearance of the pustule; M. Clerc mentions incubation of even 30 days. Fournier gives a maximum of 70, a minimum of 17, and an average of 30 days, as the period of incubation for the infecting chancre ('Recherches Experimentales sur l'Inoculation Syphilitique,' &c.). M. Martin mentions a case where the incubation was 60 days in a patient confined in St. Lazare. I have also quoted a case where it was nearly 90 days in a gentleman who went to sea immediately after the intercourse. These experiments were, no doubt, made on patients bearing the chancre with which they were inoculated.

There is no doubt that the secretions from the indurated chancre are easily and certainly inoculable on a healthy subject virgin to syphilis, although they may be with difficulty inoculated on the subject bearing the disease; in this respect the inoculations fail simply in the same way that inoculations with secondary syphilitic pus fail on the subjects

the simple or soft chancre, with a profuse purulent secretion and a soft or phlegmonoid base, which so easily produces a characteristic pustule when submitted to this test. This is the chancre which inevitably poisons the system, unless it be completely destroyed before induration takes place; and even then the patient is not always safe. The induration rarely appears before the third day, and it has been asserted that chancres of this kind completely destroyed before the fifth day are never followed by constitutional disease: by this, however, is meant the fifth day from the exposure to contagion. After the chancre has become specifically indurated, and the glands in the groin enlarged and tender, cauterisation is no longer available, as these are symptoms indicating that the system is already affected, or that it is about to become so. I shall return to the question of cauterisation as a means of preventing constitutional taint when speaking of the abortive treatment of chancre.

It is in cases of indurated or infecting chancre that mercurial treatment is especially indicated; and here it should be employed properly, fully, and perseveringly. Its effects are here marked and certain, and it is, beyond all question, in such states the most powerful and certain therapeutical agent that

bearing the disease, but which succeed when the inoculations are made on a healthy subject not infected with syphilis. Experiment has now set this matter at rest. Mr. James Lane says that there have been no less than five successful cases of inoculation from indurated sores at the Lock Hospital during the last six months—one by Dr. Boeck, one by Mr. Gascoyen, one by himself, and two by Mr. J. W. Coulsen (*'Brit. Med. Journ.,'* June 2nd, 1866).

A remarkable fact in the history of the experiments already detailed is the long period elapsing between the inoculation and the effects produced by it. This, however, is in distinct relation with what occurs in physiological or natural inoculation. The infecting chancre often does not appear for several weeks after exposure; I have witnessed several cases, about which there is not a shadow of a doubt, where the disease had not appeared till one month, five weeks and six days, and six weeks, after exposure. These cases were all indurated chancres, and all followed by formidable constitutional disease (M. Rollet).

See for details of the experiments quoted, a paper by Dr. Achille Dron in Diday and Rollet's *'Annuaire de la Syphilis,'* Paris and Lyons, 1859, "De la Méthode Destructive des Chancres, &c.," p. 208.

can be exhibited. Internally exhibited, it frequently fails; but when used in the form of vapour, and combined with frictions, it retards, weakens, or altogether eradicates the syphilitic diathesis or constitutional taint, of which the local and inguinal indurations just spoken of are the first symptoms. I could multiply cases of complete success in such states by the persevering use of the treatment I have mentioned. There is no other that will bear the least comparison with it in point of efficacy, either as regards its safety to the patient or its effect upon the disease. (See the chapters on "Mercurial Treatment" and the "Mercurial Vapour Bath.")

It must be admitted, however, that the mercurial treatment of the infecting chancre is more beneficial in healing the sore and dispersing the surrounding hardness than in preventing secondary symptoms. Mercury cures secondary symptoms, or rather causes their disappearance more certainly than it prevents them, and therefore the rule to abstain from mercury in all cases till they appear would be a good one if we could get the chancre to heal soundly without it. (See the chapter on "Mercurial Treatment.")

The difference in the appearance and nature of primary syphilitic sores depends frequently on the anatomical organisation on the parts on which they are seated. 1st. The elevated soft chancre is most commonly seated on the internal surface of the prepuce. 2nd. On the angle between the glans and prepuce, a common seat of chancre, the bottom of the ulcer has always a honeycomb appearance. 3rd. On the side of the frænum the ulcer is deep and burrowing; these last two varieties depend for their peculiarities on the lax cellular tissue of the parts on which they are seated; this ulcer frequently perforates the urethra. 4th. On the glans penis the sore is excavated and hard, with ragged and thick edges, but never burrows, or has that honeycombed appearance at the bottom I have just described; it spreads generally by ulceration on the surface, and not by ulceration in depth. 5th. Chancre in the interior of the fossa navicularis is accompanied by great induration of the glans penis, and very commonly by phymosis; this ulcer also has a tendency to perforate the urethra on its lower part.

The first three varieties of chancre now described are commonly of the soft kind, and, if accompanied by bubo, always to

be feared, this is either virulent, simply inflammatory, or phlegmonous. In the last two forms bubo rarely occurs, on account of the anatomical distribution of the lymphatics, since the lymphatics of the deeper structures of the penis open into the glans in the interior of the pelvis, if not into the inguinal glands. This accounts for what I have frequently observed, that indurated chancres of the fossa navicularis, although followed by general infection, are not commonly, if ever, accompanied by the indolent bubo in the groin, simply owing to the anatomical distribution of the lymphatics.

Little doubt can generally exist with regard to the nature of a chancre; the history given by the patient, its situation, with its aspect and the state of the glans in the groin, are generally conclusive on this point. There may, however, occur cases which may puzzle the most experienced surgeon. The test of inoculation is here very valuable. Patients are naturally anxious to know whether an ulcer, following a suspicious intercourse, is a "chancre," *i. e.* a syphilitic sore, liable to be followed by a constitutional taint; and it is most important that the surgeon should be able to give a reasonable opinion on this point. I have shown how far inoculation will aid him. The microscope may also assist us as a means of diagnosis. I have seen ulcers on the lip and penis, of syphilitic character, very closely resemble cancer. If the test of inoculation failed in these cases, the secretions may be submitted to microscopical examination, where we should at once distinguish between the pus-globule of the syphilitic ulcer and the cancer cell. I have never been able to distinguish by the microscope any difference between the pus of a primary syphilitic sore and that of an ordinary ulcer, and I have never been able to detect the existence of the animalcules described by Donné as existing in the pus of a chancre.

Primary syphilitic ulcers are commonly situated on the prepuce, the glans or the body of the penis, at the orifice or other parts of the urethra, on the mons veneris, or lower part of the abdomen. I have seen them also on the tongue and on the finger, and they have been observed also "on the chin, the lips, the scrotum, the anus, the thigh, the eyelids, the leg, and the nose."¹ Ricord and Vidal have also seen them in the bladder.

¹ M'Carthy; 'Thèse Inaugurale,' p. 13, quoted by Vidal.

Cephalic chancre.—Chancres of the head and face, again, present peculiarities the causes of which are difficult to explain, but it is necessary to mention the fact. All these chancres are indurated or infecting whenever situated in the integuments of the head or face or lips, &c., although chancres in these regions present this remarkable peculiarity, if they are tested by inoculation with the pus of a soft chancre a similar sore is produced as it is in other parts in the same way. A remarkable case of this kind, which appears conclusive, is detailed by M. Diday,¹ and referred to by M. Fournier.² The pus of a soft chancre, which had existed in a young man for eighteen days, was inoculated on the skin of the head of an old man suffering from cancer, who had not then, nor at any former period, suffered from syphilis. The puncture was made behind the mastoid process. In two days soft chancres made their appearance, and the nature of these chancres was verified by M. Rollet, his pupils, and several other observers.

The whole probability of success, in what is termed the abortive treatment of a chancre, turns upon the question whether this be at first a local disease merely, or a local manifestation of a constitutional taint. There can be little doubt that primary syphilis is in most instances a local disease; but there are cases occasionally occurring which seem to favour the truth of the latter position. A primary sore generally appears from four to eight days after suspicious intercourse. If, however, a chancre be inoculated, the effects are immediate. In the one case, however, the virus is introduced under the epidermis by the lancet, and in the other it only penetrates this membrane by a process of slow absorption, supposing the epidermis to be healthy and unbroken. The condition of the epidermis will explain a great deal in reference to the incubation of chancre; should it be broken or denuded, the inoculation, like the lancet puncture, is immediate; under other circumstances, various periods elapse before the appearance of the disease. This, I think, will explain what is termed the "incubation" of chancre; and this view is supported by the experiments of Mr. Ceely, of Aylesbury, who tells us that he has

¹ 'Gazette Médicale de Lyon,' December, 1857.

² 'Chancre Céphalique,' &c., Paris, 1858.

frequently succeeded in producing the vaccine pustule by keeping lymph in contact with the epidermis for a certain period of time, "*without abrasion of the cuticle.*"¹

In cases where long periods have elapsed between intercourse and the manifestation of disease, we must either admit that the virus has lain in contact with the skin for a long time without producing any effect, or that the local disease then set up is but the first indication of an already existing constitutional taint. The latter opinion has been maintained by many modern surgeons, and brought forward as an argument against the abortive treatment of chancre, which I am about to consider.

¹ The infecting or indurated chancre sometimes does not appear till long periods after exposure. I have carefully noted many cases of this kind. In four cases especially the dates were remarkable. None of these patients had been affected with syphilis before, and in none had any intercourse taken place in the intervals. I knew all the patients; there could be no motive for deception, and there could be no mistake. In one case the chancre was fourteen days before it made its appearance, in a second thirty days, in a third five weeks and six days, and in the fourth six weeks: all these cases were followed by bad secondary symptoms. "Intimately connected with this branch of the subject is the question—How is the syphilitic virus introduced into the system by sexual intercourse? General opinion assigns it to the presence of a minute lesion or wound, through which the poison is admitted. This wound or abrasion may be either caused by the act itself or have existed previously; but there is another explanation of the phenomenon, viz. that the poison remains in contact with the integument or mucous membrane and becomes infiltrated, or soaked, or absorbed through it. . . . If this mode of the admission of syphilitic matter be deemed to be that which commonly (say occasionally) prevails, it is still a most difficult matter to determine how long such matter may remain in *innocuous contact* with the membrane beneath it. Until the precise time can be fixed which is required for the poison to come within the influence of the absorbent system of the body, by whatever process it gains entrance, whether by mechanical infiltration or by vital absorption, and the first indication of local disease on the affected surface can be detected, the question of incubation must be regarded as unanswered." ('Report, &c.,' p. xiii, Section X.) My own opinion is that the mode in which the poison gains entrance, whether immediately from a broken surface or by slow absorption through an unbroken epidermis, would, if clearly made out, explain the whole difference between the soft and hard sore—the manifestation of one being almost immediate and certain, and the appearance of the other after long and indefinite periods, and the almost constant complication or addition of a constitutional taint.

Whatever treatment, whether hygienic or surgical, has been employed after a suspicious intercourse, it becomes a necessity for the next two or three weeks carefully to examine the parts, and on the least appearance of a crack or abrasion, or any solution of continuity, or the appearance of a vesicle or pustule, &c., to destroy it by a caustic immediately. This rule of practice, although attributed to some modern surgeons, is not by any means new, although its importance cannot be exaggerated. History awards to Jean de Vigo the merit of having first recommended this practice, and in his book on the venereal disease, written in 1512, he thus expresses himself:—"Imprimis veniendo ad originem morbi, videlicet, ad pustulos quæ solent accidere in virga, *sine aliqua temporis intermissione*, protinus *medicaminæ acuto* malignitatem curum interficiente, *sunt delendæ*, ut exude earundem malitia per totum corpus extendatur" (Jean De Vigo, de Morbo Gallico tractatus').

The abortive treatment of a primary syphilitic sore consists in its early and immediate destruction by caustics, the object of which is to eradicate the disease at the onset, and thus prevent all risk of constitutional taint; but in order to ensure this, according to M. Ricord, the chancre is to be destroyed before the fifth day, and this is not to be reckoned as the fifth day from the appearance of the disease, but the fifth day from the "exposure to contagion."¹ The abortive treatment has a two-fold object: it either protects the constitution from infection, as in cases of the infecting chancre, by destroying syphilis in its germ; or, in cases of the soft chancre, it converts the specific sore into a simple one, and thus prevents the local ravages of the disease. In order that it should be successful, it is necessary that the infecting chancre should be destroyed within five days of the exposure to contagion. Professor Sigmund, of Vienna, says that in a thousand cases, extending over a period of eleven years, he has known but two cases of secondary disease where the chancre was destroyed before the fifth day. Why the fifth day is mentioned, is because the infecting chancre has rarely become indurated before this period, although it does frequently much later; and before induration commences no absorption has been supposed to have taken place. The abortive treatment is

¹ Ricord's Letters, by Stapleton, p. 39.

not, however, always successful when practised on the infecting chancre within the periods laid down. M. Diday mentions cases where the chancre was destroyed before the fifth day from exposure, and yet constitutional symptoms followed. I have destroyed an ulcer thoroughly and completely, and all the surrounding tissues, to the depth of half an inch, in two hours after the appearance of the chancre, and yet bad constitutional symptoms have followed; M. Langlebert ('*Moniteur des Hôpitaux*,' Dec. 21, 1858) speaks of a student of medicine whose chancre was destroyed on the second day, and yet constitutional symptoms followed two months after.¹ A positive opinion cannot be given in all cases as to the protective power of the abortive treatment; nevertheless the destruction of a chancre is to be attempted, unless there are some special contraindications, as soon as it is presented to our notice; but we cannot say that such destruction will inevitably convert a specific ulcer into a simple one, or prevent the occurrence of constitutional symptoms. It, however, may, and therefore the practice is a safe and a proper one; we gain nothing by neglecting it.

Our duty is to endeavour, by the use of escharotics, to convert, if possible, the specific sore into a simple one. For this purpose either a strong solution of the nitrate of silver, or the application of this caustic in substance, may be employed.

When the nitrate of silver is used, if the disease be pustular, it will be necessary to open the pustule with the point of a lancet, to discharge its contents, and rub the whole surface and edges of the ulcer thus produced with the nitrate of silver previously cut to a sharp point; if the disease be an open ulcer, it is to be treated in the same way. The nitrate of silver thus applied will sometimes have the effect of producing a simple

¹ The cauterisation of a chancre, however early it may be practised, is not always a protection against constitutional taint; when the chancre is specifically indurated it is useless and even injurious. I have in several instances thoroughly destroyed chancres within a few hours of their first detection by the patient, and yet bad constitutional symptoms have followed. If a chancre be destroyed within an hour of its first appearance, and the intercourse or exposure which caused it have occurred at a long date previously, the operation is sure to fail. The chancre is of the infecting kind, and the system is already tainted.

sore, but it will more commonly give rise to considerable irritation and inflammation, whilst the specific character of the sore is not destroyed. I have seen so much evil, in this respect, from the use of this escharotic, that I have now abandoned its use under such circumstances, and have recourse to other caustics of a more powerful and certain character.

The great evil in the use of the nitrate of silver in these cases is, that it is powerful enough to irritate, but not sufficiently powerful to destroy. We want a remedy that will at once disorganise the tissue to a depth coequal with that of the chancre. For this purpose I now employ several remedies: highly concentrated nitric acid, the acid nitrate of mercury, the acid nitrate of silver, or the potassa cum calce of the London Pharmacopœia. I have already given a form for the preparation of the second of these remedies; the third is made by dissolving a drachm of the nitrate of silver in an ounce of nitric acid. When it is determined to destroy a primary venereal ulcer with any of the first three caustics, a camel-hair pencil must be dipped in them, and the surfaces and edges of the sore pencilled thickly over; if the acid be sufficiently concentrated, the whole surfaces touched are at once destroyed, and converted into a yellow eschar, which, on separating, generally leaves a clean simple sore underneath.¹

¹ The remedies most efficacious in the destruction of chancre are—

1. The Vienna paste or potassa c. calce, equal parts of hydrate of potass and quick-lime, made into a paste of proper consistence, when used, with spirits of wine; when applied, this caustic gives severe and continued pain, and produces a black or venous oozing, but thoroughly destroys the chancre. A modification of this caustic, made with two parts of caustic potash and one of quick-lime, melted together and run into moulds known by the name of "Caustic Filhos," is a most convenient and efficacious form of applying this caustic. It may be procured at Jozeau's, in the Haymarket.

2. Chloride of zinc or Canquoin's paste, made with one or two parts of the salt to two of flour, and made into a paste, when applied, with spirits of wine.

3. Sulphuric acid mixed with powdered vegetable caustic, in proportions convenient to form a semi-solid paste.

4. Monohydrated or highly concentrated nitric acid.

The first three of these caustics are accompanied by severe and continued pain, but they effectually destroy the chancre. The last caustic

When the potassa cum calce is employed, it must be made into a paste of moderate consistency with spirits of wine, at the time it is wanted for use, and the sore and its edges covered with it. When it has been on a few seconds, a smart burning pain is felt, which continues to increase as long as the caustic is suffered to remain on, which it should be from half a minute to a minute, or even longer, according to the effects produced. After this the caustic must be all removed by means of a fine bone spatula, and the black eschar left may be covered with a poultice, a cold saturnine lotion, or fine, soft, dry lint. The pain soon subsides after the caustic has been removed, and in about half an hour the patient is generally pretty comfortable. The aggregate amount of pain produced by the application of this remedy is not so great as that by the nitrate of silver, whilst the effect of the potassa cum calce is certain; all the parts touched by it are at once destroyed, and, on the separation of the eschar we have a clean granulating sore left, which commonly yields with great rapidity, particularly if the ulcer be a recent one.

Whenever, then, a primary venereal sore is presented to us, unless there be some special contra-indication in its situation or condition, it should be immediately destroyed after the manner laid down. If the sore be recent, *i. e.* of few days' standing, it is very probable we may eradicate the disease at once, or convert a specific sore into a simple one; the constitution may not as yet have become infected. If the last intercourse preceding the appearance of the chancre have been short, *i. e.* not more than a few days, it is very probable we may succeed in eradicating the disease by cauterisation, *i. e.* the specific sore may be destroyed and converted into a simple sore, and no constitutional symptoms

also occasions severe pain, but it is of short duration; the tissues are converted almost immediately into a yellow eschar, which falls off in a few days, and generally leaves a healthy granulating sore underneath.

The liquor hydrarg. nitratis acidus of the present Pharmacopœia answers very well; made with highly concentrated acid, I know of no better caustic to ordinary soft chancres. It is sufficiently destructive, and the pain, though sharp for a minute or two, soon passes away. The remedy was in the Dublin Pharmacopœia adapted from the French Codex, where it appeared under the name of the "acid nitrate de mercure."

may appear; but if the last intercourse preceding the appearance of the chancre should have been long, twelve or fourteen days or longer, although no induration either with the round or wider sore, or enlarged gland in the groin, the effect of caustics will be exceedingly uncertain; it is very probable that, if the sore heals kindly, the site or cicatrix will indurate and ulcerate again, and constitutional symptoms break out sooner or later. If cauterisation is to be successful, it must be immediate and applied to those sores only which appear a few days after intercourse. A poultice is the most convenient and best application during the time the eschar is separating, if the patient can rest, which should always be urged upon him as an essential point, if it can possibly be managed. The moment the eschar begins to be detached, and a secreting surface is exposed, the poultice must be abolished and other remedies employed. Of these, weak lotions are the best. I employ weak solutions of the acetate or sulphate of copper, alum, or zinc, or tannin in port wine, in the proportion of about two drachms of the former to six ounces of the latter. There are many objections to the use of caustics. The objections are, the violent pain they occasion, the length of time required for their application, their occasional and even frequent failure either in preventing constitutional infection or converting the soft chancre into a simple sore, and the swelling and inflammation of the penis which they frequently induce. Out of 66 cases treated by cauterisation with the chloride of zinc paste by M. Diday (*'Annuaire de la Syphilis,'* p. 230), 5 had secondary symptoms, and in 5 others the specific character of the sore was not destroyed; 56 were cured. The chloride of zinc paste should be left on the sore from one to three hours; the black caustic of Velpeau, the carbo-sulphuric caustic, must be suffered to dry on and separate with the eschar. In cases of soft chancre, the abortive treatment does not always prevent the occurrence of a virulent bubo. The chief objections are—1. They frequently fail in effecting the objects for which they are employed; they do not succeed in destroying the virulent nature of the chancre, nor in preventing the formation of a virulent bubo. 2. Their use is accompanied by most severe and long-continued pain. 3. They produce great swelling, inflammation, and œdema of

the penis. 4. They occasionally cause a sympathetic or phlegmonoid bubo. The late Baron Dupuytren was strongly opposed to cauterisation. He called it, not without some show of reason, the most fatal of methods.

There are certain conditions of primary venereal ulcers which contra-indicate or actually prevent their use. Caustic is useless after specific induration has commenced; it cannot be used in cases of chancre with phymosis, or in chancres situated within the urethra. It should not be used in cases of soft chancre, in irritable, sloughy, or inflamed conditions. If a chancre of this kind produces violent inflammation of the penis, this must be reduced by a proper general treatment before we have recourse to these remedies, which may be used after the inflammation has been subdued, if the sore be foul and stationary, and show no disposition to heal. The situation of a primary venereal sore frequently altogether prevents the use of the remedies in question; for instance, chancre situated under the prepuce, and producing complete or partial phymosis. In such cases there is generally more or less inflammation or tumefaction of the penis, more or less discharge from the preputial opening, and a distinct hardness can be felt, tender to the touch. This hardness may be lesser or greater according to the size of the concealed sore; I have felt it extending from the prepuce, under the skin of the penis, down nearly to the pubes. It is almost useless, in such cases as these, to attempt the reduction of the inflammation of the penis by the ordinary means, which would succeed were the surface of the sore exposed and not so situated. It must be borne in mind that the situation of the sore produces and keeps up the inflammation, and the phymosis which is dependent upon it. If the inflammatory symptoms in such a case run very high, rest, fomentations, a regulated diet, and a general antiphlogistic regimen, may be employed as preliminary measures, and we may succeed in subduing the inflammation more or less completely by these means. We must not, however, conceive that we have completely succeeded, unless we can reduce the phymosis, and expose the sore to view, the grand object towards which all our treatment should be directed.

In chancre, with inflammation of the penis and phymosis, if,

after a reasonable time spent in antiphlogistic treatment, the inflammation and tumefaction of the penis do not give way, and we cannot denude the glans, recourse must be had to the operation for the relief of the phymosis, and the chancre may be destroyed after the manner already laid down. By these means we shall prevent the inoculation of the recently cut surfaces. The parts should then be covered with pledgets of lint soaked in an appropriate lotion.

Most chancres, especially those of the soft variety, are attended, in the commencement, with more or less local inflammation; indeed, some of the most appalling results witnessed, under circumstances of this kind, arise from the excess of the local inflammation and the sloughing, rapid ulceration, or gangrene, which is its result. Many of the ill effects produced by primary sores are attributable to the want of a proper regimen on the part of the patient, and at this period rest and the recumbent position are, if it can possibly be obtained, of the utmost consequence.

Whenever we are consulted by a patient with a primary venereal ulcer, it will become necessary to point out to him, in as strong terms as possible, the necessity of his adhering rigidly to a very regular diet till the ulcer assumes a granulating condition, and to insist on a total abstinence from malt liquor, wine, or spirits, or at any rate to take these beverages in very moderate quantities. If the patient, from circumstances, cannot lie by and rest altogether, he should be recommended to retire early to bed, rest in bed being a most important auxiliary in the treatment of all forms of primary syphilis.

Whether it be the intention to submit the patient ultimately to mercurial treatment or not, these preliminary cautions should never be omitted. Many of the evils attendant on mercurial courses are to be attributed to not preparing the patient by diet and rest for the administration of this medicine. I do not subscribe to the tenets of those who treat syphilis systematically on what is termed the rational or simple plan, without mercury; but I must bear so far testimony in favour of this school to say, that they have conferred an immense advantage upon society by pointing out that diet, rest, simple dressings, and an antiphlogistic regimen, have a vast influence over the

ravages produced by syphilis; and wherever mercury is exhibited for the cure of syphilis, more particularly its primary forms, let the concomitant measures relative to diet and regimen be these which the rational school teaches, and I have just laid down.

If mercury be given for the cure of a primary venereal ulcer, it should not be used till the patient has been prepared to receive it, by adopting for some days the regimen laid down, and till all inflammation and irritation has subsided; it may then be employed with every hope of realising its most beneficial effects. To throw it carelessly in without these precautions, under a vague and false impression that mercury is a specific for syphilis, is worse than injudicious; it is criminal, and cannot be too much censured. Mercury will be indicated after the application of caustics, if the chancre become indurated after the separation of the eschar, or in cases of induration of the cicatrix after the apparent healing of the sore. In cases of the soft chancre, if used at all, it must be used under the circumstances already advised in the chapter on "Mercurial Treatment."¹

The local treatment of the sore must also be changed when the eschar produced by the caustic has separated, and the granulating process has commenced; and as mercurial applications are generally injurious during the ulcerating stage of chancre, so are they beneficial during the stage of reparation. Local applications during this stage may consist of calomel and

¹ The reader may consult the works of Wallace, Ricord, Desruelles, Cullerier, Brunstead, Acton, Berkely Hill, &c., on the points here in question. He will find all admitting the efficacy of mercury in hastening the cicatrisation of a primary venereal ulcer under the circumstances I have advised or permitted. The last three recommend mercury, when the sore is indolent, does not cicatrise under the simple plan; when its edges are hard and elevated, or the sore leaves behind it in healing an indurated cicatrix.

Mercury, although not a specific against syphilis, is the most powerful therapeutic agent we can employ in many cases in its cure (Ricord). I am far from rejecting the internal use of mercury in the treatment of the primary venereal ulcer. I believe that in many cases it is necessary, and even indispensable. (See Cullerier, *op. cit.*, p. 186, and the remarks of Desruelles, *op. cit.*, pp. 313—15.)

lime-water, or weak solutions of the acetate or sulphate of copper. If the soft chancre has been treated by caustics after the eschar has separated, it must be dressed with soft lint soaked in one of the lotions mentioned below. As a rule, all ointments should be interdicted, especially those containing mercury, and all lotions which contain much mercury in suspension or solution, such as the black and yellow washes, &c.

Local dressings to chancres are of the utmost importance. A very trivial error in this respect will entail very serious consequences. If the chancre becomes painful or is disposed to spread, if the edges become hard, overhanging, and elevated, and the secretions from its surface are increased, that particular dressing must be given up and another substituted for it. They consist in the application of aromatic wine,¹ medicated either with tannin,² with opium,³ or with both; or in solutions of sulphate of zinc,⁴ or the sulphate or acetate of copper,⁵ or potassio-tartrate of iron.⁶ These are the best applications I

¹ The aromatic wine of the French Codex is composed of four ounces of aromatic herbs (rosemary, rue, sage, hyssop, lavender, absinthium, origanum, thyme, laurel leaves, the flower of the red rose, chamomile, mellilotum, and elder), digested in two pints of red wine for eight days.

² ℞ Vini aromatici, ℥viij;
Tannin, ℥ij. M.

³ ℞ Vini aromatici, ℥viij;
Tannin, ℥ij;
Ext. opii pur., ℥ss. M.

Mr. Maunder recommends in lieu of the aromatic wine, one drachm of the tincture of the sesquichloride of iron to eight ounces of distilled water.

⁴ ℞ Zinci sulph., gr. ij;
Tinct. lavandulæ co., ℥j;
Aquæ destillat., ℥vij. M. ft. lotio.

An excellent dressing in the earlier stages of chancre.

⁵ ℞ Cupri sulphatis, gr. j ad gr. x;
Aquæ rosæ, ℥j. M. ft. lotio.

℞ Cupri acetatis,
Aluminis exsiccatae, āā gr. ij ad gr. xv;
Hyd. chloridi, gr. v ad ℥ss. M.

Of great use to touch soft chancres which are indolent and stationary.

⁶ ℞ Ferri potassio tart., gr. x ad ℥j;
Aquæ, ℥j. M.

In ulcerative phagedena or the serpiginous condition of soft chancres should be accompanied by the internal use of the same remedy.

know of to chancres in various states of ulceration, and may be used to sores after the eschar produced by the caustic has separated, or in cases where caustic or the abortive or destructive method has not been practised. I have long proved the efficacy of these remedies; they are what I daily employ in the ulcerating stages of primary syphilis.

Chancres should be duly washed, by suffering a shower of tepid water to run over them from a sponge, so as to cleanse them from the secretions with which they are covered or which adhere to them; they should not be rubbed or touched with the material used to cleanse them, for fear of disturbing any parts in process of healing. Afterwards they may be covered with a piece of fine soft lint or charpie well moistened with one of the remedies mentioned; these should be changed, as a rule, twice a day. Care must be taken, in renewing the dressings, to soften the lint well before it is removed, so that no part of the surface or surrounding skin may be torn away with the lint.

These preparations possess the advantages of modifying the surface of the sore, of promoting its rapid cicatrisation, of diminishing the secretion of pus from its surface, and by their astringent properties acting upon the surrounding tissues, or preventing the extension of the disease, or the formation of fresh chancres, a circumstance which should be carefully guarded against. The use of the aromatic wine, with or without tannin, is contra-indicated when the surface of the sore is dry, furnishing no secretion and remaining indolent, or again, where, the edges being indurated, these dressings seem to increase the induration.

The state of the economy at large demands much attention on the first appearance of a venereal ulcer; and we must here bear in mind the golden rule, that the varied appearances of primary venereal sores, and the characters they afterwards assume, depend very much, if not altogether, upon the natural constitution of the patient, and upon the particular condition of his health at the time he imbibes the venereal poison. Thus, in many instances, a primary venereal sore upon the penis produces the most intense local inflammation and fever. Under these circumstances the patient must be treated upon general principles: he should be restricted to the simplest diet, and

kept quiet in bed, whilst emollient fomentations or poultices are applied to the sore. The local inflammation and fever are first to be removed, in these cases, before we think of resorting to escharotics; and should the stage of ulceration be arrested by these means, and the sore assume a disposition to heal, it will not be necessary, or even safe, to use them at all, but the granulating ulcer must be treated in the way we shall presently mention.

The more mildly chancres, especially soft ones, are treated locally, the less likely are they to be followed by those appalling complications which sometimes accompany them, such as rapid ulceration, sloughing, or disorganisation of the penis and scrotum, which used to be so common under the old treatment of stimulating mercurial applications during the first days of chancres. I dwell upon this point, because I deem it of the first importance, whilst we have the universal testimony of modern writers on syphilis in its favour. To well understand the principles on which the local as well as the general treatment of primary sores must be conducted, the surgeon must constantly bear in mind the two stages of chancre: in the first we have to do with a specific sore, irritable, poisoned, and poisonous, liable to be irritated by the least stimulus; whilst in the second we have a simple ulcer destitute of all these characters.

The local applications must be varied to suit the actual condition and aspect of the sore: should it be painful, opium combined with the remedy we apply is useful. Should the irritability of the ulcers be of the inflammatory kind, it will be necessary to leave off all stimulating dressings, and have recourse to emollient fomentations; as topical applications, when the inflammatory symptoms have subsided, solutions of the nitrate of silver, sulphate or acetate of copper or zinc, or pomades of calomel and opium, or mercurial ointment and opium. All these varied preparations may be found useful in various conditions of the surface of the primary venereal ulcer. The condition of the latter is the only circumstance that can guide us in their proper mode of application.

The primary ulcer specifically indurated demands a treatment, both local and general, different from the simple or non-

indurated forms of disease. I have already explained why its destruction by escharotics must not be attempted after induration has taken place. Should it be first presented to our notice already specifically indurated, or should induration come on after the use of escharotics, or should induration appear on the site of the old cicatrix after the ulcer has apparently healed, the patient must be placed on a mercurial course, regulated by the rules already laid down; and this must be persevered in till the ulcer has healed, and all indication of the cicatrix has disappeared.

The patient should be put on a milk or broth diet, submitted to the action of the mercurial vapour-bath daily, and directed to use mercurial frictions every night. I continue this plan till the gums are red, elevated, and spongy; the vapour may then be administered every two or three days till the sore has healed and the induration gone. Two or three days' treatment generally makes a marked impression on the disease, even before the constitutional effects of it are ascertainable. I will venture to affirm, that this is by far the most certain method of removing the induration and preventing constitutional taint from an indurated primary sore; and it has the vast advantages of being free from the evils of a mercurial course, as commonly conducted. I have treated patients by hundreds on this plan, and I have never seen any evils from its use that could occasion more than a passing anxiety; in a few instances only has a smart ptyalism or diarrhœa been induced, easily controlled by opiates, the chlorate of potass, and astringent gargles.

After the healing of a primary sore, the cicatrix occasionally remains hard and elevated, and is prone to ulcerate again on the occurrence of the slightest exciting causes. This local condition denotes the persistence of syphilitic action in the system, and is the "forerunner of accidents to come." A patient in this condition may daily look for secondary local ulcerations of a rapid and destructive character, and constitutional symptoms of a more or less formidable kind. It therefore behoves him to adopt speedy means for the removal of the induration, which may be generally accomplished, and till that period arrives he cannot be considered safe. I could detail a number of cases

of induration of this character which I have entirely succeeded in removing by the continuance of the plan just laid down for the treatment of the indurated chancre; a gentle and continued action of the remedies should be kept up till the induration has entirely disappeared. It is a rare circumstance for this plan of treatment to fail: should, however, the induration not appear to yield after two or three weeks' treatment by vapour and friction, mercury may be administered by the mouth. One preparation of mercury will succeed, occasionally, when another has failed; the plan laid down is applicable and successful in the great majority of cases, but exceptions will from time to time occur. Specific induration always remains for a time after the chancre has apparently healed, and in many cases, as I have already said, a secondary ulceration, and even a third, will take place as long as the induration remains. Should this not occur, the induration remains, more or less marked, for two or three months after the chancre has healed; sometimes much longer. Cases have been recorded where these indurations have remained for years. (See M. Puche's tables, quoted by M. Ricord in his 'Lectures on Chancre.') I have seen since then one case where a distinct induration on the seat of an old chancre has remained for several years; but in such instances the indurations appear to have lost all their specific character, for in two cases the subjects of them had been some time married, and both wives and children were in good health.

Buboes form only in the glands which are placed on the course of the lymphatics in connection with the primary sore; and hence it is that buboes in the groin do not form as a consequence of ulcers confined to the glans penis, since the lymphatics of the veins do not pass through the glands situated in the groin, but under the arch of the pubis, to open into the glands placed within the pelvis. The lymphatics from the skin of the penis, from the angle between the glans and prepuce, from the crypts on the side of the frænum, and from the scrotum, all pass through the glands in the groin, and hence chancres situated in any of these localities are liable to be followed by bubo. When the chancre is soft or simple, no bubo may form, if the patient keep quiet, is properly treated, and the local applications used not of an irritating nature.

Under other circumstances, a gland in one or both groins may be attacked with inflammation (adenitis), which may or may not run on to suppuration; in a great majority of instances suppuration does take place, and frequently the chancre has been long healed before the suppuration in the gland is complete. The cause of these buboes is either an extension of inflammation along the lymphatic to the gland, produced by ordinary non-specific causes, or by the absorption of a specific pus from the chancre itself.

Buboes are often much more formidable diseases than the chancres which cause them. The non-virulent bubo is often followed by a succession of abscesses, sinuses, and induration of the surrounding integument and cellular tissue, which are sometimes months disappearing; the non-virulent bubo is frequently produced by walking, riding, skating, or free living, whilst the patient has a primary sore still uncured: the local applications to the primary sore frequently produce this kind of bubo; the use of escharotics frequently does so, whatever may be said to the contrary.

The open virulent bubo becomes formidable from its liability to assume a form of ulcerative phagedena: the ulcerations run upwards over the abdomen, and downwards over the thigh; they preserve their virulence for weeks or even months after the chancre has healed; during which periods, if inoculated, they produce a virulent ulcer, fearful mutilation, and occasionally terminate fatally, from the extension of the ulceration to the coats of the surrounding blood-vessels. I have seen the femoral artery opened by these ulcerations, and the patient die instantly from the hæmorrhage produced; the external iliac has been perforated in the same way.

The buboes which succeed to chancres specifically indurated are much less formidable as local diseases than the two forms just alluded to: they consist in a chain of enlarged and hard glands in one or both groins, generally in both, and in one more than the other; several glands are hard and tender, one generally more than the rest; they show no disposition to suppurate, and rarely do so. They are, literally, blind chancres in the groin, require no local measures, and are only to be dispersed by means of constitutional treatment.

CHAPTER IX.

OF CHANCRES OF THE URETHRA.

CASES of syphilitic ulcers in the urethra have been cursorily alluded to by many surgical writers. Hunter mentioned them; they are also noticed by Mr. R. Carmichael in his 'Clinical Lectures on Venereal Diseases.' The late Dr. Wallace spoke of some discharges from the urethra of venereal origin which were only curable by mercury; but it has been left to modern surgical pathologists to demonstrate that primary venereal sores, precisely resembling in their nature and consequences chancres situated externally, may exist in the canal of the urethra itself, at variable points between the meatus urinarius and the bladder.

M. Lagneau fils has collected a great number of cases of deep-seated ulceration of the urethra, prostate, and bladder, which coincide with urethral discharges, having all the characters of gonorrhœa. Although M. Lagneau considers many, if not most, of these cases as ulcers produced by a protracted gonorrhœa, there is no doubt that many of them were true chancres, many not discovered till after death, and many of them, again, accompanied by constitutional syphilis. (See '*Du Chancre Larvé, ou Ulcération syphilitique primitive intra-urétrale profonde,*' &c., par Lagneau fils, reprinted from the '*Archives Générales de Médecine,*' &c.)

The most frequent seat of urethral chancre is the fossa navicularis. Here there is no doubt of the nature of the disease; but the chancre may be situated more deeply, where it can neither be seen nor felt, and where the only proof of its existence has been the successful inoculation of the discharge

from the urethra, or the constitutional taint of which that discharge has been the only primary disease.¹

Discharges from the urethra are due to more causes than one; and hence we find "that there occur cases of these discharges in which we find mercury to act in the most salutary manner; and others, again, in which the discharge will continue, and be, after a time, followed by induration and bubo, and most probably by secondary symptoms, unless this medicine be given." When we consider the generally powerless effect of mercury over pure gonorrhœa, we cannot but suppose that these remarks must refer to chancres or venereal ulcerations of the urethra, which an imperfect diagnosis has confounded with gonorrhœa.²

The symptoms of urethral chancre are, heat, itching, or irritation in the urethra, accompanied by discharge; pain or tenderness in a particular part of the urethra when it is rolled between the fingers; the presence of a distinct induration at the point where the pain is complained of; pain also increased during micturition, and referred to the same point. Discharge from the urethra occurs at various and at irregular periods after the setting in of the first symptoms already described. It is very different from the discharge of gonorrhœa; it may be sanious, bloody, or of a sloughy character, and commonly does not flow unless the indurated portion before described be pressed forcibly between the fingers.

Where there is an infecting chancre in the urethra there is distinct circumscribed induration, generally situated in or near the fossa navicularis, more or less swelling of the penis, especially of the glans, which is commonly red and shiny; little or no discharge; sometimes a little pus or sanies exudes mixed with blood; little or no pain on micturition, much less than in gonorrhœa, and a distinct adenopathy in one or both groins.

The only disease for which chancre of the urethra is likely to be mistaken is gonorrhœa. From this it is to be distinguished

¹ It is not improbable that too great prominence has been given to the fact that all discharges from the urethra followed by secondary symptoms are due to a chancre situated deep in the canal. I have elsewhere alluded to this. See Lagneau, 'Du Chancre Larvé,' *op. cit.*

² Wallace, *op. cit.*

by the history of the case, the character and quantity of the discharge, the presence of a distinct circumscribed induration in some part of the urethra, most commonly seated in or immediately behind the glans penis.

When muco-purulent discharges from the urethra continue to resist the usual methods of treatment we may resort to the means of differential diagnosis, of testing the character of the disease by inoculation. It has been established that the inoculation of the skin of the thigh, the prepuce, or elsewhere, with the matter of pure gonorrhœa produces no result, or at best a negative one.¹ The same inoculation with matter from the urethra, secreted by a chancre in that part, gives rise to chancre. In eighty-five cases of urethral discharge, thus tested by M. Mairion, at the military hospital of Louvain, four produced chancres by inoculation; the remaining eighty-one gave no result.

In some rare cases, a primary venereal sore in the urethra and gonorrhœa may be contracted by the same connection. I will mention one which seems to bear upon this point.

CASE XV.

Gonorrhœa and urethral chancre the result of the same intercourse.

A gentleman, fifty years of age, contracted from a suspicious connection a discharge from the urethra, which had all the characters of ordinary gonorrhœa; he placed himself under the care of an eminent practitioner, and took for a month the ordinary remedies, such as copaiba and cubebs: with this treatment the discharge disappeared. At this time a slight ulceration was perceptible round the meatus, which seemed to come from within the urethra. This spread rapidly, soon involving the whole under surface of the glans, and the urethra for an inch and a half, which were entirely destroyed by ulceration and sloughing. I was consulted on this case, which was succeeded by extensive nodes, and a pustular eruption; and what is very remarkable, the nodes were the first constitutional symptoms which occurred, an exception to the law which seems

¹ See the chapter on "Inoculation," and the cases of "chancres larvés," in Ricord's work, before referred to.

to regulate the appearance of constitutional symptoms generally.

It is not uncommon to see patients with external sores and a true gonorrhœal discharge from the urethra at the same time; neither, in the female, is it rare to see true primary venereal sores in the vulva, vagina, or uterus, coexistent with purulent discharge from the os uteri or urethra. In the male, however, more particularly, these two primary forms of disease are not curable by the same remedies. In the case I have just quoted, it appeared that the two forms of primary venereal infection existed simultaneously in the urethra at the commencement, since the symptoms of gonorrhœa disappeared under the use of the ordinary specific remedies, whilst the venereal ulcers continued to spread, and ultimately produced the most serious mutilation. We have no further proof of the opinion I have hazarded than is to be drawn from the effect of remedies, a fact to which I am disposed to attach very considerable importance.

Chancres in the urethra may be met with as a solitary form of primary venereal infection, or they may coexist with sores situated externally. It very commonly happens, also, that the presence of external sores, and the absence of discharge from the urethra, prevent any examination of the latter. In examining, however, a patient who applies with a primary venereal affection, the canal of the urethra should always be pressed between the fingers, and the lips of the meatus opened.

A gentleman contracted several small sores situated on the glans and prepuce; they were free from pain and irritation, and healed quickly under ordinary treatment; the glans, however, became swollen, red, and shining, and yet there was no external symptom to account for it. On everting the lips of the meatus, a small sore was discovered, upon which the condition of the glans was evidently dependent, since it disappeared as soon as the sore in the urethra healed.

The prognosis of chancres in the urethra is not always favorable; Ricord and Vidal de Cassis have shown that by extension to the bladder they may terminate fatally. The prognosis is again unfavorable as regards the integrity of the

organs of generation, since, however carefully they may be watched, severe mutilations are occasionally produced. The chief evils I have seen arise from chancres in the urethra have been the following :

1st. Contraction of the orifice of the urethra by the cicatrix of the chancre. I attended a gentleman who had a chancre of the orifice of the urethra, which, in healing, so contracted the meatus, that it would not admit the bulbous extremity of an ordinary silver probe.

2nd. Contraction of the urethra by the cicatrix of the chancre where the sore has been situated lower down. To this species of stricture the term traumatic has been applied. It does not readily yield to the bougie.

3rd. Perforations of the urethra. These are variable in extent and situation, but are commonly situated immediately behind the glans. I have said that a very common seat of chancre of the urethra is the fossa navicularis, and the glans is sometimes scooped out, as it were, by the spreading out of venereal ulceration in this situation. I have seen this passage behind the glans opened for an extent of an inch and a half by the ravages of an urethral chancre.

4th. The urethra itself may be completely destroyed to a greater or less extent. Of this also I have seen one example, where the passage was destroyed by ulceration for two inches, and the urethra opened on the under surface of the body of the penis.

The situation of chancres within the urethra prevents the adoption of the practice recommended to be employed in primary venereal sores situated elsewhere. The use of caustics is clearly impossible, unless the sore be situated immediately within the passage ; and even then the application will require great care and attention, and is not generally to be recommended.

From the situation of a primary venereal sore in the urethra, we are prevented employing the local remedies commonly used in the treatment of chancre ; and an indiscriminate course of mercury is still more useless and injurious.

The existence of chancre of the urethra being ascertained, the inflammatory symptoms are to be first subdued by a treat-

ment appropriate to the earlier stages of gonorrhœa; diet, rest, diluents, and fomentations, with emollient injections; afterwards injections with any of those lotions, properly diluted, which have been recommended in the ulcerating forms of chancre. An appropriate escharotic may be used, if the inflammatory symptoms are not too acute, and the chancre situated within reach. It is useful to introduce a small plug of lint into the urethra, impregnated with the injection employed, with the view of keeping the surfaces apart, and preventing any extension of the disease.

Mercury may be employed in chancres of the urethra with indolent indurated glands in the groin at the period and in the manner before recommended in the treatment of indurated primary venereal sores situated elsewhere.

CASE XVI.

Chancre of the urethra.

R. M—, aged 29, contracted, from the same connection, sores on the penis and a running from the urethra, seven years before. The ulcers on the penis were cured, very likely by a mercurial course, as the patient has been repeatedly salivated. The treatment which cured the external sores had no effect upon the discharge from the urethra. This continued; it has been repeatedly treated, but never cured. Soon after this, scaly blotches appeared on the forehead and other parts of the body, which disappeared under medical treatment. Disregarding the discharge from the urethra, which never disappeared, and fancying himself well, our patient now married. His first child died a few months after birth, covered with blotches; a second and a third child shared the same fate, and died under the same circumstances. The wife also had sores and bloody discharge from the vagina, and blotches on the body, the husband still having no affection except the slight running from the urethra, which sometimes attracted his attention, and at others was totally disregarded.

During these periods, R. M— had at several times fresh constitutional symptoms, for which he underwent a variety of treatment, but was never free from the running from the urethra. In November, 1843, between six and seven years

after the contraction of the primary disease, he came under my care as a patient of the Queen's Hospital. He was then in the following state: The head and face were covered with foul blotches, which consisted of incrustations or scabs, concealing deep, irregular, and ill-conditioned ulcers; there was superficial redness of the fauces, but no ulceration at this time; he was feeble and emaciated from long-continued disease. The skin disease was evidently pustular in its commencement, as one or two fresh-formed pustules were on the face: these pustules were situated on an inflamed base, and, when they broke and discharged, ran into ulcers, covered with flat or conical crusts, thus constituting a variety of disease to which the term "pustulo-crustaceous" has been applied.

He denied at first having anything the matter with the genitals, but, on closer questioning, admitted that he had a running so slight as to be hardly worthy of notice. On examination, I perceived a sanious oozing from the urethra, very different from that which characterises chronic gonorrhœa or gleet. About an inch from the meatus, immediately behind the glans penis, existed a circumscribed induration, about the size of a hazel-nut: this was painful when pressed between the fingers, and the pressure occasioned some blood and portions of white tenacious sloughs to issue from the urethra. On separating the lips of the meatus urinarius by means of a small speculum made for the purpose, the commencement of ulceration, which appeared to extend deep into the urethra, could be perceived.

This case is remarkable under many points of view. In the first place, the disease itself (primary venereal sore in the urethra) is not of every-day occurrence, although I have seen many instances of it; again, the time which the sore has existed is remarkable. There is no evidence that R. M. had ever contracted a venereal disease subsequent to his marriage; the evidence of the wife and himself is conclusive upon this point. The sores which he contracted at the same time with the running were cured previous to his marriage, the running still remaining; some days he perceived none; yet, having no other disease than that in the urethra, we observe the wife becoming

diseased, and three children dying, with unquestionable venereal affections.

This case is one, then, of primary venereal sore in the urethra, contracted at the same time with external primary sores. The primary sores were healed, but the urethral sore remained uncured, and marrying in this state, his offspring all die diseased, and his wife also is affected.

The patient has had repeated attacks of constitutional disease in the most alarming forms, which have recurred as often as they have been cured; and this I explain by the sore in the urethra being still open and poisoned, and thus forming, as it were, a well of poison, which was constantly tainting the system.

It is proved by the history of this case, then, which has been very carefully watched and examined, and the history very correctly taken, that primary venereal sores may exist within the urethra for a long period of time. M. Cullerier has recorded a case of this nature, which had, when presented to his notice, continued upwards of a year, and was then uncured, although the patient had been submitted to repeated treatments. These sores may be seated in any part of the urethra, and even in some rare cases extend to the bladder itself.

CASE XVII.

Thickening and contraction of the urethra, from the cicatrices of venereal sores situated in the fossa navicularis; chancre of the fossa navicularis.

R. T. came to consult me respecting what he termed an obstruction in his urethra; he gave the following history of his case:—About eighteen months ago (September, 1843), shortly after a suspicious intercourse, he perceived a slight discharge from the orifice of the urethra, from which there issued some drops of pus; on separating the lips of the urethra he perceived within them a small sore. He applied to a druggist, who furnished him with an ointment which irritated the sore and made it worse. Some time after this a surgeon was consulted,

who recommended mercury ; this was taken till salivation was produced. The sore, however, did not amend under its use ; it was still to be perceived when the urethra was examined, and the same discharge of drops of pus continued.

He consulted, some time after this, a second surgeon, who cauterised the sore daily with the nitrate of silver ; this produced hardness of the glans penis, and discharge of sloughs and blood from the urethra. This state of things continuing the patient began to lose confidence in the mode of treatment, which he abandoned, and, three weeks after the last application of the caustic, he consulted me. Copper-coloured spots made their appearance on several parts of the body, the arms, and trunk, at this time.

When the patient pressed the urethra forcibly between the fingers, he brought from it a thick tenacious slough, exactly resembling that which covers a chancre in its first or ulcerating stage. The under surface of the glans penis was red and inflamed, and, when this part was examined between the fingers, a considerable induration was perceived, which appeared to exist in the lower part of the fossa navicularis, just within the urethra. When this induration was pressed, there issued from the urethra pus, sometimes mixed with blood, and at times tenacious shreds or portions of sloughs similar to those already spoken of. I examined the interior of the urethra for an inch and a half or more, with a small speculum made for the purpose. A white smooth cicatrix occupied the whole of the fossa navicularis on its upper part and sides ; I could not obtain a clear view of the bottom of the fossa, where I believe ulceration still existed. This I inferred from the induration, the redness opposite this part, and the character of the discharge forced from the urethra when the induration was pressed between the fingers.

There were no constitutional symptoms in existence either in the throat or vicinity of the anus ; some copper-coloured blotches only occupied the arms and legs. In primary venereal sores of the urethra, the local treatment is a main point to be attended to. I recommended the patient to inject the urethra three times a day with tepid olive oil, and in the intervals introduced into the passage a thin shred of soft lint soaked in a

solution of tannin and extract of opium.¹ The lint was kept constantly in the urethra, merely being removed when the patient wished to make water. The patient was also directed to take one grain of the iodide of mercury with three of the extract of conium, in a pill, every night, and to be strictly regular in his mode of life. With very slight modification in the mode of treatment at first laid down, this case was brought to a successful issue; the induration and discharge disappeared from the urethra, and the copper-coloured blotches from the body. There remained some contraction of the urethra, produced by the first cicatrix, which was materially relieved by the bougie. This constitutes what has been termed by some writers "traumatic stricture," very commonly produced by the cicatrices of primary venereal sores thus situated, which, when they do not actually contract the urethra, partially destroy its elasticity, and produce many troublesome symptoms, more particularly a dribbling away of the urine for some minutes after the patient has done making water. This constitutes a species of incontinence of urine whose cause is to be sought for, not in the bladder, but in the urethra.

¹ R Tannin, gr. x;
Ext. opii pur., gr. ij;
Aquaë, ℥j. M. ft. lotio.

CHAPTER X.

OF PHAGEDENA.

INSTEAD of following the regular course, the primary ulcer assumes a character of rapid ulceration or sloughing, to which the term phagedena is applied. Phagedenic ulcers assume various forms: sometimes they are intensely painful, the surface covered with a tenacious yellow slough, the edge red and hard, and the surrounding integuments little or not at all affected. This species of sore spreads rapidly by ulceration, and if not arrested frequently occasions fearful mutilation.¹ Soft or simple chancres frequently assume this character at the commencement, without any evident cause; but it is again a secondary condition, produced by the habits or constitution of the patient, the injudicious exhibition of mercury, or improper local treatment. Either a primary or secondary syphilitic ulcer may become phagedenic: hence there are two kinds of phagedena, primary and secondary. Primary ulcers may assume a phagedenic appearance from an excess of local inflammation; in such cases the penis is lividly red, much swollen, and the sore itself covered by an adherent parti-coloured white or black slough. With these local conditions the constitution of the patient sympathises more or less; there is, in some cases, smart symptomatic fever, the pain prevents sleep, and there are profuse night perspirations.

¹ This is ulcerative phagedena, and it is a condition into which simple chancres frequently degenerate; it also attacks those ulcers which succeed to a bubo which has suppurated specifically. It is a simple, slow, destructive ulceration, in which the edges of the chancre are thick, jagged, overhanging and irregular, and its surface red, shining, and without granulation. I have seen two instances in which these ulcerations have continued, one for twelve, the other for eighteen months. Soft chancres in a state of ulcerative phagedena are commonly termed by French writers "serpiginous."

Phagedena is most commonly the result of inflammatory action; this is more especially the case in chancres where the phagedenic action is marked by sloughing; the slough may be white or black. In the former case, there is a thick tenacious slough, of a white colour, adhering firmly to the surface of the chancre; and when thrown off or taken off quickly reproduced; the edges of the parts immediately in contact with the sore are vividly red, and the whole penis is commonly swollen and inflamed. The prepuce is transformed into a thick puffy ring; surrounding the glans forming a barrier between it and the body of the penis, there is more or less paraphymosis, and on turning up the swollen prepuce, we find a stricture formed by the contracted integument by which the paraphymosis is produced.

Dr. Wallace¹ particularly insists on the benefit to be derived from mercury, in phagedena with white slough. "All the varieties of this form of phagedena or irritability are in general favorably influenced by mercury." In black slough, on the contrary, he unhesitatingly condemns it.

In many cases no positive cause can be assigned.² I have seen phagedena in persons previously very healthy. Desruelles, in the true spirit of Broussaism, attributes it to irritation of the viscera, a chronic gastritis, or gastro-enteritis. Ricord believes also that there is commonly an accompanying visceral irritation, but thinks also that a cold damp atmosphere disposes primary sores to become phagedenic. Mr. Mayo states that "what gives the phagedenic character to sores on the genitals after infection is some peculiarity of the general habit." This is perhaps true, but the difficulty is to know in what this peculiarity consists.

Primary phagedena is most commonly seen in soft chancres situated on the penis, and the ulcerative form is here the most common; the ulcerative stage of the chancre goes on unchecked

¹ Wallace, *op. cit.*, p. 181.

² Phagedena occurs commonly in persons who consume large quantities of spirits and ale; just in the same way that simple wounds become gangrenous in persons of similar habits. Irregular habits, spirit-drinking, and dressings used to soft chancres in their early stages, must certainly be ranked amongst the most frequent causes of phagedena.

by remedies, and the ulcer becomes phagedenic. This form of disease is particularly liable to occur at the orifice of the urethra; it commences in the fossa navicularis; the glans penis is red, shining, and swollen; a sanious discharge issues from the meatus, and a white ring soon surrounds it; the ulcerative process soon extends over the whole glans. Mutilation can hardly be prevented in such cases; for to however a trifling extent the substance of the glans may be destroyed by ulceration, it is never repaired: the ulcers may cicatrise and heal, but the loss of substance is not restored. On everting the lips of the meatus in such cases, a white slough may be seen covering the whole surface brought into view. It is in the phagedenic ulceration of the soft chancre that M. Ricord has recommended the potassio-tartrate of iron. I have had ample experience of its beneficial effects, but it is by no means a specific in such states.

The treatment of phagedena is local and constitutional. The first indication is to arrest the process of ulceration or sloughing, whether this be done by local or constitutional measures, by escharotics of various kinds locally, or by bleeding, tartar emetic, opium, or mercury, as constitutional remedies.

One of the most apparently feasible means of arresting the ulcerative process is destruction of the whole surface of the sore by caustics, such as strong nitric acid, the acid nitrate of mercury, or the other remedies described as applicable to the abortive treatment of chancre. The sore must then be covered with pledgets of lint soaked in warm olive oil, or strong decoctions of poppy, or aqueous solution of opium.¹ Although this may be practised in some forms of phagedena, there are others in which it is inadmissible or positively injurious. In sores characterised by great irritability caustics are hurtful, and in those marked by great inflammatory action this must be subdued before they are used; they may then be employed, if necessary. In these varieties of phagedena a purely antiphlogistic treatment, with anodyne fomentations, is the safest practice, leaving the application of caustics till the inflammatory action has been in some measure subdued. As local appli-

¹ Caustics are sometimes utterly inefficient in averting the ravages of phagedena.

cations to very irritable ulcers of this kind I have found the unguent. zinci with opium answers very well where all other applications have failed.¹ As a detergent for sloughy sores, or after the acid has been used, one of the best applications is composed of equal parts of balsam of Peru and castor oil.²

In forms of primary phagedena attended by severe pain, the chief reliance is to be placed upon opium, with or without tartar emetic; conium, hyoscyamus, and other sedatives may be employed, but the most certain remedy is the first; this may be combined with sarsaparilla in conjunction with the iodide of potassium, the mineral acids with bark, or the cold infusion of sarsa in lime-water.³ In the inflammatory forms general bleeding may be indicated; but, except in extreme cases, I do not approve of this practice. I prefer low diet and tartar emetic as a means of reducing inflammation. It must be remembered also that we have to deal with a specific and not a common inflammation, and as I have already remarked, when speaking of the inflammatory forms of gonorrhœa, that the inflammatory symptoms do not in all cases yield to antiphlogistic treatment, we debilitate the patient very often by them, and do not ameliorate the disease. There are cases in which the degree of inflammatory action accompanying a primary syphilitic sore is not a positive contra-indication to the use of mercury. Dr. Wallace had already remarked this, and founds his opinion on the value of mercury freely exhibited in syphilitic iritis, and upon the fact that mercurial fumigation, in certain destructive sores of the throat are very frequently beneficial, though attended by great inflammatory action.⁴ No remark

¹ R Unguent. zinci, ℥jss;
Pulv. opii, ℥ij. M.

² Mr. Cock, of Guy's Hospital, recommends constant irrigation with tepid water. Many successful cases are recorded.—'Medical Times and Gazette,' April 17th, 1856.

³ R Rad. sarsæ, ℥iv;
Rad. glycyrrhizæ, ℥j;
Liquoris calcis, Oij.

Macera. per horas xxiv. Cap. poculum magnum, ter die.

⁴ In secondary phagedena of the throat and fauces, I have rarely found the treatment by mercurial vapour fail; during its use the patient must live well, and take the iodides of iron, potass, soda, or ammonia, with or without bark.

can be more correct. The records of cases in my own practice have offered me abundant evidence of the truth of this position, and I think the following rule laid down by Dr. Wallace of extreme value: "that although that form of inflammation which supervenes when a patient is under a mercurial course is sure to be aggravated by persisting in the use of mercury, the remedy will powerfully assist to subdue inflammation which commences under different circumstances."

In those forms of phagedena which are characterised by a black slough, the sloughing phagedena of British surgeons, the gangrenous phagedenic chancre of the French, mercury is wholly inadmissible; the disease is to be treated on the principles which should regulate us in the management of similar diseases not syphilitic. It must be recollected, however, when the sore has been brought to heal by proper remedies, that it has had a venereal origin, and perhaps has succeeded to a regular primary sore, rendered gangrenous by irregularities and bad treatment, and therefore that it may be followed by secondary or constitutional symptoms.¹

It will be evident from what has been said that mercury is not to be generally employed in phagedena; although there are cases in which its use may be beneficial, and these are chiefly where all other ordinary means have failed in arresting the extension of ulceration; when it is indicated, the method *par excellence* is that by fumigation. The other remedies consist of venesection, and tartar emetic;² in the inflammatory forms the

¹ In the gangrenous forms of phagedena, covered with black sloughs, where the junction of the diseased with the healthy tissues is marked by a red inflammatory ring, caustics are wholly inadmissible; this is gangrenous phagedena from excess of inflammation; the line of treatment generally suitable consists of charcoal poultices, with large doses of opium and tartar emetic; supporting the system with porter, wine and bark.

² Carmichael's Antimonial Solution:

R Antim. tart., gr. iv;
Tinct. opii, ℥j;
Tinct. card. co., ℥ss;
Syrup., ℥ss;
Aquæ fontanæ, ℥vij. M.

Administered in the simple or compound decoction of sarsa, in primary

dilute nitric acid, or the nitro-muriatic acid, or the hydriodate of potass with bark, or sarsaparilla. In the way of local treatment in certain cases, no applications are better than strong nitric acid, the acid nitrate, or the pernitrate of mercury, "used freely to the sore, and repeated till a clean vascular surface comes into view." The first or second application is not attended with considerable pain, as the disorganized surface tends to protect the more sensitive parts underneath; but as the slough becomes detached, the pain is increased on each successive application. If the slough be reproduced, it may be dressed with equal parts of balsam of Peru and castor oil.¹

Secondary venereal ulcers sometimes assume a phagedenic character. Secondary phagedena is chiefly met with in the throat and fauces in bad constitutions, or constitutions broken down by bad living, long-continued disease, or improper treatment. To these we shall return, when speaking of secondary syphilis.²

CASE XVIII.

Phagedena of the body of the penis, spreading by rapid ulceration; failure of ordinary treatment; cure by mercurial fumigation.

A young gentleman, of delicate constitution, aged 22, contracted a sore on the body of the penis. It appeared first as a pimple, but rapidly ulcerated and spread. I saw this patient seventeen days after the first appearance of the ulcer. It was then as large as half-a-crown, covered with a tenacious yellow slough, the edges hard, elevated, and red, but no characteristic induration. The pain from the ulcer was most severe, its surface very sensitive; the patient could not sleep, and was tormented with profuse perspirations. Various local remedies were tried without effect; the irritability and sensitiveness of

venereal ulcers, where much inflammation is present; also in the earlier stages of all syphilitic eruptions.

¹ Egan, on Primary and Secondary Phagedena, 'Dublin Journal,' January, 1845.

² Secondary phagedena of the pharynx and fauces very frequently yields in a remarkable manner to frictions of calomel on the tongue and gums. See the section on the uses of calomel as an antisyphilitic.

the sore were so great that I feared to use caustic to avert the spread of the ulceration, which increased daily. The only local remedy which could be borne was the unguentum zinci with powdered opium. For twelve or fourteen days I kept this patient in bed, and gave him large doses of conium with opium, sarsa with nitric acid, &c., with very little, or I may say no good effect. The ulceration continued to extend, and threatened to involve the whole integument of the penis. I now resorted to the moist mercurial fume. I placed him in a strong bath, in which he only remained ten minutes, the pain produced was so great, and when he was removed he fainted. On the next day the ulceration had not spread; the bath was again used, with less pain; on the third day there was no pain, and one or two healthy spots made their appearance in the centre of the slough which covered the sore, and the edges were less hard. After the fifth bath, the ulcer was covered with healthy granulations, and very shortly healed. The gums were very slightly affected.

CASE XIX.

Indurated phagedenic ulcer of the glans penis; failure of ordinary treatment; cure by mercurial fumigation.

A commercial gentleman, very healthy, 28 years of age, contracted sore on the under surface of the glans penis, near the frænum. I did not see it till the third week of its existence, during which period the patient had pursued his usual avocations, and used various local remedies. When I first saw this case, there was a deep burrowing ulcer involving the whole under surface of the glans, having destroyed the frænum, and extended to the integument on the under surface of the penis; this ulcer was covered with a tenacious slough, black in some places, white in others. The glans penis itself was swollen and much inflamed, and the whole body of the penis was in a similar condition. The patient was now confined to bed, placed on a low diet, and parts enveloped in a bread poultice, and aperients, with nauseating doses of antimony, exhibited. In two or three days, the ulcer continuing to spread, I destroyed the whole surface with the acid nitrate of mercury, and after the separa-

tion of the eschar, no improvement having taken place, I did this a second time. The slough was again reproduced, the ulcer still spreading, and threatening to open the urethra; a circumstance I have seen more than once consequent upon ulcers in this situation. It is to be remarked also that the general inflammation of the glans and penis were very little reduced by the rest, diet, and antiphlogistic treatment. I now resorted to the mercurial fume. The patient was immersed daily for forty minutes; there was no extension of disease after the second bath. At the end of eighteen days the sore had healed without induration, leaving, however, an excavated cicatrix on the glans. The mouth was moderately affected. Profuse night perspirations also accompanied the ulcerating and sloughing stages.¹

¹ Added.—The use of mercury, as a rule, is to be condemned in phagedena, whether sloughing or ulcerative; where the disease is the result of excessive inflammatory action, this is generally of a low character, and the patient rarely bears depletion well, and this must be adopted with extreme caution. The patient generally requires to be supported by a generous, but hardly stimulating, diet, and iron and quinine added to whatever other remedies are used. With respect to the use of mercury, where other remedies fail and mutilation is threatened, the patient should use it, but not take it internally; let it be employed either by way of vapour, inunction, or hypodermic injection. From either of these modes, judiciously employed, I never saw harm result; but again, I am compelled to say, do not give it by the mouth: if this is done one or two doses will commonly induce diarrhœa and depress the patient fearfully, if not fatally.

CHAPTER XI.

OF CHANCRES AND ULCERS IN THE FEMALE.

WHAT has been already said on chancres and non-specific ulcers in the male, finds also its application here, especially in reference to sores situated on the external parts of generation.

Primary venereal ulcers in the female are most commonly seated on the external parts, as the labia majora, the nymphæ, the folds of mucous membrane surrounding the clitoris, at the orifice or other parts of the vagina, or at the meatus urinarius.

Ulcers, yielding a characteristic pustule by inoculation, are rare on the neck or at the orifice of the womb ; although ulcerations, unquestionably syphilitic, are by no means uncommon in this situation.

Primary venereal ulcers, as we observe them on the external parts of the organs of generation in the male, are rarely found on the neck, on the lips, or in the canal of the cervix uteri, yet they have been met with in all these situations. I can only find one case on record where an ulcer of the uterus yielded a positive result when tested by inoculation, and this is mentioned by M. Ricord, at page 212 of his 'Treatise on Inoculation.' Another case is given, by the same surgeon, at p. 11 of his 'Iconographie,' and figured in the fifth plate. Here the ulcer was single, and its existence suspected from two persons having contracted chancres from the subject of it. No account is given of its having been inoculated artificially, and therefore I conclude that no test of this kind was instituted. It is described as "a round ulcer, with well-defined and sharp edges, and an ash-coloured surface, surrounded by a red areola or border."

A man was admitted, under my care, as an out-patient at the

Queen's Hospital, some time ago, with several soft chancres round the corona glandis. He said the disease had been given to him by his wife, who was suffering from syphilis when he married her, and soon after this event the disease under which he laboured broke out. He brought his wife with him for examination.

On the lower lip of the cervix existed a deep ulcer with sharp edges, surrounded by a well-defined inflammatory patch; the ulcer appeared to run into the canal of the cervix. I never saw anything more closely resemble a chancre, yet it produced no result when inoculated.

Dr. Whitehead, at page 367 of his treatise on 'Abortion and Sterility,' says: "I have seen but one case of this kind. The husband had orificial chancre with gonorrhœa, which were contracted about three months after marriage. His wife had *no external sores*; she had constitutional syphilis. The ulcer occupied the boundaries of the orificium uteri to the extent of a sixpenny piece; it had lost its primary character, as far at least as the infecting power of its secretion was concerned, as no result was obtained by inoculation of the matter on the skin; but it still retained a genuine chancrous appearance, having an excavated centre with raised over hanging margins and a yellow base."

A girl was admitted into the Queen's Hospital, under my care, in August of last year, with a syphilitic eruption, a well-marked "lichen corymbosus." On examination of the uterus, a large well-defined ulcer was discovered on the lower lip, which ran into the canal of the cervix. It was surrounded by a ring of inflammation. The remaining portion of the mucous membrane was healthy, and contrasted strongly with the diseased one.

Nothing appears more likely to happen than inoculation of the uterine surfaces, when the male has chancre of the urethra. The comparative frequency of this may be seen from an examination of the work of M. Fournier, who, out of 820 cases in which the seat of chancre was noted, found 32 of the meatus urinarius, and 20 seated within the urethra, which could not be seen till the lips of the urethra were opened.

The latter belong to the class of concealed chancres, or

"chancre larvés," as they are termed by the French pathologists. Such ulcers in the female may be seated within the canal of the cervix, and thus bear a strong analogy, as far as their situation is concerned, to those placed within the urethra of the male. The 17th case narrated by Dr. H. Bennet, in his treatise on 'Inflammation of the Uterus,' appears to have been one of this kind. It occurred in a female, who had communicated to her lover a chancre and a bubo: and these circumstances led to an examination of the vagina and uterus. No trace of disease could be discovered, except a profuse puriform discharge from the vagina, and a muco-pus which issued from the os uteri. On the third examination with the speculum, "a small ulceration was discovered issuing from the os uteri, and turning over the anterior lip. The ulceration presented a greyish surface and an irregular indurated margin; it was deemed to be a true chancre by M. Emery, as well as by Dr. Bennet, and many other persons who saw it." (Bennet, 'On the Uterus,' p. 442.) This case is narrated by Dr. Bennet as one of chancre concealed within the cavity of the os uteri for several weeks, the first symptom of which was the discharge of muco-pus from the uterine orifice.

It will be remarked, in the two cases I have mentioned from my own observation, that both the ulcers which I thought might be primary, turned into the canal of the cervix. They might have commenced there, as the cases were not examined till disease had been in existence some time.

It is very probable that the concealed chancre of the canal of the cervix may be a more frequent affection than is generally supposed; for it is not uncommon to see females with secondary syphilis, who have had no external sores, but who complain merely of discharge more or less profuse. On examining these cases with the speculum, a thick muco-pus is found to issue from the os uteri, which may or may not be symptomatic of concealed chancre of the canal of the cervix.

From what has been already said, it will again be observed, that although in one instance only, and that of a sore situated on the external portion of the neck of the uterus, could a successful inoculation be produced; still three of the females mentioned produced chancres in the persons with whom they

cohabited, and yet had no external sores: they presented no other marks of primary syphilis than those which were found on the uterine os.

In addition to the cases of presumed chancre of the canal of the cervix uteri which I have already mentioned, M. Robert has cited four cases of discharge from the os, which yielded a characteristic pustule when tested by inoculation; from this fact it was believed that such discharges were symptomatic of chancre situated within the canal of the cervix uteri. There was no external trace of ulceration, and the successful inoculation of the pus discharged was the only symptom which led to the suspicion of the existence of such chancres.

What has already been said as to the treatment of chancres in the male, both constitutionally and locally, finds also its application here. If caustics be used to ulcers situated deeply in the vagina or in the uterus, they must of course be applied through the speculum: the best and safest caustic to uterine ulcers is the liquor hydrargyri nitrat. acid., B. P., 1867; care must be taken in applying it that none drop on the healthy portions of the vagina; a small pledget of lint should be placed over the ulcer after the application of the caustic.

See also the chapter on Secondary Syphilis of the Uterus.

CHAPTER XII.

OF BUBO.¹

I HAVE already made some remarks on bubo, or adenitis, in connection with primary sores. Bubo may follow gonorrhœa, balanitis, or other non-specific disease; it is then a mere glandular inflammation, a simple adenitis, and in such case in no respect syphilitic. Again, it may succeed a soft chancre, and here a gland in one or both groins may become inflamed from a variety of causes non-specific; in such case, either the inflammation in the gland is arrested by treatment and the swelling dispersed, or the disease runs on to suppuration, and the pus which is discharged is of a non-virulent character. The buboes, however, which succeed to soft chancres are commonly produced by the absorption of a specific pus from the chancre itself; the gland suppurates, and an ulcer in the groin succeeds; which is then a glandular, or inguinal chancre: this is a specific or virulent bubo; or, as it has been termed, the bubo of absorption. The virulent bubo is later in appearing than the inflammatory bubo; frequently it does not occur till after the chancre which produced it has been some time healed; even when a chancre remains long open, the bubo is not quick to develop itself. A third kind of bubo succeeds to or accompanies an indurated chancre, consisting in a chain of indolent glands, which swell in one or both groins; these buboes have no tendency to suppurate. All these varieties of buboes have a distinct dependence upon a primary lesion which has produced them; but the glands in the groin sometimes inflame and suppurate after suspicious intercourse, without any primary lesion elsewhere having preceded such an occurrence. This is a primary bubo,

¹ Adenitis.

not a consecutive one ; it is the "bubon d'emblée," about which there has been so much discussion.

The bubo which has been termed primary, or "d'emblée," which arises after promiscuous intercourse, and has not been preceded by either a discharge from the urethra, a sore, excoriation, crack, or fissure, on the genital organs, may be, but commonly is not venereal.¹ It is very commonly due, in young persons especially, to over-sexual indulgence, or violent exercise during coition : of this I have seen many instances. This is clearly not a primary virulent bubo, produced by the absorption of any special virus, but an ordinary adenitis due to an evident cause. I have never seen a case of primary bubo which has been tested by inoculation, and thus proved to be of a syphilitic character : my experience on this point is supported by Dr. Egan.² Such cases have, however, been seen and verified by some modern surgeons of credit and experience, and, therefore, we can hardly doubt the existence of such buboes, although they must of necessity be rare.³ Inguinal buboes again frequently form in constitutional syphilis, from the irritation produced by or the matter absorbed from secondary ulcerations, or condylomata, on the scrotum, penis, the lower part of the abdomen, or the vicinity of the anus. Chancres situated on the fingers or hands produce buboes above the internal condyle of the humerus, or in the axilla, or in other places on glands situated on the course of lymphatics, in connection with a chancre, wherever it may be placed. I have seen several cases of infecting chancre of the finger and hands in medical men. I especially call to mind one case in a surgeon, in a neighbouring county, with a well-marked indurated chancre

¹ M. Ricord now denies the existence of primary bubo. (See 'Letters' by Stapleton, p. 42.) I believe he is correct ; I certainly never saw a case. Mr. B. Hill is of the same opinion.

See the 26th and 27th 'Letters,' 2nd edit., Paris, 1856, in which the occurrence of the "bubon d'emblée" is still resolutely denied.

² 'Syphilitic Diseases,' &c.

³ See Vidal (de Cassis), 'Traité Maladies Vénériennes,' pp. 201-3.

Two cases where primary buboes were successfully inoculated are recorded by Mr. Lane in Dr. Blackman's Translation of Vidal, American edit., p. 237.

of the finger, with a well-marked adenopathy of the lymphatic gland, above the inner condyle of the humerus. In some persons this gland does not exist, and the matter passes directly into the glands in the axilla.

When a bubo has suppurated, the pus which it has discharged, or that found at the bottom of the ulcer, may be tested by inoculation. I have already shown why buboes are much more rarely successfully inoculated than chancres. The virus is modified or diluted in its passage through the absorbent vessels and glands by the contents or secretions of these parts. This is evidently the true explanation why inoculation is not a certain test of the true nature of a bubo. Even M. Ricord admits that inoculable pus is never met with beyond the first glands in connection with chancres. ('Letters' by Stapleton, p. 44.) "Whilst, therefore, I admit that this test, when applied to the inguinal glands, will in many instances serve to distinguish the nature of bubo, I cannot concur in the conclusion at which M. Ricord arrives when he states that inoculation in bubonic enlargements may be relied on as forming an unexceptionable and pathognomic sign." (Egan, *op. cit.*, p. 22.)

The causes of bubo, or of adenitis, are various: besides syphilis and gonorrhœa, they frequently arise from excessive indulgence with a healthy female,¹ from fatigue, jumping, swimming, skating, long journeys on foot, sudden and violent exertion, or from ulcers situate upon any part of the lower extremities; also from piles, ulcers, or condylomata in the vicinity of the anus. Any stimulus acting for a longer or shorter period of time upon the inguinal glands, is liable to be followed by simple inflammatory bubo. A strumous diathesis is a frequent cause of bubo. This form of bubo occurs where syphilis is complicated with other diseases, such as albuminuria, phthisis, or a general cachectic, strumous, or bad habit of body. In such cases, the enlargement of the glands arises slowly; the tumour is lobulated, puffy and uneven, affecting the glands on both sides, in the femoral frequently, as well as in the inguinal region; it remains long indolent, or suppurates imperfectly,

¹ This, in many cases, explains the bubon d'emblée.

discharging a badly-formed pus, the abscesses running frequently into troublesome sinuous ulcers, surrounded by much induration. The use of caustics (the advocates of cauterisation admit that an imperfect cauterisation frequently causes a bubo) or irritating dressings to primary sores, occasionally cause a bubo, though this does not affect the general question of the utility of caustics under such circumstances. The cases are rare, but still this must be admitted as one of the occasional causes of bubo.

When we perceive a stiffness in the groin when the patient walks, accompanied with tenderness on pressure, and a glandular swelling, during the period a soft chancre is open, and in its ulcerating stage, or at various periods more or less remote after it has healed, we may be sure a bubo is about to form, and an attempt should be made to avert the disease at this period, although such attempts may not always be successful.

It is of great importance to the patient that a bubo should be dispersed, if possible, and not suffered to suppurate, the latter process leading to a long and troublesome affection, fraught with endless inconvenience, pain, and even danger. An abortive treatment has been attempted here, as well as in gonorrhœa and chancre, but, as in these diseases, with an uncertain success. In the first stage of bubo, if much inflammation, pain, or tenderness be present, rest, with local bleeding, blisters, tartar emetic, and the application of ice or cold evaporating lotions, are the appropriate remedies. If the inflammatory symptoms are not marked, and the bubo be indolent, rest and compression alone may be resorted to. It has been remarked, that patients wearing trusses seldom have a bubo form on the side where the truss presses; hence, in the first stage of bubo, that of simple enlargement, without much inflammatory action or pain, a well-regulated pressure is frequently successful in dispersing the tumour. It must be associated, however, with rest and an antiphlogistic regimen.

When the commencement of bubo is accompanied by much pain, tenderness on pressure, or heat of parts, the local abstraction of blood may be necessary. Two, three, or more relays of leeches may be thus employed, proportionate to the strength of

the patient and the intensity of the local disease. I am not generally in favour of the practice.

After the inflammatory symptoms have subsided, pressure may be made upon the enlarged gland by means of plasters, over which may be placed a pad and a bandage. These plasters should be spread on soft thick wash-leather, and laid on parallel to the thigh. Plasters composed of belladonna, lead, iodine, or mercury are to be preferred.¹

If the bubo be a simple non-specific adenitis, we may probably succeed in dispersing it by these means. Should it be a virulent bubo, produced by the absorption of a specific pus, we shall almost certainly fail. Frictions with ointment composed of the iodides of lead² or a solution of iodine³ are useful in dispersing the chronic enlargements caused by an inflammatory bubo.

When fluctuation is evident, more particularly if the skin covering the tumour be thin, it will generally be useless to lose time in attempting longer the resolution of the tumour. It will, as a general principle, be better to open it at once, either with caustic or the knife.

The bubo may have suppurated freely, and the collection of

¹ For this purpose may be employed the "Emp. Ammoniac. c. Hydrargyro" of the 'London Pharmacopœia,' or the Emp. de Vigo, of which I have already given the form.

Or,

℞ Emp. belladonnæ, pts. viij;
Plumbi iodidi, pt. j. M.

℞ Emp. "de Vigo" c. mercurio, pts. iv;
Emp. belladonnæ, pt. j. M.

℞ Emp. belladonnæ, ℥iv;
Iodi., ʒj. M.

℞ Emp. hydrargyri, ℥iv;
Iodi., ʒj. M.

² ℞ Ext. belladonnæ, ʒij;
Ung. plumbi iodidi, ʒj. M. ft. unguent.

³ ℞ Iodi., ʒj—ʒss;
Potass. iodidi, ʒij—ʒj;
Gum. mastiche, ʒj;
Sp. vini, ʒj. M.

matter be large, and the surrounding tissue little indurated; or there may be much surrounding induration, and the collection of matter small and deep-seated. In all cases the best general rule of practice is to open the bubo as soon as fluctuation is evident; and this should be done at its lowest or most depending portion. When a bubo is ready to puncture, it is not advisable to make too free an incision; when this is done, there is a quantity of integument on the edges which will not unite with the surface of the sac thus produced. By opening the bubo in this way, the whole anterior wall of it is more or less destroyed, and the cure must take place by the cicatrisation of a granulating surface which springs from the floor or posterior wall of the abscess. The objects to be obtained are, the evacuation of the matter; to diminish the disposition of its re-formation; and to procure union of the two sides of the cavity. This may be done by making several small punctures in the lowest part of the integument with a fine bistoury; through these the matter will ooze out till the abscess is empty. Through one of the apertures the point of a fine syringe may be introduced, and a very weak solution of the sulphate of zinc injected: when the abscess is empty, a compress of lint should be placed over it, and moderately tight pressure made by means of a bandage. By these means a partial or complete adherence of the sides of the bubo is obtained, and a speedy cure is the result; in some instances this may not be the case, but by daily use of the injection through one of the punctures, which should be kept open for that purpose, a cure may generally be effected in a reasonably short space of time. If the skin be thin and the collection of matter large, the bubo may be opened with a fine seton, containing four or five threads, or one or two silver wires; the seton should be passed in the axis of the bubo, and suffered to remain two, three, or four days, according to circumstances. One of Chassaignac's fine drainage tubes would answer in such cases very well.¹

¹ Note added, 1870.—It is always well to prevent a bubo suppurating, if possible. M. Guerin, of the Lourcine Hospital, employs with success a succession of blisters; he asserts that this plan succeeds to whatever extent the suppuration may have gone, providing no incision has been made. M. Guerin has observed patients who have been admitted into

When the integuments covering a bubo are of a deep blue colour, more or less disorganised, or threatening gangrene, it is better to open the abscess with the potassa fusa, or some other caustic, than by simple incision. Where it is impossible to save the integuments, from their thinness and the degree of disorganisation which they have undergone, Desruelles and Wallace prefer opening the abscess with caustic: the surface of the skin is to be destroyed by the potassa fusa, or other appropriate escharotic, to the proposed extent, and the next day a puncture made with the lancet in the centre of the slough thus formed. Where, however, it is probable that the integuments may be saved, the nitrate of silver is to be rubbed "on the surface of the bubo, and of the surrounding diseased skin, previously moistened with tepid water, until the cuticle is rendered of a bluish colour to the extent of an inch beyond the diseased integuments covering the tumour." On the following day, a puncture is to be made in the thinnest part of the integuments, and a compress and roller are to be applied. When the surface of the cuticle has become dry after the first application of the caustic, it may be reapplied over the integuments as before. This local treatment, recommended by Dr. Wallace, is sometimes very beneficial.¹

What I have just said refers more especially to the treatment of non-virulent bubo: the course pursued by a virulent bubo is very different; whether this be suffered to break of itself, or whether it be opened by one or more punctures, the openings thus made ulcerate, and assume the form of soft chancres in their ulcerating stage. Every puncture may become a separate sore. These ulcerations continue to spread for a longer or shorter period before cicatrisation commences; they very often become phagedenic, and spread fearfully by rapid ulceration or sloughing. They are to be treated precisely on the principles laid down for the management of soft chancres

his wards with an open ulcerated bubo on one side, and on the other one on the eve of bursting; yet blisters have succeeded in causing absorption of the pus, and the resolution of the abscess in the bubo which had not been opened. The blisters should be of good size, and when one has been healed it should be immediately followed by another to the number of four or five.

¹ Wallace, pp. 377-78.

both locally and constitutionally. Caustics in some cases find their application here, used with the intention of converting a specific sore into a simple one. Where the surface is extensive they are contra-indicated; and in many cases they fail in destroying the phagedenic character of the sore. The local applications mentioned when speaking of the soft chancre are useful; with bark, iron, the nitro-muriatic acid, and as a last resource in cases stationary and perfectly chronic, mercury in the form of vapour or otherwise. (See the chapter on Phagedena, and the Mercurial Vapour Bath.)

The open or ulcerated bubo may assume many morbid conditions which prevent its cicatrization. In the first place, the inflammation which the absorption of the venereal poison has occasioned in the glands of the groin, and which has terminated in suppuration, may continue to be violent after the pus has been evacuated; and hence, one obstacle to the cicatrization of the ulcer is a degree of inflammation in the part itself. This undue excitement results either from a continuance of the original inflammation, kept up by exercise of the diseased part, by too nourishing a diet or other causes, or from the imprudent and too early local application of stimulating dressings. In this form of the disease, the patient will derive benefit from repose, anodyne fomentations, and the application of compresses soaked in an aqueous solution of opium. The opiate, or simple cerates, are the most appropriate dressings; and these may be assisted by gentle pressure, by means of compresses and a roller methodically applied.

Again, the surface of the open bubo is commonly covered with a thick slough; the ulcer itself is indolent, or disposed to spread, and its edges are red, angry, and elevated. This is an ordinary condition of the true virulent bubo; and all that has been said on the ulcerating stage of chancres is applicable here. It may become necessary, in these states, to destroy the diseased surface of the sore by means of caustics; and for this purpose the nitrate of silver, the mineral acids, the acid nitrate of mercury, or the other caustics already mentioned, may be employed. The dressings well suited to this form of bubo are weak solutions of the sulphate of copper or zinc, or of the chlorides of lime or soda.

In chronic open indolent bubo, with a foul surface, where most remedies have failed in modifying the condition of the sore, a small quantity (from one to five grains) of the bichloride of mercury, previously finely powdered, has been dusted over the surface of the sore, and suffered to remain for some hours. The application of the remedy is followed by severe pain and inflammation, but often succeeds in producing a healthy condition of the sore, speedily followed by complete cicatrization.¹ The indications of all local applications are to be sought for in the condition of the sore; they require constantly to be changed; what is useful to-day may be injurious to-morrow.

A formidable obstacle to the cicatrization of an open bubo is occasionally presented by the edges of the sore itself. The integuments covering the cavity have lost part of their vitality; they are more or less discoloured, indolent or indurated, and offer no disposition to adhere to the under surface of the sore, or to throw up granulations by which the ulcer might be filled. In this condition they offer a permanent obstacle to cicatrization, and it becomes necessary to adopt means to bring about their union with the subjacent parts, or else to remove them altogether by the knife, scissors, or caustic. To accomplish the first intention, the under surface of the integuments may be rubbed with the sulphate of copper, the nitrate of silver, or some other caustic, the cavity of the ulcer filled with soft lint, covered with some dressing suited to the condition of the sore, and a bandage and compress applied.

It may become necessary to remove the floating portions of integument; caustics or the knife may be used; but this operation must not be performed on a truly venereal bubo in a state of ulceration, inflammation, or great irritability. These conditions must be subdued before such an operation is thought of. The removal of the diseased integuments covering an open bubo may in most instances be prevented "by the vesication of the diseased integuments, and also of the sound skin for a little

¹ This plan was first employed in the treatment of cancerous or foul sores of the rectum, nose and other parts. The results of the method were so favorable, that Cullerier tried it at the Hôpital des Vénériennes in the treatment of foul indolent bubo. It has in many cases exceeded his most sanguine expectations.

way beyond them by means of the nitrate of silver." The application of the caustic is to be renewed every four or five days, or as often as the surface of the integuments to which it might have been applied becomes covered by a new cuticle. It will also be useful to apply it occasionally to the whole ulcerating surface, and to the orifices of any fistulous openings that may exist, not with a view of destroying exuberant granulations, but to excite the granulating surface to more healthy actions.¹

Dr. Wallace states that he has known loose portions of integument of several inches in diameter, which were so diseased in their structure that they lay on the surface of the ulcer like a dead flap, saved by this process. "I have also," continues this author, "accomplished the cicatrization of other ulcerations, which presented numerous fistulous openings or detached flaps, and in which all the ordinary means, such as injections, compresses, incisions, &c., had all been employed in vain. In short, I can most confidently recommend this treatment of indolent and atonic ulceration, &c., as well as that of abscesses of the same class, as a very great improvement in the general practice of surgery."

The internal surface of the open bubo is rarely smooth, uniform or continuous; it is generally uneven and irregular, frequently divided into compartments, or presenting numerous orifices which are the openings to other glands, which have suppurated, and thus open by small orifices into the chief or general cavity, which is very commonly an abscess in the cellular tissue surrounding the gland or glands, which have been originally the seat of disease. It is this pathologic condition of open bubo which renders the treatment so difficult and tedious.

Injections may be employed in the treatment of these fistulous openings, with a view of modifying the condition of their surfaces, and disposing them to cicatrise. Solutions of the sulphate of copper, the nitrate of silver, the sulphate of zinc, or bichloride of mercury² may be thus employed.

¹ See Wallace, *op. cit.*, p. 381.

² R Cupri sulph., gr. vj;
Aque dest., ℥j. M.

If appropriate dressings and compression fail in the treatment of these fistulæ or sinuses, it may be necessary to lay them open with the knife. Sometimes the enlargement of the orifice is sufficient, or it may be necessary to divide them in their whole length; or if the situation of the sinus permit, a counter opening will generally answer all the purposes of complete incision, a practice attended with much terror and pain to the patient. Counter-openings may be made with the caustic potash; the caustic as well as the opening may contribute to the cure in these cases. The fistulæ may likewise be cauterised internally by means of solid nitrate of silver, or a small portion of the powdered bichloride of mercury, introduced by means of a grooved director; this practice is painful, but generally successful in its results.

M. Ricord has laid down a positive law, "that a bubo which suppurates specifically—that is to say, which furnishes an inoculable pus—is never followed by secondary symptoms." (28th 'Letter,' p. 287.)

The indolent bubo symptomatic of indurated chancre, of which I have already spoken, and which consists in a chain of enlarged glands in one or both groins, requires little local treatment. These buboes have generally no tendency to suppurate; they are the first indications of a constitutional taint, and are to be dispersed by constitutional treatment only: the treatment I have mentioned as applicable to indurated chancre is to be adopted here. They generally subside with the induration of the chancre, but this is not always the case. After all taint on the system has apparently been eradicated, and all induration of the chancre has disappeared, one or more glands, although reduced in size, do not diminish to their pristine condition; they remain permanently enlarged, although they may have lost all their specific character. I have seen them remain for years, the patient otherwise in good health. In two or three

℞ Argent. nit., gr. vj;

Aquæ, ℥j. M.

℞ Zinci sulph., gr. x;

Aquæ, ℥j. M.

℞ Hyd. bichlorid., gr. j;

Aquæ, ℥j. M.

instances where secondary symptoms have been very rebellious to treatment, I have known these buboes slowly suppurate : and I have also noticed, when this suppuration has taken place, that the constitutional taint, previously difficult to treat, has quickly and permanently disappeared.

CHAPTER XIII.

ON DISEASES AND ACCIDENTS TO THE SEXUAL ORGANS; THE RESULT OF INTERCOURSE, BUT NOT OF A SYPHILITIC CHARACTER.

APART from gonorrhœa and syphilis, or those affections which are termed specific, the sexual organs in the male, more especially the penis, are liable to several important diseases and accidents which are directly due to sexual intercourse, but are not of a specific nature; some of these, indeed, seem due to vices of conformation, or from a disproportion in size between the male and female organ, which of itself occasionally becomes a source of complaint. The affections which I have chiefly noticed and treated, are the following.

1. Paraphymosis, which I may term, to distinguish it from other forms, *accidental*.
2. Inflammation of the membrane and follicles of the mucous surface of the prepuce.
3. Rupture of the mucous membrane of the glans penis, where it is reflected upon the prepuce.
4. Rupture of the frænum.
5. Rupture of the parts entering into the composition of the penis; of the meatus urinarius; of the urethra; of the corpus spongiosum; or of the corpora cavernosa, occurring separately or in various states of combination.
6. Extravasation of blood into the bulb of the urethra.

Many persons have naturally so long a prepuce, that in the natural condition it completely covers the glans penis, and hangs in folds over the end of it. It cannot be retracted so as to completely uncover the glans, even when the organ is in a state of erection. During intercourse in such state, the prepuce is forced

backwards behind the base of the glans, and, the latter being swollen and distended with blood, the prepuce cannot be brought forward again, thus producing an *accidental paraphymosis*. In this condition the patient may possibly be able to bring the contracted membrane forward and relieve himself; but in many cases he cannot do this, and the aid of the surgeon becomes necessary. In treating the case, the operator has two ends in view; one to relieve the paraphymosis, and the second to prevent its re-occurrence. To accomplish the first, the prepuce, or rather the penis, must be grasped near its root, with the forefinger and thumb of the left hand; these two must, as it were, clasp it like a ring; at the same time, the swollen glans must be forcibly compressed between the thumb and first and second fingers of the right hand. The two hands must act in concert; the left bringing forwards the skin of the penis; the right compressing and pushing backwards the distended nut or glans; and this action will generally succeed in restoring the parts to their original condition. Should the constriction be unusually great, and the force required to reduce the parts great, it may possibly be necessary to put the patient under the influence of chloroform. If much inflammation or tenderness be produced by the paraphymosis and the means adopted for its reduction, it may be necessary to apply cooling lotions, and keep the patient quiet in the recumbent posture for a few days. The most important part of the treatment, however, will consist in the adoption of measures for the prevention of the return of the accident. If the paraphymosis be produced by a long prepuce, the operation of circumcision will become necessary, and this will generally effect a cure; should it be due, which is frequently the case, to a tight or contracted portion of the prepuce itself, produced by repeated attacks of chronic inflammation (chronic balanitis), frequent attacks of herpes, or the cicatrix of old chancres, a free incision through the contracted prepuce will give complete and permanent relief. I have frequently been consulted by married men who have been much annoyed by this contracted prepuce; it prevents the complete erection of the penis; and when this is strong, the part is frequently torn through, and gives rise to troublesome sores, and frequently to considerable hæmorrhage.

Rupture of the frænum, arising from a preternaturally short condition of this part, may take place also during intercourse. There are some persons who have naturally this so short, that in a distended condition the male organ is actually bent by it, giving it the form of an ordinary chordee. During conversation in such a state rupture is very likely, and does frequently occur. I have seen many cases of it. Sometimes the rupture is only partial, and amounts merely to a tear; if the rupture be complete, the accident cures the disease, though commonly attended, in such a form, with a good deal of hæmorrhage. I have seen a serious loss of blood from it. In such cases if cold, rest, and astringents do not succeed in stopping the bleeding, the vessel must be tied or twisted; and I generally recommend either the ligature or acupressure to be used; it is the safest practice, for frequently, although all danger from bleeding appears to have been passed, still, when the patient becomes warm in bed, and reaction comes on, the hæmorrhage breaks out again, and the patient is placed in considerable danger. I lately saw a patient who experienced a considerable amount of annoyance, and in fact a great deal of pain and inconvenience, from the thickening and contraction of the under surface of the prepuce of which I have been speaking. Whenever he had intercourse with his wife, the contraction was so great as to bend the penis, prevent its due erection, and in fact to produce a veritable chordee. In such cases the remedy is simple and effectual. A narrow bistoury should be introduced flat under the contracted and thickened membrane; the cutting edge turned upwards, and the superposed structures completely and thoroughly divided. I have performed this little operation a great number of times; and in the earlier years of my practice was somewhat surprised at the number of patients, especially married men, who suffer in this way. The pain of the operation may be entirely removed by using the ether-spray; it is in such operations as these, that it is so especially valuable, easy of application, and certain in its effects. If the artery of the frænum be divided in the operation, it may require ligature.

One of the most important and serious accidents met with, as an occasional result of sexual intercourse, is *rupture of the*

penis. Either the urethra, the corpus spongiosum, or one or both of the corpora cavernosa, may be more or less completely or partially torn. *Rupture of the urethra* may occur from an unusual degree of excitement or effort, the part, at the same time, being the seat of urethritis, or chordee. Franck, Maisonneuve, Demarquay, and other surgeons, have recorded rare examples of this accident. I have seen several. I was called into the country not very long since to see a case of this kind. The patient was seized suddenly, either during, or immediately after intercourse, with violent hæmorrhage from the urethra. I saw him a day or two after the accident; the hæmorrhage had partially ceased; there was still an oozing of blood from the urethra; the penis was hot and swollen, and presented in one position, a distinct, hard, large, swelling, doubtless owing to the rupture existing at this point. The patient was confined to the recumbent posture in bed; a full-sized catheter was passed into the bladder, and a bandage wet with cold water passed round the penis, so as to make a slight degree of pressure. At the end of three days the catheter was withdrawn; the hæmorrhage did not recur; there remained a distinct circumscribed swelling at the place where the rupture was supposed to have taken place, and afterwards there existed great difficulty in passing a No. 6 instrument into the bladder. A traumatic stricture had formed, probably produced by the contraction of the cicatrix, resulting from the healing the wound in the torn urethra.

The symptoms of rupture of the several parts of the penis are not easily mistaken. After violent exertion, the organ being fully charged with blood, and the cells of the corpora cavernosa turgid and distended, the first symptom is generally a greater or less degree of bleeding from the urethra, and this may occur to such an extent as to occasion syncope, or at least to make a very serious impression upon the patient. Hæmorrhage, however, does not occur if the urethra be not ruptured, as well as the corpora cavernosa; the penis is swollen and uneven; its colour varying in places from a deep red to black, according to the greater or less extent of rupture, or the quantity of blood effused; in serious cases, the extravasation of blood may extend to the scrotum, perinæum, or to the lower parts of the abdomen.

A most serious complication of rupture of the corpora cavernosa is rupture of the urethra. Should this occur at the same time, extravasation of urine, as well as blood, may take place.

Retention of urine from mechanical causes may succeed to this accident, and the relations of the urethra may be so altered that it is equally impossible for the urine to pass out of the bladder, or for the surgeon to pass an instrument in. In such cases puncture of the bladder becomes necessary, and the place where this operation should be performed must be determined by the nature of the case; very probably puncture through the rectum would, in ordinary cases, offer the most advantages.

Rupture of the corpora cavernosa is a most serious accident, and several cases are on record of a fatal termination to it. Its dangers are much increased by being complicated with rupture of the urethra; when a few only of the cells and the cavernous bodies are broken, the mischief is limited to effusion of blood into the body of the penis only, which, with proper treatment, soon becomes absorbed, and the organ resumes its natural condition. In such cases there is no discoloration of the skin; the penis is nodulated and uneven, presenting several small tumours not movable under the skin, and hardly tender on pressure; these tumours, or nodosities, seem to form part of the penis itself; the swellings may become inconvenient from their size, and they may, on this account, present a mechanical obstacle to intercourse; otherwise little or no mischief results from them. The treatment I have adopted consists in pressure with a bandage moistened with a lotion composed of muriate of ammonia, distilled vinegar, and water. In the perfectly indolent state friction with ointments composed of mercury or iodine are useful. In an extreme case, I have blistered the penis, with a view of dispersing the swellings, and with success; but occasionally it is very difficult to do so; and in such instances it is fortunate that they lead to no bad result. The chief evil consequences resulting from rupture of the corpora cavernosa are—hæmorrhage; extravasation of blood or urine; difficulty of erection; (the fibrous envelope and trabeculæ, which give firmness to the organ in a state of erection, being broken through;) traumatic stricture, and a nodulated or irregular condition of the penis. This accident is not so rare

as might be imagined; I have seen more than one instance in which the corpora cavernosa have been ruptured, by attempts made to strengthen the penis during an attack of chordee. I especially remember the case of one gentleman, where such an accident occurred; the organ was enormously distended and painful, and in a violent attempt to bend it the corpora cavernosa and urethra both gave way, a violent hæmorrhage set in, the blood streamed from the urethra, and there was a distinct hard lump instantly made its appearance on the body of the penis. A catheter was passed into the bladder and retained; a damp bandage passed round the penis, and the patient kept quiet in the recumbent posture in bed. This case did very well, but was succeeded by a traumatic stricture, which ultimately required division.

Another rare, and almost unique, form of rupture is narrated by M. Demarquay as having occurred to a patient of his who died in the Maison Municipale de Santé. This patient, after dining freely, and committing an excess at table, gave himself afterwards to excesses of another character, repeating the act five times, and being in a continual state of excitement for two hours. Shortly afterwards he became extremely prostrate, and experienced considerable difficulty in micturition; this gradually increased till no urine could be passed. He sank and died the next day. On examining the body the bulb of the urethra was found of the size of a hen's egg, extremely hard, and filled with black coagulated blood. According to the researches of Kobelt, the bulb of the urethra sends to the glans penis the materials necessary for the completion of sexual excitement; if so, it is possible that the series of phenomena which resulted in the death of this patient may have originated in that condition of the bulb of the urethra which was found at the post-mortem examination, and not have been a *consequence* of the excitement to which he gave way. I merely mention this as a speculation to which probably some degree of weight may be attached; but I am rather disposed to look upon the case as one of that long list of evils which results from a transgression of those moral laws which govern, and ought to regulate, all natural or vital action, the disobedience to which is generally followed by its own peculiar punishment.

PART II.

CONSTITUTIONAL OR SECONDARY SYPHILIS.

CHAPTER XIV.

OF CONSTITUTIONAL OR SECONDARY SYPHILIS.¹

CONSTITUTIONAL or secondary syphilis consists of a class of morbid actions, which make their appearance sooner or later after a discharge from the urethra, or after the healing, or during the course of a primary venereal sore on the genitals or elsewhere; or, again, it is due to other causes hereafter to be mentioned. Constitutional syphilis is produced by the absorption of the syphilitic virus and its mixture with the blood; it is a blood disease, a dyscrasia or diathesis, of which the various effects about to be mentioned are the symptoms.²

¹ "Syphilis constitutionnelle; accidents secondaires et tertiaires."—Ricord.

² Note added, 1870.—Secondary syphilis generally appears within three months after the occurrence of the primary disease. The first symptoms generally consist in ulcerations of the throat or eruptions on the skin. In most cases they appear before the end of the second month, and in some before the primary lesion is healed.

Dr. McCarthy gives seven weeks as the average of time as elapsing between the occurrence of an infecting chancre and the roseola, the earliest of the syphilidia.

Bassereau says from the sixtieth to the eightieth day.

Fournier, from the fortieth to the fiftieth day.

Sigmund, six weeks.

Diday, the forty-sixth day.

Quoted from 'Medical Circular,' August 13th, 1863.

The phases of syphilis have been divided into the primary, the secondary, and the tertiary ; or, as Hunter has already laid down, constitutional affections of the first and second order of parts. The primary symptom is due to the direct application of the venereal poison by means of sexual intercourse or inoculation. This is capable of propagation, from one individual to another, by intercourse or inoculation. The primary symptom may be followed by a series of symptoms which are successive or continuous, but not constitutional or secondary ; these are new chancres, buboes, or abscesses, &c., of various kinds, these being purely local, and not dependent upon an affection of the constitution generally.

Secondary symptoms are those which make their appearance after the economy has become generally tainted by the venereal poison, during which process the matter has undergone modifications which, in some measure, change its character. Secondary syphilitic diseases appear on the skin or mucous membranes, in the eyes or the testicles, in the bones, and in the internal organs.¹ Constitutional syphilis rarely makes its appearance before the second week after primary infection, more commonly later, towards the fourth or fifth weeks, or at periods very much more remote.

When syphilis has continued in the economy for an indefinite period of time, the symptoms which are termed secondary disappear, or lose the properties which at first characterised them ; whilst others of a different kind succeed, to which has been applied the term of "*tertiary*."² The tertiary symptoms appear

¹ See Yvaren, 'Metamorphoses de la Syphilis, &c.,' Paris, 1854 ; Virchow, 'Syphilis Constitutionnelle, par Picard,' Paris, 1860. In the latter work, syphilis of the spleen, the liver, the lungs, the brain, the heart, the kidneys, and other internal organs, is methodically described.

² There are two changes which take place in organs as a consequence of constitutional syphilis : the first resemble inflammatory diseases, the second are due to specific changes ; the first are secondary, the second are tertiary. The great variety of diseases of the skin which succeed to syphilis, as scaly, pustular, or papular affections, are inflammatory in their nature, or, as Virchow calls them, hyperplastic. These diseases differ in no way in their pathology from other affections of the skin not due to syphilis ; they are inflammations, with effusions of serum, pus, or lymph. We recognise in such forms inflammation and its products

at an indefinite, and generally very long period, after the primary diseases, and in the greater number of subjects, either after secondary symptoms have disappeared, or whilst these are still manifest in the constitution; thus, it is exceedingly common to see scaly or pustular diseases of the skin coexisting with diseases of the bones or testes. The diseases which have been termed tertiary are deep-seated diseases of the skin, as tubercles, and affections of the glands and bones, as periostosis, exostosis, caries, necrosis. To these may be added various internal affections, as yet neither well known nor described. Many of the constitutional forms of disease are capable of propagation by contact or inoculation; and in persons cohabiting as man and wife, a secondary syphilitic symptom existing in one is very commonly produced in the other, in precisely the same form.

It may be naturally inquired here, whether any treatment of the primary disease can certainly prevent the constitutional. The early and complete destruction of the primary disease, by an escharotic that will disorganize the tissues to the depth of the ulcer before absorption has taken place, is the only certain mode of preventing constitutional taint. I have before stated that the nitrate of silver is in most cases not sufficiently destructive for this purpose; and the caustics that will char the tissues to the depth of the ulcer are the potassa fusa, the potassa cum calce, the acid nitrate of mercury, the carbo-sulphuric, or the chloride of zinc pastes. This practice is useless in a chancre already specifically indurated, the induration itself being an indication that the constitution is already affected, and the local disease only to be cured by constitutional remedies.

Unhappily there are numerous reasons why the practice just recommended cannot always be adopted with a prospect of success. In many instances the surgeon is not consulted till many days after the establishment of the disease, when, in all probability, absorption has already taken place. In other in-

only; but in the tertiary symptom there is an actual change of structure, a deposit of a specific kind; this is well observed in one form of syphilitic sarcocele. For a minute description of the changes produced in various organs by syphilis, to which changes the term tertiary has been applied, I must refer the professional reader to Virchow's work already quoted, especially the 12th chapter.

stances, the situation and character of the ulcer are such that we are prevented from resorting to the method recommended; though in all instances it should be done, if at all practicable.

All persons are not equally susceptible of a constitutional infection from a primary sore; hence some writers have spoken of the syphilitic temperament, a vague expression, to which no definite meaning can be attached.¹ Those individuals are most likely to suffer from constitutional syphilis whose general health is bad when they contract a primary sore; hence, chronic affections of the skin, stomach or digestive organs, scrofula, general cachexy, or other diseases, general or particular, under which the patient may labour at the time of infection, are to be considered as predisposing causes. Attention to the general health is of the first importance, and the constitution of our patient must most materially modify our treatment.

Secondary syphilis, like primary, becomes formidable by neglect and ill-treatment; it is a principle we should never lose sight of, to commence seriously the treatment of constitutional syphilis the moment it becomes manifest in the economy. There is no contra-indication to the immediate commencement of this treatment; should the constitution be bad, or the patient diseased, it must be modified to suit these circumstances: even the period of gestation is no bar to the anti-syphilitic treatment. M. Ricord states that he has seen more females miscarry when their disease has been suffered to go on unchecked, than when they have been subjected to an anti-syphilitic treatment, framed with judgment to suit the circumstances of the case. The same remarks apply to the period of suckling.

When constitutional syphilis is complicated, these complications should never be neglected; if they coexist with acute or subacute affections of internal organs, the latter ought first to be attended to; these should be subdued before we commence the anti-syphilitic treatment. When scrofula, affections of the skin, or chronic diseases of internal organs, complicate constitutional syphilis, the anti-syphilitic treatment may be at once commenced; but it must be framed and conducted with

¹ It is quite certain that many patients throw off a constitutional taint with comparative facility, whilst in others it remains for years or perhaps for life, in spite of the most judicious and persevering treatment.

much care, that the accompanying affection, of whatever character it may be, may not be aggravated by it. An exclusive, or empirical treatment, cannot be too strongly condemned. It is in these cases that the compounds of iodine and mercury, iodine and iron, and iodine and potass, are commonly so useful, but, above all, the mercury vapour bath.¹

Whenever any of the forms of constitutional syphilis are accompanied by fever, or much inflammation, an antiphlogistic treatment and regimen are in the first instance necessary. Without a rigorous observance of this rule we can have no rational hope of success. Whatever be the character of the constitutional symptoms, if they are accompanied by local inflammation or general excitement, an antiphlogistic regimen and treatment ought to be followed till such symptoms are subdued. An antiphlogistic treatment is not to be adopted where these phenomena are absent, and of course its employment as a general measure is to be severely condemned; for in many cachectic or scrofulous patients, or those whose constitutions are already undermined by chronic disease, an opposite plan of treatment becomes necessary. In the latter instances, a full, nutritious diet is essential to success. Debilitated and scrofulous patients, who have been badly fed, quickly recover their general health, and are cured of syphilis under a full diet; whilst those whose circumstances have enabled them to live well, frequently become cachectic under a low diet; their syphilitic affections remain stationary, and they only recover their health, and lose their disease, in returning to the habits of living to which they have been accustomed.

¹ See the whole of the excellent remarks of M. Ricord, on "Complicated Constitutional Syphilis," *op. cit.*, pp. 615-18.

"En un mot, l'accident le plus saillant, l'épiphénomène, quel qu'il soit, est celui qu'il faut combattre, sans négliger aucun des élémens qui peuvent fournir aux indications thérapeutiques."

CHAPTER XV.

OF THE CAUSES OF SECONDARY OR CONSTITUTIONAL SYPHILIS.

THE chief causes of a constitutional venereal taint are—1. The absorption into the system of the virus from a primary venereal disease, whether this be a sore, a discharge, or a bubo. 2. Inoculation or contagion, *i. e.* the direct communication of a secondary or constitutional affection, from a diseased to a healthy person, without the intervention of any primary disease.¹

¹ Note added.—Surgical instruments, sponges, &c., may become the vehicles of contagion, especially those used for the examination of mucous canals, urethra, Eustachian tube, &c. M. Fournier relates a case of disease produced by catheterism of the Eustachian tube ('Gazette des Hôpitaux,' June 28th, 1863). M. Fournier states that he had seen five cases of the same nature. The operation had been performed in each case by the same surgeon, and in all the disease commenced in the pharynx, throat, and nasal fossæ ('Archives Générales,' 1863, p. 237). A number of similar cases are related by Dr. Oppert ('Visceral and Hereditary Syphilis,' p. 1).

Can a constitutional syphilitic taint be communicated by vaccination? M. Viennois, of Lyons, lately published an interesting paper on this subject. He concludes—(1) That syphilis has in many instances been observed to follow vaccination. When a healthy subject is vaccinated with lymph taken from a syphilitic one, and the lancet at the same time be charged with a spot or two of blood as well as the vaccine virus, the two affections, *i. e.* syphilis and vaccinia, may be conveyed by the same puncture—the vaccinia with the virus and the syphilis with the blood. In such cases the vaccine vesicle is first developed, because its incubation is shorter than that of the syphilis; the latter appears subsequently, and manifests itself by its own characteristic lesions at the inoculated spot. The initial lesion by which syphilis produced by vaccination very commonly manifests itself is an indurated ulcer at the point of puncture, with adenitis of the nearest gland, &c., thus, according to M. Viennois, corroborating the law laid down by M. Rollet.

3. Hereditary transmission.
4. The treatment of the primary disease, whether due to the use or to the neglect of mercury.
5. A peculiarity of constitution.

I.—PRIMARY ULCERS AND DISCHARGES CAUSES OF SECONDARY SYPHILIS.

It is universally admitted that the most frequent cause of a secondary venereal disease is a primary venereal ulcer; and it is also as generally admitted that the ulcer which is most commonly followed by such a condition is one which presents a well-marked induration during its course, or is so where the cicatrix or site of the ulcer becomes indurated when the ulcer has closed. Other ulcers, however, which do not present this appearance of induration, are occasionally though not so frequently followed by secondary symptoms. Again, many forms of primary discharges from the urethra are followed by secondary diseases; it is well known that M. Ricord considers such discharges as symptomatic of primary venereal ulcers in the urethra. Certain it is, however, that discharges from the urethra, in which no ulcer can be discovered, and where no circumscribed induration can be felt along the track of the

viz. that syphilis always commences by a chancre, even when the contagion arises from a secondary inoculation. (This law is, however, very far from being of universal application.)

It is most important never to take vaccine virus from a suspected person; there can be no doubt that syphilis is occasionally communicated by vaccination, but, on the other hand, this has been very much exaggerated, and many of the infantile skin diseases are attributed to vaccination when certainly this is not the cause. Mr. Garden, superintendent vaccinator at Simla, in India, says that in 80,000 cases he never once saw syphilis communicated. ('Lancet,' October 11th, 1862; also August 29th, 1863. 'Med. Times and Gazette,' March 29th, 1862. 'Syphilis,' by Henry Lee, &c. &c.)

Eczeema infantile, a disease common amongst infants, is frequently charged with being syphilitic, and I have known several instances where this disease has been reported so, and where the surgeon has been subjected to much annoyance and injury, charged with having employed lymph from an impure source, from which carelessness he has been entirely free.

urethra, and where, again, the secretions have not yielded any evidence when tested by inoculation, are occasionally, though not commonly, followed by constitutional disease.

CASE XX.

Primary disease, discharge from the urethra; never, at any period, any other form of primary venereal disease; secondary disease six months after, in the testis and in the bones; cure by calomel and opium, and the iodide of potassium.

M. B—, æt. 30, came under my care as an out-patient of the Queen's Hospital, in July, 1849, suffering from enlargement of the right testis, pains in the arms, bones of the head, and other parts, with nodes on the head and clavicle, and general enlargement of the right knee-joint. One year and a half before his admission, he contracted a discharge from the urethra, for which he had never been treated, and for which he had never taken medicine; this after a long period disappeared of itself, and left no induration in the urethra discoverable by examination, nor any impediment to the passage of an instrument, or to the stream of urine behind it. Six months after, his right testicle enlarged without pain; to this succeeded general pains in the limbs and head, which incapacitated him from work; and large nodes formed, two on the head, one of which contained matter, and one on the clavicle, with general bony enlargement of the knee.

He was put on the use of calomel and opium at night, with the iodide of potassium and colchicum in the day; and under this treatment all the symptoms disappeared. No change was made in the remedies employed.

The cases recorded by M. Cazenave are well-marked examples of constitutional diseases which had never been preceded by any primary disease, except a discharge from the urethra.¹ Mr. Erasmus Wilson,² Dr. Egan,³ and others, support this doc-

¹ Cazenave, 'Traité des Syphilides.'

² 'Syphilis, Constitutional and Hereditary,' pp. 20, 21, 22.

³ Egan, op. cit., p. 18, &c.

trine.¹ I have seen in private practice now so many cases where the starting-point of constitutional syphilis was a discharge from the urethra, and where the patients have had no other form of primary disease, that this symptom must be admitted as the occasional cause of constitutional disease. My experience must be corroborated by all other surgeons. One case especially forces itself upon my mind, of a poor gentleman who had never had any primary disease, but a discharge from the urethra. This was followed by a most formidable outbreak of pustular syphilis, which harassed him for ten years. M. Lagneau, fils, in the 'Archives Générales' for March, 1856, details six cases which occurred in his own practice, and that of his father, of well-marked constitutional syphilis, succeeding simple purulent urethral discharges, without evident ulceration. What the nature of these primary urethral discharges may be, is another question. If they result from an ulcer on the urethra, the existence of the latter must be a matter of conjecture, since we are unable to demonstrate its existence. I have already expressed my belief that secondary syphilitic discharges from the uterus of the female may occasion urethritis in the male, and it is not improbable that such discharges may be the origin of constitutional syphilis under the circumstances I am now considering. (See the chapter on Syphilis of the Uterus.)

CASE XXI.

Discharge from the urethra as a primary symptom; scaly blotches on the skin, and a node on the forehead, as constitutional symptoms; cure by the mercurial vapour bath.

A gentleman consulted me respecting a lump on his forehead, which was red, tender, and painful; he had upon different parts of his body, and on the head more particularly, some dry, scaly blotches; his hair also came off rapidly. He had never suffered from any primary venereal disease, except a discharge from the urethra. When I saw him this no longer existed; the urethra presented no induration in any part, a bougie passed easily, and he made water in a good free stream.

I recommended the use of the mercurial vapour bath, which

¹ 'British and Foreign Med.-Chir. Review,' No. xv, p. 88.

was administered every other day. I prescribed no medicine internally. In a month the cure was complete.

I could multiply such cases, which leave no doubt as to the fact that discharges from the urethra, apparently in no way different from ordinary gonorrhœa, and which are not accompanied or followed by any perceptible organic change in the urethra, are the primary causes to which secondary syphilis is occasionally due.

II.—CONTAGION A CAUSE OF SECONDARY SYPHILIS ; CONTAGION BY THE SECRETIONS, ETC. ; SEMEN, ETC. ; LATENT SYPHILIS A MODE OF CONTAGION.

Constitutional syphilis may be communicated from a diseased to a healthy person, without the intervention of primary disease. I do not mean to assert that constitutional syphilis is commonly capable of propagation by inoculation on the same person with a lancet puncture, and I have never succeeded in producing any effect of this kind by inoculations practised on an individual, already diseased, by his own secretions; and I have never attempted, and never shall, to propagate secondary syphilis from the diseased to the healthy.¹ Waller,² Wallace, and Vidal de Cassis³ have, however, succeeded in this. The case of M. Boudeville (*interne en pharmacie*), who voluntarily submitted to inoculation with the matter of the secondary syphilitic pustule, and in whom a regular secondary pustular disease was produced, is conclusive on this point. (Vidal de Cassis, p. 357. See the report of the Imperial Academy of Medicine on this point, p. 34.) Although I have never seen secondary syphilis propagated by inoculation from the diseased to the healthy, I have seen it communicated,

¹ Dr. Guényot and M. Gailleton were prosecuted at Lyons for inoculating a child not affected with syphilis, with secondary syphilitic pus; the inoculation was successful, secondary syphilitic symptoms appeared within two months; but they were fined for the experiment, one in a sum of 100 francs, the other in a sum of 50 francs.—'Gazette des Hôpitaux,' Dec. 1859; 'Edin. Journal,' March, 1860.

² "Du Caractère Contagieux de la Syphilis Secondaire, par le Docteur Waller," in the 'Annales des Maladies de la Peau, et de la Syphilis,' tom. iii, p. 174.

³ 'Traité des Maladies Vénériennes,' pp. 240, 261, 355.

by contagion, in this way in a great number of instances; two I have already recorded. The circumstances under which this takes place are generally from the husband to the wife, where the primary disease, having been cured for an indefinite period of time, a secondary attack takes place after marriage, and by constant contact is thus communicated to the wife. Dr. Copland says, "I have had sufficient reason to conclude that whenever a secondary venereal ulceration seated on the integuments, or on the mouth or throat, produces a secretion or discharge which comes in contact with a mucous surface, or with an abrasion of the cutaneous surface, or is even allowed to remain in contact with an unabraded surface (see Ceeley's 'Experiments on Vaccine Lymph'), infection may take place (*i. e.* if the party exposed be free from syphilis), and that this liability exists both in children and in adults. The communication of secondary syphilis, especially when the sores have proceeded to secrete or produce a fluid exudation, was a fact well recognised in former times, and has been witnessed by myself in the course of my experience in several instances." ('Dictionary of Medicine,' article "Venereal Disease.") These are precisely the conditions I have already laid down as likely to communicate secondary syphilis from the diseased to the healthy. A secreting surface on the one hand, and an abraded surface on the other, with prolonged or repeated contact; they are just the circumstances under which the disease was communicated from the diseased to the healthy by Wallace in six instances. I have seen this mode of communication of constitutional disease in numerous instances.¹ M. Rodet, of Lyons, supports this view. See his paper in the 'Archives Générales,' Février, 1859. Prof. Sigmund, of Vienna, maintains a similar doctrine (see 'Medical Times and Gazette,' August 3rd, 1861, p. 121). I record a recent case, which I carefully watched and noted.

¹ The following conclusions are arrived at by Prof. Hebra, based on the personal examination of nine cases:

1. "Secondary syphilis can be communicated by the male to the female by sexual intercourse without any local affections of the sexual organs, and this with the greatest facility if the remains of a constitutional taint still exist on the skin or mucous membranes of the male."

CASE XXII.

Communication of pustular syphilis from the diseased female to the healthy male without a chancre.

B. M— had suffered from constitutional syphilis for two or three years ; in this state she twice became pregnant, and was delivered of two dead children. After the last labour, pustules broke out on legs and arms to the number of twelve or fourteen. These were soon covered with dark, thick crusts, which, being detached, were found to cover deep, foul-looking ulcerations. She had profuse vaginal discharge, but no sores. (See the chapter on Secondary Syphilis of the Uterus.) In this state she made the acquaintance of a very healthy person, who repeatedly slept with her : in a few weeks he had a crop of pustules precisely like his mistress ; they became covered with the same kind of crust, and which concealed similar sores. I treated both, and repeatedly examined and compared the diseases ; they were exactly alike ; neither of them had any sore on the organs of generation. The man had never been diseased before.

I have already quoted the conclusions of the venereal commission, that "evidence is conclusive with regard to the contagious character of secondary syphilis." M. Langlebert,¹ amongst modern authors, is the one who has most completely investigated this point, both clinically and experimentally. His conclusions are—(1) that secondary syphilis is contagious ; and (2) that secondary syphilis is always communicated in the form of a chancre. "Constitutional syphilis has always for its initial symptom a chancre, and especially an indurated chancre,

(*Comment.*—True, but the genitals are also sometimes affected, and so is the uterus.)

2. "Syphilis may be latent in the system, without being manifested by any symptom, till it shows itself in the offspring." (*Comment.*—True ; I have detailed several cases.)

3. "Syphilitic men may not infect either their wives or children." (*Comment.*—Occasionally this happens, but very rarely. I have seen and recorded more than one case.)

¹ 'Du chancre produit par la contagion des accidents secondaires de la syphilis, &c.,' Paris, 1862.

even when it has been communicated or produced by the product or secretion of a secondary symptom." With this dictum I do not agree. I have seen time after time secondary eruptions communicated from the diseased to the healthy without the intervention of a chancre (properly so called).

In a number of instances, secondary venereal diseases, when propagated by contagion, produce their like. Thus, skin diseases are communicated under the same specific form, so are secondary condylomata. Some modern authors (Waller, Erasmus Wilson, Porter, the late Mr. Colles, myself, and others) maintain the occasional propagation of constitutional syphilis by means of the secretions alone. The ovum is constantly diseased by the secretions of the father; hence there is every reason to suppose that such an origin of constitutional taint is exceedingly probable, especially when we consider the condition of the blood (whence all the secretions are derived) in secondary syphilis.

Mr. Porter has recorded several cases of the communication of constitutional syphilis by means of the semen ('*Dublin Journal of Medical Science*,' May, 1857). He says, "The semen of a diseased man deposited in the vagina of a healthy woman will, by being absorbed, and without the intervention of pregnancy, contaminate that woman with the secondary form of disease, and that without the presence of a chancre or any open sore either on the man or woman" (p. 264). It is well known that this was the opinion of the late Professor Colles. I have seen four cases of this nature in the course of my practice, in which there could be no doubt that this was the mode in which disease had been communicated.

CASE XXIII.

Communication of latent syphilis from the male (no syphilitic symptom for twelve months) to the healthy female without chancre.

B. D— had suffered from various forms of constitutional syphilis for four years. He remained perfectly well for twelve months, and then married. Soon after his marriage, he had an eruption of copper-coloured spots on the skin, and a sore throat. He lost his hair and eyebrows. His wife, an exceedingly

healthy young lady, had an eruption similar to her husband; she lost her hair and eyebrows; she had also ulcers in the throat. The genitals were entirely free from complaint; the lady never suffered from excoriation, ulcer, or discharge. This lady subsequently became pregnant, and was prematurely delivered of a dead child.

CASE XXIV.

Communication of latent syphilis.

R. T— consulted me in June, 1858, respecting some secondary syphilitic symptoms. The symptoms disappeared under treatment. About eighteen months afterwards he married, having no symptoms of syphilis whatever at the time, nor having had for many months previously. Shortly after his marriage, his wife was affected with superficial sores in the vagina, a purulent discharge, and swelling of the labia. She had afterwards a well-marked leprous eruption, and for this eruption she was placed under my care. Some months after the first symptoms had appeared, she became pregnant; she went her full time, but had a diseased child.

In both these cases the patients became pregnant after the first symptoms of syphilis had appeared.

CASE XXV.

Communication of latent syphilis in the male (no syphilitic symptom for many months) to the healthy female; without pregnancy.

I was called in consultation to see a gentleman, about twenty-four years of age, with secondary phagedena of the fauces. He had been married some months. For more than a year previous to his marriage, he had been apparently quite free from syphilis; but before this he had chancres, with an indolent bubo, which did not suppurate. A month after his marriage, his wife, previously a healthy looking young lady, began to complain of irritation of the vagina, with discharge. She was examined: she had superficial ulceration of the os uteri, discharge from the orifice, and an aphthous condition of the whole vagina. She

had also a sore throat, and some pustules on the skin. Her husband had also a pustular eruption. The spots on each resembled each other very closely. She had never been pregnant.

It has been supposed that when the female is diseased by the semen, it is only in the case of pregnancy that she becomes so, and that it is through the medium of the fœtus, and not directly that contagion takes place. (See Mr. Jonathan Hutchinson's paper, and the discussion on it at the Hunterian Society, Oct. 8, 1856.) I am now, however, quite positive that, although this may be the more frequent mode of contagion, the female may be and frequently is diseased directly by the semen, the male not having at the time any evidence of syphilis, but having previously suffered from constitutional disease.

Added, 1869.—(I could multiply these examples to a great extent. I have notes of numerous additional cases, which prove beyond a doubt the communication of secondary syphilis and latent syphilis. In the latter instances the patients have married, having had no symptom for months, and in some cases for years, but after marriage, at a longer or shorter period, the wife has become diseased, and the symptoms have occurred in three forms; 1st, The wife has been affected with symptoms of constitutional syphilis without chancre and without pregnancy; 2nd, with constitutional symptoms and chancre, but without pregnancy, and 3rd, with symptoms and either with or without chancre, but with pregnancy.) M. De Meux has published some very interesting cases illustrating these points in the 'Med. Circular,' February 10, 1864.

III.

Hereditary transmission as a cause or origin of constitutional syphilis is too well known, and too universally admitted, to require me to dwell on it here. Its physiological nature is clearly a mode of contagion through the medium of the secretions, and, in most instances, the transmission takes place from the father to the ovum, the mother never having been diseased,

and never having exhibited any symptoms of disease.¹ If the mother be suffering from secondary syphilis, and give birth to a diseased child, the contagion takes place through the medium of the blood itself.

IV.

The general and medical management of the primary disease has, no doubt, a most material influence over the prevention or development of a constitutional taint. There is no reason why a grain of mercury should be exhibited for the cure of a primary venereal affection which has, on the very first discovery of the disease, been destroyed by a caustic sufficiently powerful. Many constitutions are inimical to mercury, and its exhibition so far disturbs the system that it cannot be borne, and its use must consequently be given up. There are other peculiarities of constitution, or conditions of constitution, in which, although mercury is borne, it appears to predispose to the occurrence of certain diseases, which are not known except the patient has had syphilis, and taken mercury for its cure.

Mercury is certainly not the general or common cause of secondary or constitutional syphilis, although its injudicious exhibition frequently produces very formidable constitutional mischief. Secondary syphilis occurs where mercury has never been used, and when administered for other diseases, even when pushed to salivation, never gives rise to diseases resembling secondary syphilis.

In 143 cases of secondary syphilis detailed by M. Cazenave, 46 had taken mercury for the primary disease, and 97 had taken none at all. These facts settle two points: 1st, that mercury does not certainly prevent secondary syphilis; and 2nd, that it does not cause it. Mercury, however, must be considered as a most powerful therapeutic agent in the treatment of secondary syphilis, and it is in this class of syphilitic cases especially that its judicious exhibition produces the best effects, when combined with other treatment, which I shall presently detail.

¹ I have recorded in another part of this work several cases illustrating this point. (See the chapter on "Infantile Syphilis.")

There is a great deal in the management of the patient generally during the time a primary sore is under treatment, and as much depends upon the patient as upon the surgeon. I believe the ordinary methods adopted under these circumstances are not sufficient, and that the general habits and diet of the patient are not sufficiently attended to; for a constitutional disease is frequently developed under the combined influence of an over-stimulating diet and irregular habits, which, under different circumstances, would never have appeared at all. There is no question but that the local treatment of, and the constitutional treatment during the presence of a primary syphilitic sore, has an immense influence over the production of secondary or constitutional disease. An over-stimulating local treatment unquestionably disposes to the occurrence of bubo, in the same manner that the glands inflame, enlarge, and suppurate, in the vicinity of irritations in other parts of the body.

Many of the primary forms of syphilis are accompanied by a series of symptoms, which have been termed consecutive, and which are ordinary pathological phenomena, dependent upon irritation or inflammation, not of a specific character, but more likely to take place in some constitutions than others. If these are mistaken by the unlearned for specific diseases, and treated specifically by mercury, great bodily mischief may be produced, when the simplest medication with unirritating local treatment and a regulated diet would in all probability have brought the primary disease to a safe and speedy issue, whilst the constitutional symptoms would never have appeared at all.

Another frequent cause of the occurrence of constitutional mischief is, no doubt, the administration of mercury for the cure of primary syphilis at improper periods, whilst the economy is not prepared to receive it. A certain degree of constitutional disturbance, irritability, or fever, almost invariably accompanies the first days of a primary venereal sore, and during this period mercury should never be given, nor till the patient is prepared for it, by low diet, aperients, and the warm or vapour bath. If mercury be administered during a condition of local or general irritability, constitutional symptoms are very likely to be developed. It is from this cause that we

frequently see constitutional symptoms arising during the second or third week of a primary sore, where the patient has been suffered to follow his ordinary diet and habits. There are also certain conditions or forms of the primary sore, and different varieties of phagedena, during which, if mercury be exhibited, secondary symptoms are very likely to follow.

Again, there are other forms of constitutional disease, which must be considered as wholly independent of the treatment of the primary one, and which are the result of absorption of the poison of syphilis, and its mixture with the blood. The earlier symptoms of constitutional syphilis in good constitutions appear most commonly under the form of diseases of the skin in the exanthematic, scaly, papular, or pustular forms. The mucous membranes are the next parts affected, particularly of the fauces and throat; deep redness, with superficial or deep ulceration, accompanying most commonly the early symptoms of skin disease. It is not often, if the primary sore have not been improperly treated, and mercury not hastily or injudiciously given, that the more formidable symptoms of constitutional disease make their appearance, before the healing of a primary sore. They appear soon after it has closed, or whilst the cicatrix is yet hard. Neither do the more formidable symptoms appear in ordinary cases, unless they have been preceded by some affection of the skin or mucous membranes. There are, however, instances, and I have witnessed several, where diseases of the bones and periosteum (which are generally amongst the latest constitutional symptoms to appear) have been ushered in almost before the primary sore has been healed.

Perhaps one of the most frequent causes of the continuance or non-eradication of constitutional syphilis, is the recommendation by the surgeon, and the adoption by the patient, of an incomplete treatment. Thus all treatment is very commonly given up by the patient as soon as a primary sore has healed, or an eruption disappeared; and the customary habits of life are at once resumed, diet neglected, and medicine thrown aside. In such instances we have only succeeded in getting rid of a symptom, not of eradicating a disease; and sooner or later other symptoms are made manifest, and they are generally of a

more formidable character than those to which they gave place. Endless examples might be given, corroborating this statement; a patient has a better chance in following no treatment at all than following an incomplete one.

Treatments are rendered incomplete from two causes; first, from the adoption of inefficient remedial agents; and, secondly, from discontinuing the remedies too soon. If a primary sore be treated, the remedies should be continued for fourteen days at least after it has healed, and hardness of the cicatrix disappeared; in the secondary forms of disease in the skin and mucous membrane, the patient should follow treatment for a month after the subsidence of symptoms. In the tertiary forms of tubercles, diseases of the periosteum and bones, the remedies should be continued for two or three months after the disappearance of the symptoms. The next common cause is, the inefficient or improper nature of the remedies used, or the irregularities of the patient during the time he is using remedies. If mercury be used, the proportions and that form of administration should be chosen which suit the patient; again, these preparations must be used at the times and under the circumstances already laid down. With some patients all preparations of mercury taken internally disagree; they pass off by the bowels, or produce so much irritation that their use must be given up. In these instances, frictions or fumigations may be substituted for internal remedies; and these can very commonly be borne, and are useful when internal remedies are injurious. Under this head may be mentioned also the use of mercury for syphilitic symptoms, which do not require mercury for their cure.

The neglect of warm, or simple, or medicated vapour baths, during treatment, more particularly of the constitutional forms of disease, is, again, one of the most frequent causes why syphilis becomes protracted, and why it so frequently returns when it has been supposed to be cured. I have for the last twenty-five years paid particular attention to this subject, and made numerous experiments in reference to it. I have treated many thousand cases, both in hospital and private practice, with and without the mercurial vapour bath; and, as a general statement, in almost every form of constitutional disease, I believe I can

truly say that the treatment is diminished from one half to one third of the time by its use; the cures are vastly more certain, and there is no risk to the constitution of the patient, his health generally being improved by it.

Vapour bathing and mercurial fumigations have for a long period been employed in the treatment of syphilitic diseases, more particularly of the constitutional forms, and with the best success. I have adopted, however, a method somewhat different to any I have hitherto seen used: it consists in the application of mercurial vapour in a moist state to the surface of the skin, combining, in fact, the mercurial fume with the ordinary vapour bath. I have made a number of experiments on this combination, and found it succeed in a variety of cases, where ordinary mercurial fumigation or the vapour bath, employed separately, had failed.¹

These baths should be associated with an appropriate internal treatment. I have frequently seen them succeed where internal treatment had failed, but in most instances they should be associated with it. Such, however, is their efficacy as an auxiliary measure, that in all instances the internal treatment may be of the mildest kind. When mercury is indicated, the assistance afforded cannot be too highly appreciated, since half the quantity of the remedy will suffice for the completion of the cure, which is accomplished without risk to the constitution of the patient; a circumstance so much to be feared under the old plans of mercurial treatment.

V.—PECULIARITY OF CONSTITUTION, OR HABIT OF BODY, A CAUSE OF SECONDARY SYPHILIS.

A peculiarity of constitution, or habit of body, is again to be looked upon as amongst the causes of secondary syphilis. Authors have imagined, what they have termed a syphilitic temperament, but have failed to point out in what this peculiar

¹ Of all the auxiliary remedies employed in the treatment of venereal diseases of the skin, the most valuable are, without exception, *Baths*; and at the head of these must be placed the various forms of vapour-baths. (Cazenave, on the 'Syphilida,' p. 214.)

temperament consists. A strumous habit has been considered as predisposing to the ravages of secondary syphilis. However this may be, it will be found that constitutional syphilis is often met with of the most obstinate kind in persons who, otherwise, appear in the best health, and in whom there is no evidence of struma. If the health be bad when a primary sore is contracted, there is greater reason to fear secondary disease than though the patient had been in good health at such a time. "It is not sufficient," says M. Cazenave, "for the development of secondary syphilis, that the poison should exist in the blood; it requires, occasionally, other causes of a non-specific or ordinary character to develop it. These causes are infinitely variable: a strong moral emotion, a blow, a fall, a vapour bath, excessive fatigue, a debauch, &c., are amongst the occasional causes which give rise to an outbreak of secondary syphilis."¹ I have traced attacks of constitutional syphilis very frequently to circumstances of this kind; atmospheric changes and diet are no doubt important agents in the development of secondary disease. I have seen one case where a well-marked venereal eruption occurred in spring and autumn for nine years; a second where an eruption appeared every spring for three; and a third, where the best health had been enjoyed for twenty years, where violent exercise, followed by some fever, developed a most formidable attack of pustular syphilis, with sore throat and iritis. I have often seen the symptoms of secondary syphilis reappear after indulgence in wine; and it very frequently happens that patients who have once suffered cannot indulge in the stimuli which, before disease, they used with impunity, without syphilitic symptoms showing themselves. An extreme cold sometimes retards the development of constitutional syphilis. I was consulted by an officer, in one of the Arctic expeditions, who had symptoms of secondary syphilis before leaving England, which entirely disappeared under the cold of the Arctic regions, but which reappeared when he returned home. These facts show that, independent of the specific condition of the blood, occasional causes have a great influence both on the development and course of constitutional syphilis.

¹ Cazenave, *op. cit.*, p. 528. See also Vidal de Cassis, *op. cit.*; "Causes Déterminantes," p. 264.

CHAPTER XVI.

DIAGNOSIS OF SECONDARY SYPHILIS.

THE diagnosis of secondary syphilis is not always certain either in its acute or chronic form. When eruptions on the skin, or diseases of the throat, make their appearance within a few months after the existence of primary syphilitic diseases, and these symptoms have the well-known peculiar appearances of secondary syphilitic diseases, little doubt can be generally entertained of their nature; but in many instances, diseases which resemble syphilis are not syphilitic, and symptoms are really due to syphilis, which sometimes have not the characteristic aspect of this disease. Even M. Cazenave, with the experience of St. Louis to aid him, sees great reason for doubt on this point. "I repeat," says this author, "that it is of the first importance to distinguish a syphilitic eruption from one which is not syphilitic; but how are we to arrive at such a result?" (Op. cit., p. 549.) It is difficult, in some cases, doubtless. I have already said that diseases of the throat and skin of peculiar aspect, occurring shortly after a primary disease, are generally syphilitic, especially if the patient have never before been subject to diseases of a like character. Sometimes our difficulties are increased by the patient stoutly denying the existence of any primary disease.

The symptoms of secondary syphilis, in its more acute forms, are seldom met with alone; secondary syphilitic diseases of the skin, whether scaly, papular, pustular, or tubercular, rarely occur without other symptoms of syphilis being present at the same time; and these concomitant symptoms are most commonly found in the throat in various forms of ulceration, of the soft palate, the tonsils, or the fauces. The sub-occipital lymphatic

glands are also commonly enlarged in such cases, but they are also very frequently not affected.

Secondary and vesicular affections of the skin, rare forms of disease, but of which I shall record a few examples, may be confounded with various forms of herpes, particularly herpes zoster.

Scaly diseases may be mistaken for the ordinary forms of lepra or psoriasis, or the reverse, and I believe this is a very common error; I have seen numerous examples of it. I have recently witnessed a very formidable case of secondary pustular syphilis, which, in the onset, had been mistaken for smallpox. The syphilitic pustule on the face may also be confounded with acne. I have seen cases of two distinct affections of the skin coexisting; one syphilitic, and the other not so.

Whatever difficulties may surround the diagnosis of the more acute or earlier forms of secondary syphilis, these difficulties are vastly increased where syphilitic symptoms occur in an isolated form, after many years of apparently good health, and occasionally when the patient denies ever having had a venereal symptom at all.

CASE XXVI.

Chronic disease in both testes, occurring as an isolated symptom of secondary syphilis; the diagnosis of the disease made out from the history of the patient's children; the patient denying the pre-existence at any time of any form of syphilitic taint.

A. L—, æt. 46, was admitted into the Queen's Hospital, for an ulcer on the scrotum, and enlargement of both testes, in November, 1850. Both testes were large, heavy, hard, and lobulated; and on the scrotum was a foul, dirty, deep ulcer, with thickened edges, which had first commenced as a pustule some weeks previously. This man had been married many years, and was the father of several children. He denied firmly that he had ever had gonorrhœa or syphilis at any period of his life. On stripping him, however, there were, on various parts of the body, cicatrices, which appeared to me similar to those which are left by the healing of sores consequent on the venereal pustule; but, having had smallpox, it was not easy to say to what they were due. On questioning him as to the

health of his children and wife, it appeared that the first three children were alive and healthy; the fourth died at nine months old, and had sores on the genitals and on the nates; the fifth died at three months old, with similar sores; the sixth was born dead, and had blotches on the body; the seventh died of small-pox at fifteen months old, but previous to this had sores similar to the other children; the eighth child is now alive, but has had the same sores, and is reported to be sickly and wasting. The wife is reported to be healthy, but some months ago had an eruption of blotches as large as half-crowns. The patient was placed upon an appropriate anti-syphilitic treatment, and left the hospital with the ulcer healed and the testes much reduced in size. He took ten grains of the pil. hyd. chlorid. co. every night; the iodide of potassium, in five-grain doses, twice in a day; and after the healing of the ulcer on the scrotum, was directed to use friction on the testes with the unguent, plumbi iodidi.

It will be noticed that in this case, the disease in the testes occurred as an isolated symptom; there was no other concomitant to assist the diagnosis; but the condition of his children at once removed any doubt as to the nature of the disease in the testes. Syphilitis sarcocoele very commonly occurs as an isolated symptom of constitutional syphilis, when no symptoms of the existence of this malady have been present in the system for years.

The ulcerated syphilitic tubercle on the face is very likely to be confounded with lupus. Cazenave considers the diagnosis, under many circumstances, as exceedingly difficult, but gives some rules which may guide us, which are not certain. The syphilitic tubercle is larger and rounder, of a dusky copper colour, and much less prone to ulcerate than that of lupus. In the ulcerated condition, the two forms of ulceration differ in some respects: the "syphilitic ulcer is deep, its edges swollen, of a dusky copper colour, and sharply cut; the ulcer produced by lupus is of a dull red colour, and looks as if confined to the surface of the skin."¹

¹ 'Manual of Diseases of the Skin,' by Cazenave and Schedel, translated by Dr. Burgess, p. 257.

CASE XXVII.

Ulcerating syphilitic tubercle of the lip and nose; close resemblance to lupus; no other concomitant or anterior symptom of secondary syphilis; cure by the mercurial fume, &c.

J. L—, æt. 36, was admitted into the Queen's Hospital in March, 1851, with a foul ulceration affecting the upper lip and alæ of the nose. The ulceration was not deep, nor were the edges thickened or sharp, but it was surrounded by a deep red areola; it had destroyed the central and a portion of each lateral cartilage, and had burrowed deeply into the integument of the upper lip. The disease had commenced in the upper lip, in the form of a red hard spot or pustule, which then broke and spread by ulceration; the ulcers had destroyed the alæ and central parts of the nose, and were covered with thick black crusts. This patient had suffered from several attacks of primary syphilis, but had never had any symptom of secondary syphilis, except the one now present.

Many who saw this case considered it as lupus; it was admitted by the house-surgeon as a case of lupus. Without having any positive data to guide me, I believed it syphilitic, and consequently placed the patient on an anti-syphilitic treatment. The ulcer was poulticed to remove the crusts, and the ulcers were then dressed with a weak black wash, and the fume of the iodide of mercury was used every morning. A change in the aspect of the sore was soon visible; and the patient was discharged under the month, with the ulcer quite healed by a good, firm, but red cicatrix.

The symptoms of secondary syphilis assume many varied forms, and sometimes affect internal organs, producing symptoms which closely assimilate those which are reputed to belong to other diseases.¹ I bring forward a few cases which forcibly illustrate this proposition.

¹ I refer the reader for many valuable facts to the remarkable work of M. Prosper Yvaren, 'On the Diagnosis of Syphilis, On the Diseases which Syphilis may simulate, and On Syphilis in its latent state;' this contains numerous examples of the varied and unexpected forms under which syphilis may appear; also to the recent publication of Virchow

CASE XXVIII.

Localised constitutional syphilis—simulating schirrous mamma.

M. J—, a married lady, mother of two healthy children, in the fifth month of her pregnancy of her third child, was sent to me for my opinion respecting the nature of a tumour near the nipple of the left breast, which had been seen by many surgeons, who had considered it cancerous, and recommended its removal. It was a hard, solid lump, covered with a livid blush, and evidently on the point of ulceration. The position and character of the patient put the idea of syphilis quite in the background. On my third visit my patient said, "Will you look at a lump on my forehead, which at times gives me great pain, especially at night?" I examined the lump, which was a circumscribed periostitis of the frontal bone. It struck me immediately that the disease was venereal, the lump on the forehead a node, and the lump on the breast a syphilitic tubercle, or a gummy tumour. I made my suspicions known to the husband, who admitted that he had gone astray, but was assured that he was not diseased, but had only a chafing. On examination, I found a discharge from the base of the glans penis, the site of which was thickened and hard. There was now no doubt, as intercourse had continued under these circumstances; yet on the part of the lady there was no sexual irritation, no ulceration or discharge. The lady was put on a course of mercurial vapour, with sarsaparilla, &c. The symptoms of syphilis disappeared under the treatment, but she was prematurely delivered of a dead child. She has since, however, enjoyed good health, and has had a healthy living infant.

CASE XXIX.

Localised secondary syphilis—simulating fissure, or ulcer of the rectum.

A. W— had suffered under constitutional symptoms of syphilis for some time, which had all disappeared under treatment. 'On Constitutional Syphilis, chiefly as it affects Internal Organs,' which is also very important, showing that many internal diseases, hitherto not suspected of being syphilitic, are so, and the pathological changes produced are those due to the tertiary stages of syphilis.

ment : they had consisted of condylomata around the anus, and a sore throat. He consulted me for intense pain during defecation, so great as to produce faintness, and lead him to avoid evacuating the bowels, except when actually necessary. After some difficulty I succeeded in passing my finger within the sphincter : I found an ulcer, from which all the pain doubtless proceeded. On pressing it a similar agonising pain was experienced to that which he felt when the bowels were moved. I suspected from the history that this disease was syphilitic. I recommended the daily use of the confection of senna to keep the stools thin, and placed the patient on a course of mercurial frictions. The disease was rapidly and soundly cured.

CASE XXX.

Hoarseness, with relaxed throat, and loss of voice for three years; no benefit from ordinary treatment; subsequently an attack of tubercular syphilis; cure of the former symptoms by the treatment of the latter.

A. B— placed himself under my care to be treated for secondary syphilis. The symptoms consisted in the presence of a large round tubercle, covered by a patch of inflammation, in the substance of the left cheek. On the nates, and on the upper and back parts of the thigh, there had been also several of these tubercles, which had ulcerated, and become deep, irregular, foul, discharging ulcers, seated on an indurated base. He had suffered from primary sores seven years previously; and, three years ago, the throat had become painful on swallowing, was relaxed but never ulcerated, and the voice hoarse and feeble. For these symptoms he had consulted several physicians in London, and had used counter-irritation, local applications, and had been submitted to internal treatment of various kinds, with little or no benefit; as he got thin and weak he began to fear threatenings of laryngeal phthisis. Seven weeks previous to my seeing the patient, tubercles on the back and thigh appeared, which slowly increased, ulcerated, and ran into foul sores; the tubercle on the face had also recently made its appearance. For these symptoms, doubtless syphilitic, the patient placed himself under my care.

He was placed on the use of the mercurial vapour bath, a milk diet, and the biniodide of mercury with the iodide of potassium. The tubercle on the face had disappeared after the sixth bath, and the ulcers, which were dressed with the ung. hyd. nit. oxyd., and unguent. elemi, looked healthy, and were healing rapidly. In six weeks all the symptoms had disappeared; but what is remarkable, the hoarseness, and uneasy feelings in the throat, were gone, and they have never returned.

The symptoms in the throat and windpipe in the preceding case were doubtless syphilitic, which is evident from their disappearing under the treatment which was directed against the syphilitic tubercles; but from their occurring as isolated symptoms of secondary syphilis, in a form not common, their nature and origin were overlooked.

Whilst, on the one hand, symptoms due to secondary syphilis are constantly unsuspected as to their nature and origin; so, on the other, are diseases reputed syphilitic, which certainly have no dependence upon the latter disease. This proposition is of immense importance in its practical application; patients who have once had any syphilitic taint, are apt to attribute the whole diseases of after life, of whatever nature they may be, to a syphilitic cause; and this apprehension or conviction is carried in many cases to such an extent that it is difficult or even impossible to combat it. A gentleman, upwards of sixty years of age, called on me one day, and showed me his hands and arms, which were covered with a well-marked eruption of "psoriasis guttata." I said to him, "You are come to ask me if this eruption is syphilitic, and I tell you at once, without asking a question, that it is not." He replied, "I am glad to hear you say so, and I feel persuaded that it is not, for the opinion you have expressed coincides with others that have been given me by some of the first surgeons and physicians, both in London and on the Continent;" but, continued he, "I showed it to one person, in whom I really had no confidence, who said it possibly might be syphilitic. I must confess, that this opinion makes me uneasy, and I cannot get rid of the idea that it is just possible the disease may be venereal, for I had a sore before I was twenty, and this eruption, which I have had forty years

came on about that time after bathing whilst I was very hot, my chief object in coming to you is to beg that you will test the nature of the eruption by some anti-syphilitic remedy, which will set the matter at rest, till when I shall never be easy in mind on the subject." This is not an isolated case; these fears are widely spread in society, and are sources of continual mental uneasiness; in some instances, threatening the minds of the patients, and even determining to acts of suicide. Again, on the other hand, symptoms are frequently syphilitic, which are reputed not so. A gentleman, seventy years of age, called on me and showed me his tongue, which, he said, he feared was cancerous, as he had been told so by three surgeons and one physician. I asked him if he had syphilis lately, and he admitted that he had contracted a chancre within the last two years. I placed him on a course of calomel and opium, with the iodide of potassium and sarsaparilla. The cure of the disease in the tongue was perfect; the patient is now alive, and free from all malady in the tongue.

In attempting to form a diagnosis in reference to the nature of a symptom supposed to be due to secondary syphilis, several points must be taken into consideration.

1. The nature and appearance of the symptom itself.
2. Its history, the date of its appearance; the character, date, and number of primary symptoms which preceded it.
3. The constitution of the patient, what diseases he may have been subject to, and whether any similar symptoms had ever been present prior to the contraction of any syphilitic taint by the patient himself.
4. If, apparently, an isolated symptom be present, other symptoms should be looked for, which may be generally found on close examination and inquiry.
5. If the patient be married, the health of his wife and children should be noted; and, lastly, we may resort to the test of treatment itself. By attention to these circumstances, I think it will generally be found, that we shall be able to make out, in most cases, a correct diagnosis of many secondary syphilitic symptoms, of whose nature we might remain in doubt, after a more cursory or careless examination.

CHAPTER XVII .

OF THE PROGNOSIS OF CONSTITUTIONAL SYPHILIS.

THE prognosis of constitutional syphilis involves many grave questions, besides that of the effect of the disease on the health and life of the patient. The chief points to be considered in the prognosis of constitutional syphilis are the probability of cure, or, in case of marriage, the effect of the disease on the wife or children. It is true that constitutional syphilis rarely terminates fatally, considered in reference to the number who suffer from such disease; but yet where the pustular, or tubercular, or even other forms of disease occur in advanced years, the patient's life is not unfrequently shortened by the exhaustion produced by repeated outbreaks. Where constitutional syphilis terminates fatally, organic changes are not uncommonly met with in the mucous membranes, especially in those of the intestines and larynx, where ulceration is found, and the patient sinks exhausted by diarrhœa, or symptoms resembling laryngeal phthisis; cough with profuse expectoration, and night sweats. At other times the constitutional condition is one of profound cachexia, in which the changes most evident are rather in the humours than in the solid parts of the body. In addition to its direct influence, a syphilitic taint frequently becomes the means of developing latent mischief in various organs, especially in the lungs, and I have, in more than one instance, seen patients die of ordinary phthisis, whilst suffering from syphilitic diseases of the skin and bones.

The ordinary forms of constitutional syphilitic taint do not, however, terminate fatally; neither do they, in a great number of instances, appear to affect the general health of the patient; but a serious question, in reference to the prognosis of constitutional syphilis, is that which relates to its curability, and, whether, and at what period, we are capable of pronouncing a

patient cured after the disappearance of all external signs of a constitutional syphilitic taint. Some modern writers have denied the curability of constitutional syphilis altogether, and have asserted that the virus "once received into the blood, remains there for years, and possibly, indeed certainly, for the rest of existence."¹ Though there may be some foundation for such a statement, it is too sweeping to be received as an axiom. If secondary syphilis attacks persons of good constitution, under thirty-five years of age, and be properly and perseveringly treated, I believe, in a great majority of instances, that the disease is eradicated, and I found my opinion on the fact, that many persons who have so suffered, have never exhibited any further evidence of syphilitic taint, and their children have also enjoyed the best health. If, again, a constitutional taint make its first appearance over forty, especially in the forms of pustular or tubercular diseases of the skin, although treatment may do much in removing the symptoms of such diseases, it would, perhaps, be going far, to say that they are ever perfectly cured; and I am sure they rarely are, except vapour bathing be associated with any treatment that may be adopted. This is our sheet-anchor in the treatment of all forms of constitutional syphilis. I differ from those who say, because the symptoms of syphilis have in a few instances returned after the lapse of many years that constitutional syphilis is actually incurable. Ricord says, "I still persist in not concluding that syphilis is surely and absolutely incurable." Virchow puts this opinion in a much more sensible point of view when he says, "We have no positive sign which permits us to affirm that the patient is cured." I have known a formidable attack of constitutional syphilis after twenty-two years of uninterrupted good health. Cazenave mentions one of thirty years, and Ricord one of forty. These are rare and exceptional cases, and it is just possible that a fresh disease may have been contracted in the interval. I have now for so many years seen so much of syphilis, that I can point to numbers of cases of what I consider perfect cures, where patients have for a great many years been married, and who are the fathers of large families, in whom there is not a vestige or trace of syphilis, nor

¹ Erasmus Wilson, on 'Syphilis,' &c., p. 158. Cazenave made the same assertion.

has there been in periods ranging from ten to twenty years. Dr. Faye says ('Edin. Journal,' March, 1860,') "The simplest and surest proof of the cure of syphilis, the true touchstone showing that syphilis is destroyed, should undoubtedly be sought for in those cases where the children of parents who have been syphilitic are born healthy, and do not at a later period become affected with symptoms which can evidently be attributed to the syphilitic dyscrasia." This is the test that I have already given of the probable cure or eradication of syphilis; and, reasoning from these facts, I say that constitutional syphilis can be cured. (See the chapter on Infantile Syphilis.)¹

I have, however, known, I may say frequently, cases in which the father with well marked symptoms of secondary syphilis has begotten healthy children who have never exhibited any symptoms of syphilis, so that this test is not absolutely unerring.

If, again, the symptoms of a syphilitic taint have disappeared from the system for years, the taint may remain latent, and appear in the offspring of such patients, in the various forms of hereditary or congenital syphilis. I could relate many cases of this nature, where, although no external sign betrayed the existence of a taint, still children have been born to such parents, who have exhibited formidable symptoms of syphilis.

CASE XXXI.

Latent syphilis; no symptoms in parents; six diseased children.

A gentleman married, having been free from the slightest appearance of syphilis for some years prior to his marriage. His lady aborted of her first infant, and also of the second; the third child was born alive, but at six weeks old was attacked with "snuffling," and condylomata round the anus; the eyes were also affected. The lady aborted of the fourth child; the fifth had condylomata and inflamed eyes, with snuffling; and the sixth exhibited the same symptoms soon after birth. The lady had also an ulcerated throat of suspicious appearance, but no other symptom.

Such cases might be multiplied; I have seen many; nevertheless they are rare and exceptional.

CHAPTER XVIII.

OF THE STATE OF THE BLOOD IN CONSTITUTIONAL SYPHILIS.

IF the blood taken from any part of the body of a patient in an advanced stage of constitutional syphilis be examined microscopically, it will be found to differ widely from healthy blood. The single corpuscles are small and pale, and their circumference often irregular; they are disposed to coalesce and run into irregular and confused masses, in which all trace of the individual corpuscle is lost. They are also very small in quantity, their number in proportion to the other elements being less numerous than in healthy blood. The blood of patients in this state is poor and thin; the corpuscles small or irregular, and much diminished in quantity. This has been termed "deglobulisation" by some modern writers. The diminution of the relative quantity of blood-corpuscles in secondary syphilis is strongly contrasted with the condition of the same fluid in the acute primary forms of the disease, where the globules are full and large, and their number relatively increased.

M. Grassi¹ states that in the advanced stages of the disease the globule is converted into albumen. It is certain that many forms of constitutional syphilis are accompanied by albuminuria. I have seen many cases, and have at the present moment one under my care. M. Waller has succeeded in inoculating with the blood of a patient labouring under constitutional syphilis.² MM. Diday and Vidal de Cassis also believe in the contagious properties of blood thus affected.

Of course the conditions of the blood I have just alluded to

¹ 'Gazette Médicale,' 1850, p. 200.

² Op. cit.

will present infinite varieties, dependent on the age and constitution of the patient, and the length of time the disease has been in the system. My observations have been made at all ages; but the descriptions I have now given have been taken from the blood of patients upwards of forty years of age, where the disease had existed some years.

The blood-disc taken from patients debilitated and exhausted by an old venereal taint does not long retain its characteristic shape. It is well-known that the healthy blood-disc, dried on a piece of glass, retains its shape and character for a length of time, and may be preserved in this way for the purposes of demonstration; but the blood-disc of constitutional syphilis, if examined a few days after being drawn from the patient, has completely disappeared, and nothing but a red cloud is perceived, produced by the dissolution of the disc, and showing the profound alteration the blood undergoes in advanced stages of the disease.¹

¹ The researches of M. Grassi, Apothecary to the Hôtel-Dieu, on the blood of patients affected with indurated chancres, show that there is a marked diminution in the globules, and an increase in the albumen of the blood, whilst the fibrine appears to undergo little or no change. M. Grassi also states another remarkable fact, that the globules rapidly increase under the exhibition of the iodide of potassium. (See M. Fournier's note to Ricord's 'Lectures on Chancre.') Of course, if the blood be examined at various periods and states of syphilis, it will be found, as it has been found, in very variable conditions. The blood of a patient in good health, recently affected with indurated chancre, is in a very different condition to that of one who has been suffering for long periods from pustular or tubercular syphilis. Hence Virchow has described three various conditions of the blood, in the various forms and states of constitutional syphilis; these are pretty much the same as those I have already mentioned. These changes consist in a diminution of the globules, as in the earlier stages of secondary syphilis; in an increase of the white corpuscles, a state of leucocythemia, seen in the more advanced stages of the disease; and a watery condition, "hydremia," mostly observed in tertiary syphilis, with change of structure in internal organs, especially the viscera of the abdomen.

CHAPTER XIX.

OF THE PARTICULAR SYMPTOMS OF CONSTITUTIONAL SYPHILIS.
OF SYPHILITIC DISEASES OF THE SKIN—SYPHILIDA.

SYPHILITIC diseases of the skin may be referred to nine principal groups:—1, Exanthemata; 2, Squamæ; 3, Vesiculæ; 4, Pustulæ; 5, Papulæ; 6, Tubercula; 7, Ulcers of various kinds and in various situations, many the consequences or necessary results of many of the preceding forms; 8, Vegetations, warts, condylomata, or mucous tubercles; and 9, Maculæ, or syphilitic stains of the skin.

OF THE SYPHILITIC EXANTHEMATA.¹

The syphilitic exanthemata generally make their appearance under the form of irregular patches, of a shining copper or bronze colour, at the onset of the disease; if there be much accompanying fever, they are more inclined to redness, and the bronze or copper colour is not marked till the inflammation and fever have disappeared. Occasionally this form of disease commences in red patches, spread more or less extensively over the body; these patches vary in dimensions from the size of a sixpence to that of a shilling; they are not elevated and solid like the papulæ, and have no apex or centre containing either lymph or pus. They are commonly accompanied by fever, and but for the coexistence or the immediate precedence of primary sores might be mistaken for an eruption dependent upon other causes. They very commonly appear before the primary symptoms have disappeared. When they are dying, the top is commonly covered with a thin dry scurf or scale. They are

¹ *Synonyms and Varieties.*—Roseola syphilitica, and papulous erythema. (Cazenave, on the 'Syphilida,' p. 226.)

sometimes accompanied by papulæ and other forms of constitutional syphilis, as superficial redness or ulceration of the fauces, and are frequently succeeded by the squamous or tuberculous forms of disease. These eruptions frequently accompany the primary forms of syphilis.

They demand, in the first instance, if there be much symptomatic fever, an antiphlogistic treatment, and the warm bath; afterwards, if they are rebellious, the iodide, biniodide, or bichloride of mercury, with sudorifics and the mercurial vapour bath. This is the form of skin disease which frequently accompanies an acute gonorrhœa, or comes on when it has been suddenly suppressed in its early stages. The ordinary forms of roseola generally occur early in the history of a venereal taint; but there are cases where eruptions which belong to the exanthematic form are chronic, and appear at varied intervals after primary diseases. I have seen cases where they occurred two years and ten years after the primary disease. In these instances, the affection of the skin consisted of circular red patches, fading into a brown colour, and covered with a thin, dry scurf, not a scale. After a long period, in some of the spots, the scurf became a scale, and gradually thickened, so as almost to appear like lepra or psoriasis; diseases from which, however, roseola is essentially different.

These spots of chronic roseola, at first red, gradually fade into a pale, shining copper colour, and frequently, at last, die away into a yellow stain of the skin, which remains for a long period of time, and sometimes cannot be removed at all.

The treatment, which is almost always successful in these cases, consists of a milk diet, minute doses of the bichloride or biniodide of mercury, not exceeding the twentieth of a grain for a dose, and the mercurial vapour bath three times a week.

OF THE SYPHILITIC SQUAMÆ.

The squamæ are particles of thickened epidermis, become hard, dull, and opaque, and elevated above the surrounding skin by a morbid condition of the subjacent dermis, or simply of the rete mucosum. This disease is essentially chronic, and does

not generally succeed to any febrile condition of the economy. The syphilitic squamæ generally appear in the form of patches, more or less diffused, varying from the size of a sixpence to that of a half-crown; the centre of these patches is frequently depressed; they are of a red copper colour, changing ultimately to a dull brown, or even black, which is a long time in disappearing. I apply the term, squamous, or scaly syphilitic disease of the skin, to that form which is scaly from the commencement; it is to be distinguished from other diseases, such as roseola, papules, or pustules, which either become covered with a dry dandriff, as roseola; a slight ulcer with a scab, as papules, on the decline, or a crust which covers a ruptured pustule; these are not scaly diseases, properly so-called, and the distinction should be well made, as the scaly disease is that which has been called "true syphilis," although it is not more truly syphilitic than a pustule or a tubercle, and not half so formidable in its consequences or results.

The scaly syphilitic eruption consists of thick, dry scales adhering firmly to the skin, and resting upon a red, elevated surface, the scales being continually renewed when shed; those portions of the skin on which the scales are placed present a well-marked thickening, and are thicker as the disease has been longer in existence.

The scaly disease appears under various forms; as a ring, a spot (*guttata*), an irregular ring, like the track of a snail (*gyrata*); sometimes the scales are black, at other times of a shiny or pearl-like whiteness, and sometimes, when affecting the palms of the hands, as thick as horn in old cases.

Scaly syphilitic eruptions may be confounded with other scaly diseases of the skin not syphilitic, as the ordinary forms of lepra, or psoriasis; they may be confounded, again, with other syphilitic eruptions, which assume an appearance of scaliness on their decline; some forms of papules (*lichen*), when the papules are large, resemble it very closely. On the hands the disease may be mistaken for grocers' or bakers' itch; and this is not unlikely, as the horny or scaly syphilis of the palms of the hands, and joints of the fingers, very commonly occurs as an isolated symptom of constitutional syphilis.

Scaly diseases occur at various periods after primary infec-

tion, sometimes as early as three months, in other cases much later; there is no rule on this point. They sometimes succeed to other forms of skin disease, as papules, or vesicles, and frequently occur again under the same form when they have been apparently cured, a fact peculiar to the scaly disease, for papules, vesicles, or pustules, rarely occur twice; if another attack of skin disease succeeds, it is generally, if not always, under another form.

The syphilitic squamæ have a tendency to excoriate, or ulcerate slightly in the centre, which then becomes covered by a small, dry, thick crust; occasionally, also, their surface is traversed by fissures, when there does not exist any apparent ulceration. After the cure of the disease, the dermis remains depressed in the parts corresponding to the centre of the squamous patches. The other symptoms of constitutional syphilis, with which the squamæ are commonly associated, are inflammations and ulcerations of the fauces and palate, and pains and diseases of the periosteum and bones.

As the syphilitic squamæ are not generally accompanied by vascular excitement or fever, an antiphlogistic treatment is rarely indicated. Sudorifics, as the decoction of sarsaparilla, or the preparations of Zittman or Feltz, with the carbonate of ammonia and the mercurial vapour bath, are generally successful. The bichloride or biniodide of mercury, or mercurial frictions, are the best remedies when mercurials are indicated. The preparations of arsenic are useful in some forms of disease, particularly those which succeed to primary diseases which have been fully treated by mercury. Biëtt relates a case of this character speedily cured by the liquor arsenicalis, and the arseniate of soda, after the failure of other measures. Over true scaly diseases the iodides have very little influence.

Psoriasis palmaris, or syphilitic lepra of the hands and feet, frequently occurs as an isolated symptom of constitutional syphilis; or, if associated with other symptoms, it is frequently the most prominent. In this disease the hands are covered with thick, horny scales; in other places the epidermis is dry and harsh; the joints of the fingers externally are dry, crack, and ulcerate. Sometimes the lepra occurs in round, thick patches, of irregular shape, but always affecting the palmar surface of

the hand, and the sides and soles of the feet. The hands are hot and stiff. These symptoms are tedious and difficult of cure; they require local as well as general treatment; in addition to that recommended for lepra generally, they require local management. Poultices to soften the soles, and frictions with ointments composed of iodine¹ or mercury,² are very useful. The scales when softened may be touched with strong nitric acid, or the liquor hydrargyri pernitritis.

OF THE SYPHILITIC VESICULÆ.

The vesiculæ are the most rare of all the syphilida. M. Bielt had only seen a few examples of it. Cazenave says that he published the first account in 1828. The disease is characterised by vesicles seated upon an inflamed base, of a deep copper-coloured red; they are indolent, and remain stationary much longer than eruptions of the same character not having a venereal origin. Some of them shrink up, and are transformed into grey, squamous crusts; others disappear and leave behind them on the skin where they are situated a brown mark. They are accompanied by some degree of fever, inflammation of the fauces and palate, and other symptoms of secondary syphilis. I have seen several examples of this form of secondary venereal disease of the skin, which is not, perhaps, so rare as might at first be imagined, as the vesicles soon rupture, shrink, and are transformed into little crusts or scabs, which look like lichen, or lepra. An error in diagnosis might be very easily committed, both as regards the form of syphilitic eruption, and the nature of the eruption itself, whether syphilitic or not, especially if there be no other concomitant symptom of secondary syphilis.

¹ R Unguent. picis,
Unguent. plumbi iodidi, āā ʒj. M.

² R Unguent. hydrarg. nitratis,
Adipis ppt., āā ʒj;
Glycerinæ opt., ʒij. M.

R Hyd. nit. oxpd. (levigati), ʒj;
Unguent. zinci, ʒij;
Glycerinæ, ʒij;
Kreasoti, ℥x.

M. ft. unguent.

CASE XXXII.

Infecting chancre; vesicular skin disease.

A. B. had suffered from well-marked indurated chancre, and an ulcerated throat, very rebellious to treatment. He was attacked with a crop of vesicles on the cheek, precisely similar to the vesicles of ordinary herpes; coinciding with these he had some spots of lepra on the body, and superficial ulceration of the soft palate. The vesicles, the lepra, and the ulcerated throat, were all present together. The vesicles soon ruptured, and were converted into a thick, brown scab, which covered superficial ulcers; these, when healed, left slight depressions in the skin. A lotion of the Liq. Hydrag. pernitrat. largely diluted, and ointments of the Ung. Hyd. Nit. and Ung. Zinci, generally answers local application. The Ung. Hyd. Nit. Oxyd. does not so generally agree.

The syphilitic vesiculæ are commonly preceded by other forms of skin disease, which they replace. I have seen the vesicle preceded by roseola, and replaced by a pure scaly disease; thus corroborating a former remark that, with the exception of scaly diseases, the syphilida are seldom reproduced under the same form.

Vesicles on the penis, whether venereal or not, sometimes accompany primary diseases.¹ I have seen one case in which, three days after the appearance of a gonorrhœa, the skin of the penis was covered with a crop of vesicles, from which the patient had never suffered before. Cazenave (p. 266) believes these symptoms to be syphilitic. Vidal de Cassis states that he has succeeded in inoculating the syphilitic vesicle, by which inoculation a similar disease was produced (p. 343). Pemphigus and rupia belong also to the class of vesicular syphilitic diseases of the skin: the former has as yet been chiefly observed in infants; it consists in an eruption of large vesicles filled with a straw-coloured serum, and may or may not be associated with other symptoms of constitutional syphilis. (See the chapter on

¹ These must not be confounded with simple "herpes præputialis."

Infantile Syphilis.) In rupia the vesicles are large and dark-coloured, filled with a dark or blood-coloured serum; they become covered with a laminated and elevated dark or black crust, unlike the crust of ecthyma, which is flat. These crusts cover ulcerations more or less deep, and in various conditions. They may co-exist with various other syphilitic symptoms, especially secondary phagedena of the throat. What is said with regard to treatment, when speaking of the ecthymatous pustule, its crust and ulceration, finds its application here.

OF THE SYPHILITIC PUSTULÆ.

Pustules are characterised by an elevation of the epidermis, raised by a collection of pus secreted by a circumscribed portion of inflamed skin. The syphilitic pustulæ are frequently complicated with tubercles, and the pustules themselves commonly placed upon a tuberculous base. The pustules are again occasionally associated with papulæ, but are rarely complicated either with squamous or exanthematous affections. The syphilitic pustulæ frequently ulcerate, and give place to a sore of characteristic appearance, with hard and elevated edges, and a foul surface, secreting a sanious pus. Unlike other pustular diseases of the skin, the syphilitic pustule follows no regular course; they are developed slowly, and remain stationary for a longer or shorter period, frequently for many weeks, or till an appropriate treatment be adopted. They are situated upon a hard raised base, of a deep brown or copper red; this colour is better marked when they have continued some time, than in the commencement of disease. The syphilitic pustulæ strictly belong to that class of affections which are termed secondary, but are sometimes observed to coexist with a primary venereal sore; they are, under these circumstances, developed upon the skin of the penis, the scrotum, the pubes, or the labia; they are placed upon a red indurated base, soon burst, and change into foul and spreading ulcers.

Pustular syphilis is characterised by the eruption of pustules of various sizes, over a greater or less extent of the whole surface of the body, rarely accompanied by any symptomatic

fever. It is sometimes confounded with other forms of skin disease, not venereal. On the face I have known it mistaken for acne, especially when the pustules are small, and I have also in more than one instance seen it mistaken for smallpox. Pustular secondary syphilis assumes several forms: in one form the pustules are small and numerous; this has been termed the lenticular or miliary pustule: in a second form the pustules are larger and not so numerous; and in the third form we have large single pustules, irregularly disposed, but not numerous; the patient may have from ten to twenty of these pustules, in different stages, on various parts of the body. The secondary syphilitic pustule is a very common form of constitutional syphilis. It generally occurs from six to twelve months after the primary poisoning, but I have seen cases, one now in the hospital, where a well-marked pustular eruption occurred before the primary sore was healed; and again, I have known well-authenticated cases, where pustular syphilis has occurred ten, twelve, twenty-seven, and thirty years after a primary infection. It is difficult to explain these facts, which I state from my own experience, and in which I am borne out by M. Cazenave;¹ of their truth there can be no doubt.

The syphilitic pustule runs a very marked and peculiar course, and I will take a medium-sized pustule for the purpose of illustrating the history of this course, because the progress I am about to mention is not so well marked, either in a very small pustule or a very large one. When the syphilitic pustule first appears on the skin, it consists of a portion of epidermis raised by a small quantity of pus, but the disease remains a very short time in this state, sometimes only a few hours, at most not more than a few days; the pustule becomes ruptured, the pus exudes on the surface of the pustule, which shrinks and dries up.

In the first form (the lenticular), the pustules commence in small, red, elevated, spots, spread more or less over the face, trunk, and extremities; these spots suppurate at the apex, and each spot contains a drop of matter about the size of a large pin's head; the pustule soon breaks, the pus exudes and dries on the surface of the pustule, each of which is then covered with

¹ 'Traité des Syphilides.'

a small crust, slightly depressed in the centre. On the face these pustules very much resemble "acne."

In the second form the pustules are larger, about the size of a pea or the smallpox pustule; these soon break, and become covered with a thin, flat, or conical crust. If the pustules are few and isolated, the crusts are circular; but if near together, the crusts run into each other and assume an irregular form. The disease in this stage has been denominated "pustulo-crustaceous." We may see the pustule, before it has broken, surrounded by a narrow, red or livid areola, or the circular crust where the pustule has ruptured and the pus dried up, or confluent and irregular where the pustules have been near together.

The crust covers an ulcer which, when the former is detached, may be found in varied conditions, either healthy and disposed to heal, deep and sloughy with indurated edges, or even phagedenic. These are secondary venereal ulcers, succeeding to the rupture of the pustule. The ulcer may heal under the crust of the pustule, which is a very common circumstance; but when it does so, it leaves behind it a red cicatrix always more or less depressed in the substance of the skin. If the pustule have been placed on the forehead, and have been large and long in existence, the surface of the bone is always more or less absorbed, and a well-marked depression exists in it long after the ulcer has healed, and the skin has recovered its natural appearance. Till a proper treatment has been adopted, the venereal pustule keeps constantly forming on the skin for long periods, and thus we commonly see the pustule, the crust, the ulcer, the depressed and red cicatrix, all present in the skin at the same time, giving the malady the appearance of a compound skin disease.

In pustular secondary syphilis, then, we have four distinct forms of local mischief, the pustule, the crust, the ulcer, and the depressed and coloured cicatrix; and in the advanced stages of the disease it almost invariably happens that all these conditions are present on the skin at the same time. In many forms of pustular syphilis, particularly the first two, the constitutional disturbance is not so great as the extent of the local malady would lead us to expect; thus in many cases the general

health is little disturbed. But there are other instances in which the constitutional disturbance is so great as to put the life of the patient in imminent danger. All the forms of pustular constitutional syphilis are formidable diseases, and indicate a profound and complete contamination of the system by the syphilitic virus. In the second and third forms, the general health suffers more or less, and a fatal termination may ensue, in which a general breaking up of the constitution takes place, preceded by diarrhœa and profuse night perspirations. Happily, however, under a proper treatment, this is not often the case.

Pustular syphilis is formidable again, from the marks and depressions left on the skin and on the surfaces of the flat bones by the cicatrices of the ulcers to which it gives rise, which may be frequently avoided if the patient is treated early, and before the rupture of the pustule; it is commonly the forerunner of, if it be not accompanied by tubercles and diseases of the bones. Pains in the bones, nodes, and periostoses, commonly complicate pustular syphilis, particularly where the pustules are simple and large. It must be quite evident that the stages of pustular syphilis are so numerous, its complications and pathology so varied, and the conditions of the general health under which it is met with so different, that no specific treatment can be in any way applicable to pustular syphilis, considered as a mere secondary venereal disease. It must be quite clear that the treatment of the miliary or impetigenous pustule in a patient in good health must totally differ from that we should adopt in one suffering from eczema, where the habit is weak and the health bad, and yet they are both pustular secondary syphilis.

The remedies best suited to the pustular forms of syphilis must be varied to suit the different forms of the eruption, the state of the general health, and the age of the patient. Mercurials, or the iodides of potass, soda, ammonium, or iron, may all find their application in different cases. The mercurial vapour bath may be employed in almost all the forms of the disease. After two or three days' treatment by it, we perceive that no more pustules appear; the disposition to their formation is for the time arrested; the red or copper-coloured ring round the pustules that are covered with crusts, looks less livid,

and the eruption looks more dead ; after a time, the crusts begin to drop off, and we find in many places, where they formed the covering to ulcers, that these ulcers have healed, and that there is a red cicatrix only, marking the site of the previously existing ulcer. This cicatrix very commonly is depressed more or less in the skin, forming a pit not unlike that left by the pustules of smallpox. The crust is the best dressing to the ulcers underneath, under ordinary circumstances ; and this is proved by the crusts adhering till the ulcer has healed under a proper constitutional treatment, and then falling off. If, however, the ulcers are unhealthy, and disposed to spread, we find drops of pus exuding through the crust, or the crust falls, leaving the sore underneath in very various conditions. To these sores various applications may be used. I generally poultice them, if foul, for a day or two, then wash them with a little black wash, and cover them with collodion, or the solution of gutta-percha in chloroform, suggested by Dr. Graves, of Dublin. If they secrete much, they may be dusted with starch and calomel ; ointments are generally unsuited to these ulcers, and under ordinary conditions the collodion or gutta-percha dressing, to defend them from friction and atmospheric influence, answers very well.

Treatment should be followed for a month or six weeks, and at the end of that time we shall find that the symptoms of pustular syphilis have disappeared, with the exception, probably, of the red stains left on the site of the ulcers. If they have been deep, it is some time before this redness altogether subsides, perhaps two months, or even three, or more, according to the severity of the attack. Treatment should not be given up, although it should be modified, till all the redness left on the skin has given way. If the destruction of parts by the ulceration has been great, the skin is far from presenting its original healthy appearance ; it remains puckered, and uneven in places, resembling the appearance of the cicatrices produced by a burn.

CASE XXXIII.

S. R— was admitted into the Queen's Hospital, on March 30, 1849, with twenty-eight or thirty large pustules, in various stages, on different parts of the body; constituting the disease known as syphilitic "ecthyma." In this patient the constitution had been nearly destroyed by the irritation of the disease. When admitted, he presented an illustration of the last stage of syphilitic cachexia. He could not stand; the extremities were œdematous, night perspirations profuse, and pain in the bones of the head and legs very severe. There were seven or eight large secondary ulcers, of foul character, on the head, arms, and legs, which had resulted from the rupture of the pustules; and in two places were pustules recently formed, which offered a good illustration of their commencement. The epidermis was raised by a purulent collection, of the size of a shilling, the covering of which was very thin, the pustule itself surrounded by a deep livid-coloured areola; the skin on which the pustule rested was not indurated. This patient found great benefit from large doses of opium, an admirable anti-syphilitic in such states.

I have employed opium very largely in the advanced stages of constitutional syphilitic diseases. Opium has, by a number of authorities, been extolled as a remedy of great value in many forms of secondary syphilis, and its administration by some surgeons has been carried to the extent of twenty or thirty grains a day. Opium is indicated where the health has been broken by mercury and syphilis, and its administration is almost always followed by satisfactory results. It is of especial use where the nights are bad, and the patient emaciated and feeble, where a general irritability, the result of mercury and disease, appears to be wearing the patient out. In such cases opium, in large doses, acts almost magically. In many instances it may be advantageously combined with other remedies, to suit the exigencies of any particular case. I am in the habit of prescribing it, combined with guaiacum, with very good results.

Opium, the warm bath, appropriate dressings to the secondary ulcers produced by the rupture of the pustules, and decoctions

of the woods, especially guaiacum, are the first remedies to be employed in such states as those to which I have just alluded. As the patient improves, the mercurial vapour bath must be used, and the iodide of iron given. There may be many other syphilitic symptoms present with the pustular disease of the skin, and its consequences. Pustules are commonly complicated with tubercles, topi, and almost always, in advanced forms, with pains, or diseases in the bones. Such states, of course, require modifications in the treatment suited to the exigencies of each particular case. The large pustules of ecthyma are commonly covered with thick black crusts after they are ruptured, especially in constitutions which are naturally feeble, or in systems broken down by intemperance and debauchery. This condition is frequently termed rupia; it differs, however, from that disease. Rupia is a bullous, not a pustular disease. The pustulo-crustaceous disease with black crusts is one of the most formidable varieties of secondary syphilis; it is commonly fatal, either by the exhaustion which it produces, or by the production of diseases in other organs, especially the throat, pharynx, œsophagus, or windpipe.

OF THE SYPHILITIC PAPULÆ.

The papulæ are small, solid, hard elevations upon the skin, containing neither lymph nor pus, surrounded by a small inflamed areola, having frequently ulcerations at their apices, which then become covered with small, dry incrustations. The syphilitic papulæ are more or less disseminated over the body, arranged in groups, or disposed to be confluent. They are distinguished by their deep red or copper colour, their tendency to ulcerate, and to form hard incrustations on their surfaces, which, falling off when the ulcer has healed, leave brown, copper-coloured, depressed cicatrices in the skin. The papulæ are commonly associated with pustules, tubercles, or squamæ; and are almost always accompanied by syphilitic iritis, ulcers of the mouth and fauces, diseases of the bones or periosteum, nocturnal pains, or other symptoms of confirmed constitutional syphilis. This affection of the skin sometimes accompanies primary

symptoms; when it does so, it assumes a more or less acute form, and is attended with some fever.

This variety of disease has been termed venereal itch, "scabies venerea," on account of the irritation the papulæ occasion when they are seated on certain parts of the body. It sometimes attacks the labia, principally on their external surface, the orifice of the vagina, and the clitoris, which parts, on examination, are found covered with small papulæ of a deep red colour, causing an intolerable itching, principally in the night; the eruptions sometimes extends to the arms and internal parts of the thighs. Mercurial ointments commonly allay the irritation.

Added 1870.—The syphilitic papulæ are occasionally productive of great and intense irritation or itching, and might be mistaken for another disease. Unlike common itch, however, the disease is spread in irregular patches all over the body. It may occur many years after the primary disease. The mercurial vapour bath given daily, or daily frictions with the following ointment, are almost specifics.

℞ Ung. hyd. nitratis,
 Ung. hyd. ammonio-chloridi, āā ʒss;
 Ung. zinci oxyd. ʒj. M.
 Ft. unguent., nocte manequē utend.

If the papulæ assume an acute or subacute form, they must be treated, at first, on the antiphlogistic plan, and a regulated diet must be observed. Should they succeed to primary symptoms which have not been treated by mercury, this remedy may be employed; fumigations have a marked effect in allaying the irritation by which they are accompanied; weak solutions of the bichloride of mercury may likewise be used, to sponge the surface of the skin affected with syphilitic papulæ. The mercurial vapour bath is also of essential service.

OF THE SYPHILITIC TUBERCULA.

Syphilitic tubercles of the skin are deep-seated, solid, circumscribed elevations, containing neither lymph nor pus; they differ from the papulæ in their size, being much larger, more prominent, and better defined. Syphilitic tubercles are either

isolated or grouped, of a shining red, livid, or brown colour, surrounded by an areola of a dark red or coppery appearance. These tubercles are prone to ulcerate, and form excavated sores with thick and elevated edges, and a foul surface, secreting an offensive pus, which, drying up, is transformed into grey or dark-coloured scabs or crusts. The syphilitic tubercle forms the link of connection between the secondary or tertiary symptoms; it is the first of that class of syphilitic diseases in which the virus appears to have penetrated more deeply into the economy, and to have produced a disorganisation in tissues, which those forms hitherto considered have left untouched.

The flat tubercle of M. Cullerier, or the tuberculous pustule of Alibert, sometimes occurs as a primitive affection, but more commonly as a symptom of constitutional syphilis; in the former instance it is observed on the scrotum, the labia, the vicinity of the anus, or the mammæ. The surface of these tubercles is smooth and flat, or granulated, of a deep red or copper colour, varying from the size of a sixpence to that of a shilling; they are not so much disposed to ulcerate as the other varieties. The more common forms of tubercles are conical or round elevations, dispersed here and there over the skin, or assembled in groups or clusters, which are also irregularly distributed. The size of these varies from that of a pea to that of a large hazel-nut or filbert; they are more commonly situated on the anterior surface of the chest or the abdomen, on the neck, the face, or the internal part of the arms.

Another variety of tubercle is situated, more commonly, on the alæ or lobule of the nose, or on the forehead; frequently, also, upon the neck of the uterus, or upon the tongue, where they may be mistaken for cancerous affections. These tubercles are commonly assembled in circular groups of variable size; they are so prone to ulcerate, that this termination appears to be one of their natural characters; when in this condition, they are frequently described under the name of syphilitic lupus. The tubercular syphilida are commonly complicated with a scrofulous, scorbutic, or herpetic tendency or diathesis; their progress is slow, and generally without pain; they gradually increase in size till they terminate in softening or ulceration.

They are the most formidable of all the forms of constitutional syphilis, producing great deformity in all the parts invaded by the ulceration.

Whilst the tubercles are in a state of induration, and as yet neither ulcerated nor softened, their resolution may be attempted. For this purpose, the iodide of mercury, with the iodide of potassium, may be employed: it must be remembered, however, before any plan of treatment is framed, that due attention be paid to the general health of the patient.

If there be no contra-indication, the treatment may be commenced by administering a pill of the iodide of mercury daily, containing one grain of the salt and a solution of the iodide of potassium, at first administered in doses of ten grains in the day. On the fifth day, two pills are given, and the quantity of the iodide of potassium is increased; it is generally unnecessary to carry the dose of mercury to any extent, or to continue its use very long; the treatment is to be completed by the iodide of potassium. The indurated tubercle is commonly resolved by this treatment, leaving behind it, in the skin, merely a depression of a brown or copper colour, more or less deep.

The mercurial vapour bath is also exceedingly useful, whilst the tubercles are yet unsoftened, in procuring their resolution; it may be employed with the iodide of potassium and sarsaparilla.

CASE XXXIV.

Illustrating the general treatment of the syphilitic tubercle.

A gentleman contracted syphilis in a warm climate in 1857. This was followed by a formidable attack of pustular syphilis, which disappeared under treatment. When the treatment had been discontinued for a little time, a fresh pustular disease of the skin made its appearance, which was treated by the iodides of mercury; it yielded but slowly and imperfectly to the treatment. He was now sent to England, to be placed under my care. When I first saw him, he had four different varieties of skin diseases, amongst which the tubercle was the most prominent. 1. Dark copper-coloured marks left by the healing of old ulcers. 2. Red puckered cicatrices, due to the same

cause. 3. Large foul ulcer, covered with white sloughs. 4. Tubercles not yet softened; they consisted in large, hard, red, globular or oval swellings, varying in size from a pea to that of a marble or walnut; they were situated on the neck, arms, and trunk, to the number of forty-five or fifty. He had also nodes on the tibia, and severe nocturnal pains. I placed this patient on the following plan:—Large doses of opium at night; the mercurial vapour bath four or five times a week; and the iodide of sodium, with iodide of iron and sarsaparilla. In sixteen days the ulcers had all soundly healed, and the old cicatrices were less red. In two months nearly all the tubercles had disappeared, and the nodes and nocturnal pains were gone. He was now directed to go to the coast for a few months, and then to return and resume the treatment for a month. This was done. At the present moment there are no symptoms of syphilis. I saw the patient three months ago, fat, and in good health and spirits.

I mention this case as one of the most formidable attacks of constitutional syphilis I have ever seen, and as exhibiting the general treatment of the syphilitic tubercle.

As syphilitic tubercles are accompanied by a process of inflammation, under the increase of which they soften and ulcerate, a local treatment, whilst they are in a state of induration, is of vast service in assisting the internal treatment in their resolution. For this purpose, cooling lotions may be employed, or fomentations of poppy, henbane, or aqueous solutions of opium. Blisters are also very useful.

In the ulcerated forms of tubercles, all that has been said on the treatment of primary venereal sores may be referred to with advantage, since these secondary ulcerations require nearly the same local treatment, the use of the nitrate of silver, the aromatic wine, with astringents, sedatives, narcotics, or digestive ointments, or a local antiphlogistic treatment, according to the aspect of the sore. When caustics are indicated, the surface of the ulcers may be touched with the acid nitrate of mercury; the ulcers cicatrize rapidly under its application; the separation of the crusts or eschars may be facilitated by the warm or mercurial vapour bath.

The iodides of potassium, sodium, and iron, with decoctions of the woods, are excellent remedies during the ulcerating stages of tubercle; mercurials also may be used in certain states; the iodide, the biniodide, or the mercurial vapour bath, with sarsaparilla and cinchona, are the best remedies.

OF SYPHILITIC STAINS OF THE SKIN.¹

The various forms of syphilitic diseases of the skin which I have just described are frequently followed or accompanied by alterations of its colour, without any other pathological change. These stains are generally circular in form, and either distinct, single and round, or placed in groups or clusters; or, again, consisting of a mere mottled appearance. They vary in colour, from a deep brown to a bright or a dirty yellow, and in places the skin appears as though it had not been washed clean. These spots sometimes appear on the site of previously existing diseases of the skin, or on parts which have never been affected. They do not disappear under pressure with the finger, they give rise to no irritation, and never ulcerate, or terminate in vesicle, papule, or pustule; they consist simply in an alteration of the colour of the pigment. They commonly last for years, or through the whole of life. I have succeeded in curing some forms by the mercurial vapour bath, but I have seen others which have resisted all modes of treatment. The general health is rarely disturbed in the majority of cases.

Local applications are sometimes of great service in these cases; and indeed they are essential in destroying the colour, which is sometimes very annoying. M. Clerc mentions a solution of corrosive sublimate in collodion as a good remedy.

ON CONSTITUTIONAL OR SECONDARY VENEREAL ULCERS OF THE SKIN.

Secondary venereal ulcers are most commonly a consequence of other diseases of the skin, which have immediately preceded

¹ *Synonyms.*—*Maculæ syphiliticæ*—*Taches*.

them ; thus, the ruptured vesicle, or pustule, or the softened tubercle, naturally produces an ulcer ; there are, however, some rare forms of secondary ulceration which are not preceded by any of the diseases I have mentioned, or, in fact, by any apparent disease. The sites of primary sores not unfrequently become the seat of secondary ulcers, which appear long after the healing of the primary sores, and which are doubtless due to a constitutional taint. M. Cazenave mentions some very curious examples of this nature, where an accident, a wound, the application of a blister, or a relay of leeches, has been succeeded by constitutional syphilitic ulcers, and where no other evidence of a constitutional taint could be discovered. Mr. Paget ('Lectures on Surgical Pathology,' vol. i, p. 492) mentions a case where a gentleman who, for not less than five years after a syphilitic affection of the testicle, had no sign of syphilis, except that of general feeble health ; but he accidentally struck his nose severely, and at once a well-marked syphilitic disease of its bones ensued. In another case, syphilitic disease of the skull followed an injury of the head.

CASE XXXV.

A collier was admitted into the Queen's Hospital, whose nose had been injured by the fall of some coals upon it ; he had suffered from syphilis eight years before. Caries and exfoliation of the nasal bones, which ended in their total destruction, succeeded to the blow, and this was followed by secondary phagedena of the fauces. To these ulcers an ointment of bismuth and lard was found a good application : an ounce of prepared lard, and as much of the trisnitrate of bismuth as can be incorporated with the lard.

I have already alluded to the operation of this law of proximate causes in the development of secondary syphilis, when speaking of the syphilida generally.

CHAPTER XX.

OF SYPHILITIC TUMOURS OF THE SKIN AND THE SUBCUTANEOUS CELLULAR TISSUE.¹

ISOLATED, hard swellings, varying in size from a horse-bean to a swan's egg, form on different parts of the skin in the advanced stages of many forms of constitutional syphilis. These swellings are at first movable, and the skin covering them not altered in appearance. In the advanced stages the tumour becomes adherent to the integument covering it, which inflames and ulcerates in one or more places, giving vent to the contents of the tumour, which softens and suppurates, discharges an offensive sanies, or quantities of brown or black sloughs: the ulceration spreads till the whole skin covering the tumour is destroyed; we have then a deep, foul ulcer, filled with a black slough, and sometimes an inch or two deep, the skin surrounding which is of a livid red colour, and the edges ragged, everted, and hard.

These tumours, unlike the ordinary syphilitic tubercle, which in many respects they very much resemble, appear rather to spring from the subcutaneous cellular tissue than from the skin itself, for it is not till the more advanced periods of the disease that the skin is involved: they generally appear on the extremities. I have seen these tumours on the forearm, the external condyle of the humerus, on the inner part of the leg, on the external hamstring, and other parts of the upper and lower limbs; they are rarely placed on the face or the trunk, though occasionally met with in these situations. They may be confounded with the ordinary syphilitic tubercle, or when occurring as an isolated symptom (which they rarely do), with tumours arising from other causes, or even with common

¹ Tumeurs gommeuses—Gummata.

phlegmon, or chronic abscesses, particularly those of a strumous character; the diagnosis in such cases is important, as the syphilitic tumour, when softening, or in that stage which resembles a common abscess, should never be opened or punctured.

The syphilitic tumour occurs late in the history of a syphilitic taint, and generally many years after its primary cause; it has generally been preceded, at no long period, by other symptoms which render its nature certain. It is also frequently associated with pains, or diseases of the bones, pustules, tubercles, or secondary venereal ulcers which have succeeded to the detachment of the crusts of ruptured pustules or ulcerated tubercles. In its earlier stages, the resolution of this tumour should always be attempted; and this may generally be accomplished by appropriate treatment, if the process of softening have not proceeded too far. If the tumour be seen in its earlier stages, before the skin has become implicated, local treatment is of essential service: the most efficient remedies are blisters, frequently repeated, and dressed with mercurial ointment, or the compound iodine ointment; next in efficiency is pressure by means of discutient plasters, composed of belladonna, iodine, or mercury. The emplastr. de Vigo, with mercury, also answers very well. Some writers have recommended extirpation with the knife,¹ an absurdity too great to require a serious refutation. The internal treatment should consist of the administration of the iodides of mercury, potass, or iron, either alone or in a state of combination. The mercurial vapour bath also assists powerfully in the resolution of the tumour; it should be used twice or three times in the week.

If the skin covering the tumour has become thin, and is of a deep red or livid colour, we shall hardly succeed in dispersing the tumour; in this diseased integument one or two small spots of ulceration soon appear, which spread rapidly till the whole covering of the tumour is destroyed. When this is the case, we have to deal with a secondary syphilitic ulcer, frequently of very formidable character, which has penetrated sometimes to a very great depth in the soft parts, having destroyed the fascia, and laid bare the muscles if situated on the soft parts of the

¹ See 'Vidal de Cassis,' p. 446.

extremities, or if over bones, having produced caries, necrosis, or absorption of the bony tissue to a greater or less depth. In such cases the constitutional treatment is still our chief reliance, but the local aspect of the sore will require a treatment suited to its varied aspects; should it become phagedenic, which it sometimes does, it must be treated on the principles laid down in the chapter on that subject. Generally, after the surface has become clean, black wash, weak lotions of dilute nitric acid, or of kreasote, in the proportion of twenty minims to the half-pint, answer very well, and better than ointments; although the latter are sometimes serviceable,¹ these ulcerations require, from time to time superficial cauterisation, with the nitrate of silver, or the liquor hydrargyri pernitratiss.

¹ R Unguent. hydrarg. nitratis, ʒss;
Ung. zinci, ʒjss. M.

Or,

R Ung. hyd. nit. oxyd., ʒss;
Ung. elemi, ʒjss. M.

CHAPTER XXI.

ON SYPHILITIC AFFECTIONS OF THE APPENDAGES OF THE SKIN.

ALOPECIA.—LOSS OF THE HAIR FROM SYPHILITIC CAUSES.

It not unfrequently happens, that whilst other symptoms of constitutional syphilis are present in the system, the hair of the head becomes thin and falls off rapidly; and so slight is its adhesion to the scalp, that it comes off in large quantities when the hand is merely passed through it. This loss of hair is not confined to the head; it affects the whiskers, the beard, the eyebrows, eyelashes, and even the hair on other parts. The loss of hair is sometimes partial, and it comes off in circular patches, leaving one or more places completely bald: sometimes ten, twelve, or even twenty of these patches are formed, giving the patient a grotesque appearance. I saw a remarkable case of this kind, which was accompanied by a leprous eruption and a sore throat, and preceded by an indurated chancre; the beard and whiskers also come off in circular patches: the cure was perfect in about three months. The loss of hair rarely occurs as an isolated symptom of constitutional syphilis; it has generally been preceded, or is even accompanied by superficial ulceration, or redness of the fauces or pharynx, or those forms of skin disease which are seated in the epidermis or superficial layers of the dermis: it rarely accompanies tubercular or pustular affections. Even when the hair does not fall off, patients suffering from a constitutional venereal taint are subject to a constant formation of scurf on the scalp, which is doubtless due to syphilitic disease: cracks, fissures, and loss of the nails, considered in the next section, are almost always associated with loss of the hair.

I believe, when the hair comes off from causes which are due to syphilis alone, that it is almost always restored under an

appropriate treatment. The constitutional treatment required for syphilitic alopecia, is that which is indicated for the other symptoms with which it may be associated. Local treatment is here very important. The best remedy for restoring the hair quickly, and preventing its becoming weak is, no doubt, shaving the head, and repeating this operation two or three times, rubbing well into the scalp, at the same time, one of the preparations about to be mentioned. Pomades, containing various preparations of mercury, or lotions or liniments with cantharides, are the chief remedies to be relied on in the restoration of the hair lost from syphilitic causes.

℞ Hydrargyri iodidi, ʒj;
Adipis prep., ʒiij. M. ft. unguent.

A small portion to be well rubbed into the hair every night, and washed out in the morning, dressing the hair, after washing, with the following preparation :

℞ Ol. morrhuae,
Tinct. cantharidis, āā ʒj. M.

Or, an ointment composed of one part of the unguent. hyd. nit. oxyd. and three of scented pomatum (E. Wilson) ; or the following lotion to wash the head with night and morning :

℞ Ol. morrhuae, ʒj ;
Liq. ammoniæ, ʒss ;
Tinct. cantharidis, ʒss ;
Aquæ mellis, ʒij ;
Spiritus rosmarini, ʒiv. M.

The mercurial soaps recommended by Sir W. Marsh and Dr. Moore, of Dublin, will be found very serviceable to wash the head with in cases of syphilitic alopecia ; they are made by beating up a drachm of the white precipitate or red precipitate of mercury with an ounce of Windsor soap, adding a few drops of spirit and a little scent.

Dr. Burgess speaks highly of the vapours of iodine, or sulphur, as superior to all other remedies in cases of alopecia not syphilitic.¹ I have elsewhere shown that the vapour of the bisulphuret or iodide of mercury arrests syphilitic alopecia, after one or two applications.²

¹ 'On Eruptions of the Face, Head, and Hands, &c.,' p. 205.

² 'On Secondary Syphilis,' p. 26.

CHAPTER XXII.

ONYXIS—SYPHILITIC DISEASES OF THE NAILS.

THE matrix or root of the nail is very commonly affected with syphilitic inflammation, under the influence of which the skin surrounding this part becomes thickened and red, and ultimately ulcerates, the sores thus produced having all the characters of secondary syphilitic ulcers. Sometimes the skin surrounding the nail continues red and everted, and does not ulcerate, but an offensive pus oozes out from between the nail and the skin. In other cases, the nail alone is affected; it cracks or breaks easily, becomes thick and opaque, and loses its transparency in whole or in part; at other times the nail falls off without any appreciable inflammation of the skin, or apparent alteration in the structure of the nail itself.

Syphilitic diseases of the nails occasionally occur as isolated symptoms of constitutional syphilis, and then their nature may be mistaken, unless a strict inquiry be made into the nature of the diseases from which the patient has suffered; when they accompany other symptoms which are decidedly due to syphilis, these are generally superficial redness or ulceration of the throat, alopecia, or diseases of the superficial structures of the skin. The treatment of onyxis is that of constitutional syphilis generally, of which it is always a symptom. Except in the ulcerated forms, local treatment has little or no influence over the disease.

CHAPTER XXIII.

OF SYPHILITIC WARTS, EXCRESCENCES, VEGETATIONS,
CONDYLOMATA, ETC.

VEGETATIONS, excrescences, or warts of varied form and appearance upon the skin or edges of the mucous membrane, constitute the last variety of syphilitic diseases of the skin. These excrescences appear on the skin or muco-cutaneous surfaces of the male and female organs of generation, both in the primary and secondary forms of syphilis. They are variable in appearance and consistency, sometimes resembling common warts on other parts of the integument, and at others presenting a surface so fibrous or granulated, that they have been compared to the root of the leek or the surface of the raspberry. These fungi, excrescences, warts, or vegetations, by all which names they are indiscriminately known, grow from the surfaces of the skin in the immediate vicinity of the organs of generation, or from the under surface of the prepuce, and from the glans penis, in the male; and in the female from the labia majora, the nymphæ, or the entrance to the vagina itself, which they sometimes entirely surround.

These warts or excrescences arise from several causes. In the first instance, they are commonly produced by the irritation excited by gonorrhœal discharges on the common integument in the vicinity of the organs of generation, and they are commonly produced by the same discharges on what are termed the muco-cutaneous surfaces of these organs (by the muco-cutaneous surfaces, I mean those where the skin and mucous membranes insensibly blend into each other). They may be sometimes found at the orifice of the urethra, or the entrance to the vagina, which is sometimes studded with these growths. I have seen the whole of the vulva, vagina, lower part of the abdomen, the

vicinity of the anus, and the upper part of the thigh, covered over with warts, in females suffering from vaginal discharges, either gonorrhœal or syphilitic. In the male they are also found in large quantities on the prepuce in patients who have suffered from balanitis, or gonorrhœa. I have frequently seen these warts (not condylomata or mucous tubercles) in large numbers about the anus in men. Warts are caused, in the first instance, by the irritation produced on the common integument, or the muco-cutaneous surfaces of the organs of generation, by the irritation of pure gonorrhœal discharges. They are caused, secondly, by superficial forms of irritation, excoriation, or ulceration of a venereal character, seated on the surfaces to which I have just alluded. These are common in the male, and are situated on the glans penis itself, more commonly round the corona glandis, or on the under surface of the prepuce, these being properly muco-cutaneous surfaces.

In the third instance, they arise from the surfaces of primary venereal sores themselves, from chancres or ulcers during the period of cicatrisation; and most commonly this takes place when venereal ulcers are treated on the simple or non-mercurial plan. In such cases, more particularly when the patient is suffered to follow his customary avocations during the treatment of the primary syphilitic sore, the latter heals slowly and with difficulty, occasionally remaining stationary for many days together, and showing neither disposition to heal or spread, although its surface may be covered with healthy granulations. In such cases, when the sore does not close, instead of skinning over or cicatrising in the usual manner of an ordinary ulcer, the surface assumes a hardened character, and begins to grow or throw up this hardened substance, which ultimately assumes the aspect of a wart or vegetation. In this way is the third variety of venereal excrescences produced.

All the varieties of warts that I have as yet described belong to the different forms of primary syphilis or gonorrhœa. Vegetations or warts, however, are commonly met with as symptoms of constitutional syphilis, and they are then termed condylomata. The secondary forms of syphilis, on some occasions, strongly resemble the primary forms; and hence it is that, although the varieties of which we have just spoken are produced, like all

the other forms of primary syphilis, by the direct application of the venereal poison, they present a striking resemblance to certain excrescences, or fungous growths, commonly denominated condylomata, which result from the contamination of the system. "However, with proper attention, primary condylomata can easily be distinguished from secondary condylomata; for the latter are uniformly accompanied or preceded by other symptoms which point out constitutional disease, and particularly by a very slight scaly or rubeoloid eruption, either with or without a superficial affection of the mucous membrane of the mouth and fauces.¹

The secondary condylomata are not always accompanied by affections of the skin or throat, but "they appear as a distinct symptom of constitutional syphilis in advanced periods of the disease." It is of the first importance to distinguish between these two varieties—viz. the primary and constitutional, since the treatment suited to the one is not admissible in the other. The first varieties are generally purely local, and may be cured by local means; the second are constitutional, and require a general treatment for their eradication. In forming our judgment as to their true character, we must be guided by the history of the case, the preceding and accompanying symptoms, and the appearances of the disease itself. "They are not so hard as primary warts; they are more of a fleshy nature, more tender, and more apt to bleed. They have a more uniform surface; and instead of being formed of a number of smaller warts connected together, they are composed of one uniform mass. They do not approach so near the verge of the anus as primary watery excrescences generally do, being for the most part of the greatest extent and most elevated near the tuberosity of the ischium. In some cases they become ulcerated, and discharge a great deal of very offensive matter; for the most part the ulceration which takes place being superficial, and not reaching below the surface. Like the other symptoms of constitutional syphilis, these excrescences either continue in the same state, or become gradually worse, as long as no remedy is employed constitutionally for the cure of the disease."²

¹ Wallace, pp. 388-9.

² B. Bell, 'On Gonorrhœa Virulenta and Lues Venerea,' vol. ii, pp.

The surface of these fungi or vegetations frequently secretes a puriform discharge, and this discharge has a power of propagating "a disease similar to that which produced it."

In proof of this assertion, I shall bring forward a case which Sir A. Cooper used to relate in his lectures. "A gentleman in Sussex was called to attend a lady in labour; he felt something in the vagina which appeared unintelligible, and on examination found it to be a crop of warts. He delivered her, but did not say anything about the warts to the lady. In conversation with the husband, he told him that his lady had a number of warts. The gentleman stated, that at the time he was married he had a wart on the penis, and he had no doubt that he had communicated them to his wife." ('Cooper's Lectures,' p. 497.)

There can be no question about the contagious character of the secretions from secondary condylomata, the mucous pustule of the French writers; independent of daily observation, the experiments of Wallace, Vidal (de Cassis), Waller, and many others, place the matter beyond a doubt.

Warts, or primary excrescences, grow in many instances from the epidermis, their attachment being so slight, that on being removed the cutis vera is left entire. In other cases they proceed from the skin itself; they have not been observed to go deeper than this. The primary forms, being generally purely local diseases, are in most instances to be removed by a treatment purely local; the secondary, resulting from a poisoned or infected constitution, as generally require a constitutional or general treatment for their cure.

The primary forms of warty venereal excrescences are generally to be cured without great difficulty, either by the knife, by ligature, or the application of escharotic or irritating remedies. Where the base is broad, and its attachments to the skin extensive, it is better to trust to the latter remedies, which we shall presently pass in review more particularly. When the knife or ligature is used, it is always advisable to touch the cut surface with some caustic. In the more ordinary cases these excrescences may generally be removed by bathing them and the

125-7. The secondary forms of condylomata are termed by the French writers *mucous tubercles*, *mucous papulæ*; they differ in nothing from the description I have already given, except in the name.

contiguous parts, several times a day, with a strong solution of the muriate of ammonia or the bichloride of mercury.¹ With these applications the warts may be sponged freely several times a day, till as much irritation and inflammation are excited in the surrounding parts as the patient can reasonably bear. In mild and recent cases these remedies will generally accomplish a cure. When the surfaces of the warts are hard, if they are of long standing, or do not yield to the remedies already mentioned, it becomes necessary to employ escharotics and irritants of a more powerful character. When such are used, the parts "should be merely moistened with a pencil dipped in them, nor should this be repeated above once in two or three days." Amongst these stronger preparations are the acid nitrate of mercury, the tincture of cantharides, and the liquor potassæ arsenitis. Arsenic was a favourite remedy with Sir A. Cooper, in the destruction of warts. He employed an ointment composed of one drachm of the oxide of arsenic (arsenious acid) to one ounce of spermaceti ointment or lard; the surface of the warts to be smeared with it frequently, according to circumstances. Powders which, when dusted over the warts and integument in their neighbourhood, irritate and inflame the latter, are generally more efficacious than solutions of the same substances. Amongst these may be mentioned equal parts of the savine powder and chloride of mercury, savine leaves powdered and corrosive sublimate, and the hydrargyri nitrico-oxydum.² We may also use, for this purpose, equal parts of the dried or burnt alum, and the nitric oxide of mercury. "After these warts have been removed, by local irritants or by the knife, it will be necessary to use some astringent lotion, to restore tone to the capillaries of the diseased surfaces,

¹ R Ammoniæ hydrochlor.,
Aceti destill.,
Aquæ, aa ʒij. M.

R Hydrarg. bichloridi, ʒss;
Sp. vini, ʒj;
Aquæ, ʒiij. M.

² R Pulv. sabinæ,
Hyd. bichloridi,
Hyd. nit. oxydi., aa ʒj. M.

and to remove any excoriation or catarrh which may have co-existed with the fungous growths." (Wallace, p. 337.) Strong acetic acid or the undiluted liquor plumbi are both excellent applications to many of the primary forms of warts, especially those which form round the orifice of the vagina, as a consequence of protracted gonorrhœal discharges. I have seen large masses of these warts disappear in two or three weeks by the use of the latter remedy, which is exceedingly convenient, as it occasions little or no pain; the skin generally remains for some time of a deep red in the places where these warts have been situated. Mr. Marshall has lately recommended a solution of chromic acid, 100 grains to the ounce.

We may now inquire whether these vegetations, which are the consequence, as we have seen, of some forms of purely syphilitic diseases, require mercury for their cure, or for the prevention of their return, since in many instances they are very liable to do so. Mercury is unquestionably not required for the removal of the first form of venereal warts, which are produced by the irritation of gonorrhœal discharges. Nor do we conceive it can ever be required for the cure and prevention of the second variety, which we have stated to be the result of venereal excoriations. In the treatment of the third variety, it is possible that mercury may be occasionally required. The last form of vegetation, which springs from the surface of the excavated ulcer, rarely occurs where mercury has in the first instance been judiciously used for the cure of the primary ulcer. We must bear in mind, then, that a primary venereal ulcer, for which mercury is judiciously employed, is less likely "to heal into a wart" than when such remedy has not been employed.

In ordinary and long-standing cases of vegetations which are the result of venereal sores, mercury will not be required, and we must, in most instances, trust to local remedies only. Hunter and Bell express themselves strongly on this point. "These excrescences (says the former) are considered by many not as simply a consequence of the venereal poison, but as possessed of its specific disposition, and therefore they have recourse to mercury for the cure of them; and it is asserted that such treatment often removes them. Such an effect of

mercury I have never seen, although given in such quantities as to cure in the same person recent chancres."

The latter says: "The warts which succeed to chancres commonly remain equally firm and obstinate after mercury has been given as they were before, and are to be removed by the same means as if the constitution had never been diseased. This is a point which, in a particular manner, merits attention; for whilst the opinion is retained of warts on these parts being in most instances connected with a constitutional syphilis, much mischief is apt to be done by a great deal of mercury being given where no advantage can ever ensue from it. In the treatment of warts, I have known the constitution almost ruined by one course of mercury after another, without any effect upon the excrescences, which were afterwards easily and speedily removed by remedies applied directly to the parts themselves."

In the very recent state, where they spring from the surface of an ulcer which has been treated without mercury, they may in some cases be removed by the administration of this medicine in the usual way in which it is employed for the cure of chancres generally; but this unquestionably should not be done till local remedies have been fully tried and found to fail. In the very recent state, then, of fungi springing from the surface of ulcers treated without mercury, this remedy may and should be employed if local means fail. If, again, these warts have been removed by the knife (a plan not generally to be recommended), and the cut surface run into a foul, intractable sore, mercury may be employed for the treatment of such sore, which is in all probability specific. In all other instances of primary warts mercury must be abstained from, since not the least probable benefit is to be expected from its employ.

The treatment of the secondary forms of venereal excrescences is to be conducted on principles totally different from those which guided us in the management of the primary forms. Here local treatment is comparatively of little use, and constitutional or general treatment is most to be depended on. When, then, we are fully satisfied, from the history of the patient, the appearance of the disease itself and the preceding or accompanying symptoms, that we are called to treat a case of this nature, if

there exist no special contra-indications in the constitution or state of the patient at the time he is presented to us, we should lose no time in submitting him to a mercurial course under the rules which ought generally to guide us in the administration of this drug. The mercurial vapour bath may be employed with great benefit, and the condylomata touched with Plenck's solution.¹

¹ R Alcoholis,
Acidi acetici, āā ʒss;
Hyd. bichloridi,
Aluminis,
Camphoræ,
Plumbi carbonatis, āā ʒss.

M. Verrucæ aut condylomata penicillo hoc liquore madido semel vel bis de die tangantur.

CHAPTER XXIV.

CONSTITUTIONAL OR SECONDARY SYPHILITIC ULCERATIONS OF
MUCOUS MEMBRANES.

SECONDARY or constitutional syphilitic ulcerations of mucous membranes are extremely common. They may be seated in all parts of the mouth, upon the tonsils, on the posterior part of the pharynx, in all parts of the nasal fossæ, at the orifice of the glottis, even in the larynx itself, in the œsophagus, in the rectum, on the os uteri, and probably in the canal of the cervix.

The mouth is frequently the seat of superficial ulcerations, sometimes placed upon the tongue, the pillars of the fauces, the inner surface of the lips, or other parts. Occasionally these ulcerations resemble ordinary aphthæ; again there is a distinct loss of substance surrounded by an inflamed margin, and at other times it appears as though a pencil dipped in a strong solution of nitrate of silver had been drawn over the tongue. These ulcerations generally, if not always, occur in persons who have taken mercury for the cure of some venereal symptom. They are not under the control of any specific treatment, but improve under a regulated diet, general treatment, and frequent gargles, more particularly those in which tannin forms an ingredient.¹ In most instances they are extremely difficult to cure, are very frequently rendered worse by mercury, although sometimes cured by its administra-

- ¹ ℞ Tannin, ʒj;
Spiritus vini Gallici, ʒij;
Aquæ rosæ, ʒvj. M. ft. gargarisma.
℞ Tincturæ myrrhæ, ʒj;
Liniment. æruginis, ʒss. M.

The ulcer to be touched with this liniment night and morning. The Liquor Hydrarg. Nit. Acid., L. P. 1867, more or less diluted, is an admirable local remedy in these cases.

tion. Aphthous or superficial ulcerations in the mouths of patients who have suffered long under a venereal taint, and have irritable mucous membranes, are frequently due to mercury, and not to syphilis: such patients suffer much also from dyspepsia. It frequently happens that mercurial medicines given internally aggravate these conditions of the mouth, whilst they subside under the use of mild astringents and tonic gargles,¹ the administration of small doses of conium and opium, and the cold infusion of sarsaparilla in lime-water.² Where such conditions of the mouth are associated with other symptoms of constitutional syphilis, they may still have a mercurial origin: should the general means we have mentioned fail in benefiting them, mercurial remedies may be tried.

Syphilitic ulcers of the throat, pharynx, and fauces appear under several forms.³

- ¹ R Acid. hydrochloric., ℥xl—ʒj;
Tinct. cinchonæ, ʒj;
Aquæ fontanæ, ʒviij. M. ft. garg.
- ² R Rad. sarsæ, ʒiv;
Rad. glycyrrhizæ, ʒj;
Liq. calcis, Oij. M.

Macera per horas xxiv, deinde cola. Dosis, cochlear. iv larg. bis die.

³ Examination of the Fauces and Throat.—Secondary syphilitic ulcers may be situated on the uvula, the soft palate, on the pillars of the fauces, on the tonsils, or on various parts of the pharynx; they are easily discovered in many of these situations, but without care they may sometimes escape observation. The mere depression of the tongue by a spatula is not sufficient, in all cases, for the proper examination of the throat, especially in some persons. The anatomical disposition of the parts I have mentioned is so variable, that it renders the examination of some throats a matter of great ease, whilst in others it becomes an operation of some difficulty. An ulcer frequently lies concealed between the anterior pillar of the fauces and the surface of the tonsil; I have known ulcers in this situation escape observation for a long time, although frequent examinations of the throat had been made in the ordinary manner. To ascertain certainly whether the throat is quite free from disease, each fold of membrane should be carefully unfolded and examined. In some rare cases, ulcers exist behind the velum, either on the posterior surface of this membrane, or high up on the pharynx. These are frequently connected with affections of the nasal fossæ and the posterior nares; and unless these parts be all carefully examined, in suspicious cases, we may be led into serious mistakes and errors.

1st. The deep excavated ulcer of the tonsil, covered with an ash-coloured slough, and surrounded by a deep, livid, red condition of the mucous membrane. This ulcer, though generally seated between the pillars of the fauces, is sometimes seen on the uvula. This is the true venereal sore throat of Hunter, and English surgeons generally.

Added 1870.—This ulcer has been termed the tonsillitic chancre. It is a deep excavated sore, surrounded with thick elevated edges, and covered with an ash-coloured slough. When it heals there remains a deep excavation, a loss of substance which is never replaced, although the site of the ulcer is covered with healthy mucous membrane. A distinct glandular enlargement can be felt externally. The sub-occipital glands are enlarged, and sometimes slightly tender. This ulcer requires a special treatment. I direct the Ungent. Hyd. Fort. to be rubbed nightly into each axilla. If this fails I employ frictions of dry calomel on the tongue and gums, on Clare's plan; these remedies generally succeed without being accompanied or followed by any of the ill-effects of mercury. With this I generally recommend the chlorate of potass and bark, to be taken at the same time, the frictions being used. The mercurial vapour bath should be used three times a week, or even every day. Formidable as this ulcer is, the plan of treatment laid down is almost invariably successful in its cure.

It may occur with other symptoms of constitutional syphilis, and very frequently is found to be associated with induration of the cicatrix of a recently healed chancre.¹

2nd. Creeping superficial ulcers, found on the uvula, fauces, and pharynx.

3rd. Sloughing ulcers, extending rapidly down the fauces, covered with white tenacious sloughs. These may extend over the whole of the pharynx; they resemble precisely phagedena in other parts.

The whole back of the pharynx is frequently the seat of extensive phagedenic ulceration: I have seen the whole of this

¹ This ulcer, which has been termed "amygdaline chancre," has been inoculated with success. The details of the case may be found in the '*Annales des Maladies de la Peau, et de la Syphilis*;' it is also quoted by Vidal de Cassis, p. 404.

portion converted into a pultaceous mass resembling hospital gangrene. This form of disease accompanies or succeeds to rupia or ecthyma in bad habits of body; but I have also seen extensive ulcerations here where the general health was not much affected, and the disease has occurred as an isolated symptom. These ulcerations run down the back of the pharynx, to a greater or less distance, into the œsophagus itself.

Secondary phagedena of the fauces and pharynx is always formidable, dangerous, and may become a fatal disease, from the extension of the ulceration down the œsophagus, and the production of stricture of that tube, arising either from spasmodic or organic contraction, the first due to the irritation produced by an ulcer in the œsophagus, or low down in the pharynx; the second, to the permanent contraction consequent upon its healing.

CASE XXXVI.

Permanent stricture of the œsophagus, produced by the cicatrix of a secondary phagedenic ulcer.

A girl, æt. 21, was admitted into the Queen's Hospital, under the care of Mr. West, in May, 1858, with secondary phagedena of the pharynx; she had previously suffered from various forms of secondary syphilis. On examining the throat, the cicatrix of a large ulcer which had been seated on the posterior wall of the pharynx was brought into view; and by depressing the tongue, the upper part of an ulcer which appeared to extend downwards into the œsophagus was distinctly seen. She could only swallow fluids, and that with considerable difficulty. At this period, Mr. West, going from home, requested me to take charge of the patient. She had at times complete dysphagia. For many hours together, at one time as many as thirty-six, she could not swallow anything. Neither an ordinary œsophagus bougie, nor a male catheter, nor ordinary urethral bougie, could be passed. She could not swallow milk or beef-tea, but she could generally swallow cider. Shortly after this she died, completely exhausted.

On examination, "the upper part of the œsophagus, for about

four inches, was found much dilated; its mucous membrane thickened, and marked by spots having the appearance of recent cicatrices. At this distance from the upper end it was suddenly contracted, and terminated in a narrow canal which would barely admit a No. 4 catheter. The contracted portion, which was about two inches and a half in length, was formed by the thickening of the mucous membrane, and by fibrous bands and bridles, having very much the appearance of an old stricture of the urethra. Below this track the œsophagus continued perfectly healthy into the stomach."¹

CASE XXXVII.

A gentleman, who had suffered many years from secondary syphilis, consulted me respecting his throat; he had a chronic secondary ulceration of the pharynx. He was hoarse, tormented with cough, and hawking up of frothy mucus mixed with blood. He had pain in swallowing, shooting through into the ear, and seeming to originate from some mischief deep in the throat below the root of the tongue. On examination, the whole of the back of the throat was found intensely red; it looked like an old red cicatrix, with here and there white, hard spots disseminated through it; in places superficial ulcers existed: the whole mucous surface appeared destroyed. He had great difficulty in swallowing. He was much emaciated, and looked like a man labouring under organic disease of the lung; both lungs and windpipe were apparently healthy. Soon after consulting me, this patient started on a voyage to the Cape for the benefit of his health, but died exhausted on the passage.

A few similar cases are to be found on record. Two are recorded by Yvaren, in his '*Métamorphoses de la Syphilis*,' where difficulty of swallowing, apparently caused by ulcers in the pharynx, was cured by a mercurial treatment (pp. 388, 389). Virchow gives a case where the superior portion of the œsophagus was contracted by a syphilitic cicatrix (op. cit.,

¹ For a fuller detail of this case, see Mr. West's paper "On Syphilitic Stricture of the Œsophagus," in the '*Dublin Journal*' for February, 1860.

p. 88). Follin attributes stricture of the œsophagus in many cases to the healing of syphilitic ulcers.

4th. Deep, livid redness of the arch of the palate, fauces, and throat, occurring with various forms of the syphilida, or soon after the healing of a primary sore. These symptoms may occur with or without different forms of cutaneous eruption, pains in the head and limbs, loss of hair, and other forms of constitutional infection; also with the most varied conditions of the general health. One kind of ulcer of the soft palate is generally situated immediately under the posterior nares; by passing the finger into the mouth, it will be perceived at once where the hard palate terminates and where the velum commences; the length of the latter, which is variable, will also be at once ascertained. It is this part of the throat which is most commonly perforated by secondary venereal ulcers, which are commonly due to disease concealed in the passages of the nose: there is redness in this place some days before perforation takes place, and this, being unaccompanied by that dryness which accompanies ordinary syphilitic inflammation of the fauces, is not noticed by the patient.

Patients who have suffered from constitutional syphilis frequently complain of pains in the throat, increased by deglutition, and referred to various points about the larynx and pharynx. The parts which are the seats of these pains have previously been affected by ulcers or inflammation; but although the ulcers had healed, the pains remained. I have frequently been unable to detect any lesion in parts thus affected, and have been led to regard many of these cases as pure syphilitic "neuroses."

The treatment of venereal ulcers of the throat resolves itself into local and constitutional. To the first variety local treatment is hardly beneficial, and against it, unless specially contra-indicated; as I have already said, a mercurial course should be directed, the best mode being by inunction, employing at the same time the mercurial vapour bath.

Local treatment, of all the other forms, is very important. The ulcers should from time to time be touched with one of the caustics already recommended in the treatment of the primary ulcer; such as the nitrate of silver, the *Liquor Hydrargyri Nitratis*.

Acid., L. P., 1867, more or less diluted ; the muriatic or nitric acids.¹ In the intervals of these applications, gargles of various kinds are very useful: I have found the oxymel æruginis one of the best of these. Gargles containing kreasote are also very useful. With this local treatment should be associated whatever constitutional treatment the nature of the case may point out; and here so various are the conditions, that it is impossible to lay down any fixed rules. Should mercury be used, and how? This will depend upon the nature of the accompanying symptoms, the condition of the general health, and the previous treatment. Should there be a scaly eruption, an indurated cicatrix, and tolerably good health, mercury may be fully employed with a reasonable hope of success, according to the general principles inculcated in this work.²

I would mention as other remedies likely to be of service, the cold infusion of sarsaparilla in lime-water, full doses of opium, the mineral acids, or the hydriodate of potass.

¹ Liquid caustics, such as the nitric acid, or acid nitrate of mercury, should be employed with great caution in extensive ulcerations of the fauces, soft palate, or pharynx. When used, the material should never be so wet as to risk a drop of fluid falling into the œsophagus or pharynx; the fumes should also be suffered to pass off before the remedy is applied.

² Secondary ulcers in the throat and fauces are symptoms not to be treated lightly. If they are spreading, a bold attempt should be made to arrest their progress. I have done this at once by immersion in a strong mercurial vapour bath for half an hour. I do not mind how weak the patient is, if he can sit up; the remedy is perfectly safe. I have also succeeded in many bad cases by frequent frictions of mercurial ointment in the axilla, supporting the patient's strength with wine, beef-tea, and brandy-and-milk, and administering internally bark with mineral acids. Sometimes twenty-four hours of this treatment will arrest an ulceration that has been slowly spreading for days, or even weeks.

CHAPTER XXV.

OF SYPHILITIC DISEASES OF THE NOSTRILS AND NASAL FOSSÆ.

PRIMARY venereal sores may unquestionably be produced in the nostrils by the direct application of the virus; these instances are, however, rare, and must be the result of accidental inoculation by means of the instruments, sponges, or linen used to cleanse sores on other parts. Secondary ulcerations are frequent. They are seated sometimes on the septum nasi, and frequently perforate the cartilage; but most commonly these secondary ulcerations affect the mucous membrane of the superior or ethmoidal spongy bones. Constitutional or secondary syphilitic affections of the nostrils are by no means uncommon. They generally appear under one of the following forms:—In the first they are characterised by chronic inflammation of the pituitary membrane, with an alteration in the character of its secretions, the latter being offensive, profuse, and commonly tinged with blood. In the second form, we find ulcerations of varied character and appearance; and, again, discharges of vast quantities of hard, discoloured, and offensive crusts, seemingly of dried mucus, without any alteration in the appearance of the mucous membrane of the nostrils, at least so far as this can be seen, though these discharges may probably depend on chronic inflammation of the membrane lining the upper meati of the nose. In the latter form there is also a marked alteration in the character of the voice. Caries or necrosis may also attack the cartilages or bones of the septum, or, what is more common, the turbinated bones themselves: in such cases the smell is intolerable.¹

¹ The syphilitic pustule or tubercle is sometimes seated on the external parts of the nose, and if it softens and breaks, it runs into a state of ulceration, which becomes covered with thick black crusts, the nose swells, and the skin round the ulcer becomes red and inflamed; this condition gives the patient a most unsightly appearance. The

These diseases often commence with the symptoms of ordinary cold: the nose is dry and uncomfortable, and the voice slightly hoarse. The symptoms, however, do not yield to ordinary treatment; and to this dryness ultimately succeed discharges of fetid muco-pus, and blood, and hard crusts of inspissated mucus, sometimes mixed with small portions of bone. An ordinary syphilitic ostitis, or periostitis, affects the ossa nasi, by which they are frequently thickened to a considerable extent. I have seen one or two cases of this character. The secondary syphilitic diseases which affect the nose are, however, most frequent in its interior, and affect the lateral or central cartilages, the spongy bones, or the membrane covering these parts.

These diseases of the nasal fossæ very commonly occur as isolated symptoms of secondary syphilis, and under such circumstances, without a correct history of the case, their nature might be mistaken; they are sometimes the only remnants of a syphilitic taint; the health being otherwise good. I have known one or two cases where persons in such states have married, and had healthy children. These diseases are sometimes congenital and hereditary. I saw a young lady, aged 16, who had had an affection of the nose of this nature since she was three weeks old. It commenced with that snuffling so characteristic of infantile syphilis, and which I believe to be due to syphilitic inflammation of the mucous membrane of the turbinated bones; if not cured, this ends in exfoliation of these bones, and probable sinking of the ossa nasi. This happened in the case just alluded to. The father had been diseased in this case, the mother never.

The treatment is constitutional and local. The former is that of secondary syphilis generally. The local treatment consists of the vapour of the iodide or bisulphuret of mercury, or calomel, directed by a very simple process into the nasal fossæ, for a few minutes daily; injections of calomel and lime-water, or solutions of kreasote, the nitrate of silver, or the chloride of zinc.

The naso-lachrymal canal is frequently obliterated by secondary syphilitic diseases of the nasal fossæ.

bones of the nose are sometimes enlarged, thickened, and tender; these symptoms are commonly associated with varied morbid conditions of the nostrils and nasal fossæ. I have seen several remarkable cures of these conditions by the mercurial vapour bath.

CHAPTER XXVI.

ON SYPHILITIC DISEASES OF THE LACHRYMAL PASSAGES.

SYPHILITIC diseases of the lachrymal passages are commonly associated with or produced by affections of a similar character, existing in the interior of the nose. I have in several cases scattered through this work alluded to such diseases, but here I wish to speak of them more specifically.

When, during the presence of a syphilitic taint in the system, the lachrymal passages become obstructed, and the tears run over the face, there is reason to suppose that such obstruction is due to syphilis, and that it is produced by one of two causes : 1. Syphilitic inflammation of some part of the mucous membrane of the lachrymal passages, or nasal duct. Nothing can be more likely, where the mucous membrane of the nose is affected, than that the disease should extend through the nasal duct, and terminate in its obstruction, the formation of an abscess, and subsequently a lachrymal fistula. Or, 2. Disease may be produced by affection of the bones entering into the composition of the nasal duct, such as the os unguis, the nasal process of the superior maxillary bone, or even the internal angular process of the frontal. A true venereal ostitis may exist in these bones, by which they are swollen and enlarged, and the lachrymal or nasal passages consequently obstructed, or even obliterated. I have elsewhere spoken of syphilitic ostitis or periostitis of the nasal bones. Should these diseases coexist with a well-marked syphilitic taint, and succeed to or be complicated with syphilitic disease of the nostrils or nasal fossæ, there can be little doubt of their nature : they may occur, however, as isolated symptoms of syphilis after all others have for some time disappeared, and, like syphilitic sarcocèle and many other diseases which are

clearly due to syphilis, may cause a doubt as to their nature, especially where the patient denies all syphilitic antecedent.¹

CASE XXXVIII.

Obliteration of the nasal duct by syphilitic periostitis of the nasal process of the superior maxillary bone.

A. B—, a girl æt. 22, was admitted into the Queen's Hospital under my care in July, 1867, with a lichenoid eruption, ulcers on the labia, and a sore throat. The tears from the left eye flowed over the cheek. On examination, the left nasal duct was found completely obstructed. A large, distinct nodular swelling, tender to the touch, was situated in the course of the duct, extending half-way down the nose, closely resembling a node, of the nature of which it doubtless partook, being due to syphilitic ostitis of bones entering into the composition of the nasal duct. The disease, in this instance, was chiefly seated in the nasal process of the superior maxillary bone.

Some curious cases bearing upon this subject have been collected by Yvaren, p. 234—"Fistula lacrymalis a lue venerea."

Benjamin Bell, in a remarkable passage, speaks also of another mode in which the flow of the tears through the natural course may be interrupted from causes of a syphilitic nature.²

¹ See an excellent paper by Lagneau fils, 'Archives Générales de Médecine,' March, 1857; it contains ten original and selected cases.

² "In some cases the venereal virus fixes upon the eyelids, and chiefly upon their cartilaginous borders. This sometimes happens by itself, but for the most part it is connected with syphilitic eruptions in other parts of the body. The parts become red and somewhat tender, and an effusion takes place among the eyelashes, either in the form of a dry scurf, or of a gummy, viscid matter. In this last case the effusion proves always extremely troublesome, particularly after sleep, as it glues the eyelids so firmly together as to render it difficult, and even painful, to open them. In this affection of the eyelids, I have in different instances observed a symptom which has not, so far as I know, been taken notice of by authors. The tears at first fall in drops near the internal angle of the eye, and this terminates in a constant trickling over the cheeks. Those who are not accustomed to examine the eyes in this state are apt to consider this flow of tears as the commencement of fistula lachrymalis, whereas it proceeds from a cause which tends effectually to prevent the formation of this disease. On minute inspection, it appears evidently to arise from the puncta lachrymalia being

obstructed by the viscid matter forming upon the cartilages of the eyelids, by which the tears which should pass by these openings into the lachrymal sac, and from thence into the nose, are necessarily forced over the cheeks. In some cases this weeping state of the eye proves to be temporary, and disappears with the cause by which it was produced; but in others it continues permanent, owing, I suppose, to the puncta being obliterated by the long continuance of the disease.”¹

¹ Benjamin Bell on ‘Lues Venerea,’ vol. ii, p. 142.

CHAPTER XXVII.

OF SYPHILITIC DISEASES OF THE EAR.

ALTHOUGH syphilis doubtless plays an important part in the etiology of deafness, many modern writers on "Diseases of the Ear" are comparatively silent on the subject. Mr. Wilde, however, remarks that "Syphilis has played a more extensive part in the production of deafness than the profession is aware of." Nothing is definitely known of the effects of syphilis in the middle ear, although it is not improbable that some of the changes observed in the diseases of this part may be due to syphilis. Syphilitic diseases of the external and internal ear are, however, not uncommon, and can be definitely traced and diagnosed. The most evident cause of syphilitic disease of the ear would appear to be ulceration of the throat and fauces. I have given numerous cases, in the course of this work, of destruction of the whole of the soft palate and faucial mucous membrane by syphilitic ulceration; and in these ravages it is utterly impossible that the faucial extremity of the Eustachian tube could escape being implicated in the mischief: yet I do not recollect ever having seen a case where the hearing was totally destroyed from such a cause; although I have seen it more or less impaired. In these cases the faucial orifices of the tubes may be more or less occluded by pus, mucus, sloughs, or the cicatrices of ulcers.

M. Vidal says that he has seen the meatus auditorius filled with mucous tubercles, producing a profuse otorrhœa. Mr. Wilde ('Aural Surgery,' p. 261) describes an inflammation of a specific character (syphilitic) as occurring in the membrane of the tympanum. He says, "The disease appeared suddenly as an eruption was fading off, and was accompanied by loss of

hair: generally speaking, eruptions, copper-coloured blotches, fissures and ulcers of the tongue, and slight nocturnal pains, preceded the aural affection. The symptoms consisted in a sensation of fulness in the head, and often vertigo in stooping or rising up suddenly; the patients have usually a feeling of fulness in the ear, but in no instance accompanied by acute pain: in this consists one of the chief characteristics of the disease, that whilst it is unaccompanied by local pain, as in ordinary subacute inflammation, the membrana tympani will be found to present a degree of redness equal to, and sometimes exceeding, that seen in acute myringitis. The redness has generally a brownish hue in the syphilitic form; there is not at first much loss of polish, but in a short time the membrane assumes a fuzzy appearance: both ears are usually affected at the same time. The amount of deafness is always very great, and is the symptom that first attracts the patient's attention, and it seldom varies. Tinnitus is not usually present; but in two cases the deafness was ushered in by a very loud noise, which passed away in a few days. The inflammation does not end in muco-purulent discharge from the tympanum, the surface of the membrana tympani, or the sides of the auditory canal. Nor is lymph effused in the membrane; but from its brownish-red colour in the very early stage, from a yellowish speckled opacity which is generally observable in it in the subsidence of the redness, and from the intense degree of thickening and dulness present in some cases, evidently the result of syphilitic disease, it was evident that lymph was largely effused between the lamina, or on the inner surface of the membrana tympani." (P. 262.) Mr. Wilde states that two of the worst cases of non-congenital deafness he ever saw were the result of syphilitic inflammation; and in both there was great thickening, opacity, and insensibility of the membrane.

The treatment of these cases consists in the application of leeches behind the ear, and the administration of calomel, blue pill, and opium, and afterwards of the iodide of potassium.

CHAPTER XXVIII.

ON SECONDARY SYPHILITIC AFFECTIONS OF THE TONGUE.

PRIMARY syphilis is not uncommon in the tongue. I have seen two cases of well-marked indurated chancres on this organ. Out of 824 chancres the seat of which was noted by M. Fournier, three were seated on the tongue. By some law not yet explained, chancres of the tongue are of the indurated kind, and are accompanied by enlargement of the submaxillary glands. Other diseases of the tongue, as cancer, &c., produce, however, the same effect on these glands.

The diseases which affect the tongue, during the presence of a venereal taint in the system, are due to three causes :

1. The use of the iodide of potassium ;
2. The exhibition of mercury ; and
3. To syphilis itself.

In certain cases, iodine produces a disease in the tongue somewhat resembling syphilis. I have elsewhere recorded some cases of this nature.¹ A surgeon consulted me for a skin disease of suspicious character, for which he had attempted to take the iodide of potass ; " but," said he, " whenever I use this medicine for two or three days, solid lumps, like tubercles, make their appearance on the skin and on the tongue ; and the latter organ becomes so large and painful, that I am obliged to give the remedy up." Such is an acute condition produced by iodine, which subsides when the drug is discontinued ; but in the more chronic forms, where the mischief has been slowly produced, the disease in the tongue remains even when the medicine is used no longer.

¹ ' British Medical and Surgical Journal,' No. 3, 1852.

Mercurial and venereal diseases of the tongue are frequently confounded with each other, and great discrimination and experience, with the most accurate history of the case, and of the effects of remedies, are necessary to enable us to determine the exact nature of these affections. A gentleman who had suffered from various forms of constitutional syphilis for five years, was sent to me for my opinion as to the nature of a disease in his tongue, which had been in existence for two years, and had resisted the ordinary means of cure. The organ was large, and could not be retained within the teeth. The saliva was continually running over the chin; it was exceedingly tender to the touch, crumbs of bread and the mastication of solid food occasioning severe pain. The centre of the tongue was hard and nodulated; and there existed also in the centre, a deep, foul ulcer, extending through a great part of the substance of the tongue. On either side of the tongue were small fungoid growths, resembling small ripe strawberries. In other respects, the health was good; and there was no symptom of secondary syphilis present, except some coppery macular stains on the shoulder and abdomen. This patient had taken large quantities of the iodide of potassium for three years, "so much," said he, "that my perspiration stained my linen brown;" he had also used mercury by the mouth: the latter remedy so taken always increased the mischief in the tongue. In this case, it required some care to determine whether the disease was due to mercury, syphilis, or iodine; and in such cases it is exceedingly difficult to form a correct opinion, particularly where mercury internally disagrees with the patient.

Aphthous spots and superficial ulcerations on the tongues of patients who have taken mercury internally, and who are still suffering from venereal taint, are due in many instances to mercury, and not to syphilis. It almost invariably happens, that mercurial medicines in any form, given internally, aggravate these conditions of the tongue, while they subside under the use of mild astringent gargles, and the administration of small doses of the extracts of conium or opium. When they coincide with a well-marked venereal disease, they may still be due to mercury, and mercury given in any form internally is in such states contra-indicated. A patient under my care for syphilitic lepra,

for which he was using the mercurial vapour, and taking three grains of blue pill every night, began to complain of his tongue, although the gums were hardly affected. The organ became large, tender, and covered with aphthous patches. A large induration appeared on the back of the tongue, which ulcerated, and ended in a deep, foul ulcer, with surrounding induration. These symptoms increased, while the scaly disease of the skin disappeared. This happened twice before when the patient had taken mercury.

The mercurial tongue may be confounded with the syphilitic one, if the history of particular symptoms and the effects of remedies upon them be not carefully noted and watched. Thus we see that the remedy which cured the lepra produced the disease in the tongue. Mercury in some cases fixes on the tongue, while it but slightly affects the gums. Acute mercurial glossitis is hardly to be mistaken, as it directly succeeds to the use of the remedy, and subsides, though slowly, when this is discontinued: in such cases the tongue is large and patchy; red in some places, white in others, very much resembling the appearance of the glans penis in acute balanitis. The chronic forms of mercurial disease in the tongue are much more difficult to distinguish.

Where chronic mercurial glossitis occurs in patients who have long laboured under venereal taint, it becomes a matter of some difficulty to determine whether the mischief in the tongue is due to mercury or syphilis; and sometimes the effects of treatment only will set us right on this point. I have been consulted in several cases by patients who have laboured under such conditions of tongue for more than twenty years:—"A surgeon, aged 47, consulted me for an old venereal complaint of twenty-four years' standing, of which the more prominent features at the time of his visit were patches of psoriasis on the hands and other parts, sarcocele of the right testis, and tubercles, with fissures in the tongue. He had been salivated several times, and taken large doses of the iodide for long periods; but the ultimate effects of treatment showed that the condition of the tongue was venereal."

The symptoms which are most characteristic of the true

venereal tongue are vegetations, deep fissures or cracks, ulcers, and tubercles. The vegetations of a syphilitic nature which occur on the tongue occupy its sides or its surface, are vividly red, and resemble a very small ripe strawberry. I believe these never occur but from syphilis; they are met with alone, or in conjunction with fissures, tubercles, or ulcers; they come on early after the disappearance of other symptoms of syphilis, or are associated with them, whether mercury or iodine has been employed or not.

The deep fissure or crack in the tongue is also commonly due to syphilis; the tongue sometimes appears as though it had been cut with a knife. The venereal ulcer of the tongue is most frequently long and sinuous; we are obliged to unfold the organ, as it were, to see the bottom of it; and its sides, unlike the common fissure, are more or less indurated. The venereal tubercle appearing in the tongue is a hard, solid body, occurring alone, or with some of the other symptoms I have mentioned; it generally comes on late in the history of a venereal taint, and sometimes long after the disappearance of every other venereal symptom; it resembles very much the state of tongue produced by the iodide of potassium, and may certainly be confounded with incipient scirrhus of the tongue.

I mention here one or two cases which exhibit the course, complications, and treatment of syphilitic diseases of the tongue.

CASE XXXIX.

Secondary syphilis of the tongue, resembling cancer.

A. R— was admitted into the Queen's Hospital, under my care, in June, 1856. He said he was sent to have a lump on his tongue cut out. He had on the under surface of the tongue a large lump, as large as a split hazel-nut, which was ulcerated at the top. He denied ever having had syphilis, but admitted the pre-existence of an eruption, which, he said, existed no longer. I stripped and examined him. On the body were groups of copper-coloured mottlings, into which scaly or papular eruptions frequently fade; and in one or two places there were well-marked scaly spots. The lump on the tongue looked and felt very like cancer; but acting on the hint of the state by the

skin, I placed the patient on a mercurial course, which completely cured the tongue in three weeks.

I have, in the chapter on the "Diagnosis of Secondary Syphilis," recorded the case of a man, upwards of seventy, who had a secondary syphilitic disease of the tongue still more resembling cancer, but completely cured by a mercurial course.

CASE XL.

Secondary syphilitic ulcer of the tongue, appearing during a mercurial course, cured by a change to another form of mercurial preparation.

M. C—, a lady unfortunately diseased by her husband, was under my care for a formidable attack of syphilitic lepra. She was treated by mercurial vapour, and took no mercury internally. Soon after the skin disease had disappeared, the tongue became stiff, and two or three white patches made their appearance on the sides of the tongue, and which soon ran into deep ulcers. There was no swelling of the gums. The symptoms were soreness, pain, swelling, and ulceration of the tongue. I believed this to be a case of simple secondary syphilitic ulceration of the tongue. The mercurial vapour was now omitted, and the patient placed upon the use of calomel and opium till the gums became tender. The tongue got rapidly well under this treatment.

I treated another case of lepra by mercurial vapour, where the tongue was ulcerated; the vapour appeared to have no influence on the tongue, although it cured the lepra. This patient was cured of his tongue disease by frictions of calomel on the gums, on Clare's plan.

These facts illustrate what I have so frequently had occasion to remark with regard to the influence of mercury on the different symptoms of syphilis. One preparation of mercury will have no effect on a particular symptom of syphilis, when by using another it shall rapidly disappear. The mode of exhibiting the remedy also produces very frequently the same effect: very frequently the internal administration will fail,

frictions will succeed where both the others have failed, especially in throat diseases. Nothing but experience can guide us. What is still more remarkable, as the case just detailed shows, a particular form of remedy will cure one symptom, whilst it leaves another untouched, or under the use of which it actually gets worse, whilst with a change of remedy the latter shall soon amend and be cured.

Some discrimination is necessary to enable us to determine the nature of the disease correctly, and consequently to frame an appropriate plan of treatment. To enable us to do this, attention to the following points is important:

1. The condition of the general health.
2. The nature of any concomitant disease, whether venereal or not; and whether the patient has at any and at what time suffered from constitutional syphilis; under what forms, and how it has been treated.
3. Whether mercury or iodine has been taken for the disease in the tongue, and with what effect upon it.
4. The condition of the submaxillary lymphatic glands.
5. Whether the patient has worked at any occupation in which the fumes of mercury are employed.

A careful inquiry, based on these suggestions, will most frequently enable us to ascertain the actual nature of the disease, and thus to treat it properly.¹

¹ Note added 1870.—Constitutional or secondary syphilitic glossitis may be confounded with cancer, mercurial glossitis, idiopathic glossitis; this is more especially to be feared in the chronic than in the acute stage. There are other syphilitic diseases of the tongue, such as the formation of tubercles, occurring as symptoms of constitutional syphilis which are distinct from the form we are now considering, and which require a different treatment. If the symptoms I have described come on soon after the disappearance of other symptoms of syphilis, such as eruptions on the body, or ulcers of the tonsils, the symptoms on the tongue are syphilitic and generally yield to antisymphilitic treatment, but the treatment must be of a different kind to that which cured the previous symptoms.

Prognosis generally favorable.

Treatment: mercurial frictions, mercurial baths, opium.

I have known calomel friction cure, I have known blue pill with large doses of opium cure, I have known mercurial frictions cure, and I

have known the baths cure, time after time. The treatment by the internal mercury is generally less successful than that by inunction or by vapour, opium in as large doses as the patient can bear generally does good, and the iodides in simple syphilitic glossitis are not generally successful. In syphilitic tubercles of the tongue, they are more efficacious.

See Lagneau's cases, and especially obs. 7, 'Tumeurs Syphilitiques de la Langue.'

I have found great benefit from touching these ulcers with the Liquor Hydrargyri, Nitrat. Acid., P. L., 1867.

CHAPTER XXIX.

ON SYPHILITIC DISEASES OF THE LARYNX.

THE larynx is very commonly affected by constitutional syphilis; but these diseases are most commonly preceded by other symptoms, which are or have been seated in the nose, and the throat, or the pharynx. The diseases of the larynx clearly produced by syphilis are, chronic or sub-acute ulceration of its mucous membrane, or that of the trachea; ulceration, caries, and nodes of the cartilages; and contraction of the larynx or trachea, caused by the cicatrisation of ulcers. One of the most formidable varieties of constitutional syphilis is ulceration of the mucous membrane of the glottis and larynx. Of this form of disease I have seen many examples; and modern writers on venereal diseases, more particularly Mr. Carmichael, M. Cazenave, and Virchow, have reported others. Syphilitic ulceration of the larynx generally follows or accompanies other similar diseases of the nasal fossæ, throat or pharynx, or various forms of the syphilida; it does not commonly occur as a solitary symptom of constitutional syphilis, and consequently we are the less likely to be deceived as to its true character.¹

¹ Note added 1870.—Since the discovery of the laryngoscope, these ulcerations have been seen and demonstrated during life; they have been found situated on various parts of the mucous membrane, and on the chordæ vocales. They admit of local treatment, and may be sometimes touched with solutions of nitrate of silver, by the aid of the laryngoscope. Unhappily, however, these conditions of the larynx are frequently associated with other syphilitic symptoms in the throat and pharynx, which renders the application of this instrument actually impossible. A case is detailed by Mr. Morgan, surgeon to the Westmoreland Lock Hospital, where the laryngoscope examination detected

The symptoms are, at first, an alteration in the character of the voice; it becomes hoarse, husky, or totally lost; the patient expectorates a fetid pus, and portions of slough mixed with blood; the thyroid cartilage is somewhat enlarged, and there is considerable tenderness when the larynx is examined with the fingers. In this condition the patient is generally much emaciated, and night perspirations are present. These symptoms closely resemble those of laryngeal phthisis, and even ordinary phthisis pulmonalis; from the former disease syphilitic ulceration of the larynx is to be distinguished by the precedence of primary or other constitutional symptoms, or by the co-existence of the latter. The stethoscope will hardly suffer us to mistake this disease for ordinary pulmonary consumption; indeed, the almost invariable existence of other forms of constitutional syphilis, with ulceration of the larynx will, in most instances, clear up any doubt as to the true nature of the latter.

CASE XLI.

J. M'K— was admitted under my care as an in-patient of the Queen's Hospital, in May, 1852. He had been suffering for two years from a chronic pustulo-crustaceous disease of the skin, and a large ulcer in a sloughy condition occupied the whole of the pharynx. He was much emaciated, had constant cough, expectorated an offensive bloody muco-pus, and could not speak above a whisper. Auscultation detected no disease of the lungs. The constitutional symptoms of syphilis had been preceded by chancres of the glans penis and urethra, the latter of which were not healed. He underwent a variety of treatment with little benefit, and ultimately died of extreme exhaustion. The inner surface of the larynx was destroyed for a great extent by an ulcer, precisely resembling that which occupied the pharynx, and a series of creeping ulcers extended down the urethra nearly to the neck of the bladder.

ulcers on the epiglottis. On dissection after death (on the post-mortem), in addition to the ulcers on the epiglottis, there was found extensive ulceration and necrosis of the upper rings of the trachea, close to the cricoid cartilage; the ulceration had destroyed all but the internal membrane of the trachea itself ('Med. Circular,' January 13, 1869).

M. Cazenave has recorded some cases of syphilitic ulceration of the larynx cured by the iodide of mercury; in all the cases that I have seen, I have found the disease difficult to manage, and very frequently fatal. Mr. Carmichael has experienced the same difficulty, and has proposed to lessen it by performing tracheotomy. "If the ulcer is in the larynx, there can be little hope of inducing it to heal, on account of the constant current of air through this passage, and the frequent motion to which it is subjected, as the chief organ of voice.¹ I have, however, in many instances passed into it with decided advantage a long bent probe, or metallic bougie, covered with lint, moistened in a solution of nitrate of silver, of from six to ten grains to the ounce of distilled water. In the act of passing the bougie, thus armed, into the larynx, the patient should be desired to project the tongue as far as possible from the mouth, which prevents the epiglottis from closing the aperture of the larynx; but, in the great majority of cases, I must confess that nothing more than mere temporary alleviation was obtained by this or any other measure I have seen tried, with the exception of tracheotomy. The other measures to which I allude, are mercurial fumigations, mercury internally exhibited, and blisters, moxa, tartar-emetic ointment, caustic issues, and setons to the integuments covering the larynx."²

¹ Sometimes syphilitic ulcerations occur low down in the trachea, destroying the cartilages, and contracting the tube by cicatrices, exactly in the same manner that the œsophagus is strictured by the healing of ulcers in that tube or in the pharynx. These cicatrices are extremely thick, hard, and callous; they contract or pucker up the tissues, and thus produce a true stricture of the larynx, and the patient dies of suffocation. Cases illustrative of this condition are recorded by Virchow ('*Syphilis Constitutionelle*,' obs. ii, p. 151). Two very remarkable dissections are recorded in the '*Annales de la Syphilis*,' p. 324, &c. In these instances the destruction of the rings of the trachea, and the contraction produced by the cicatrices of ulcers, existed as low as the bifurcation of the trachea.

² Carmichael's '*Clinical Lectures on Venereal Diseases*,' pp. 141-2; Dublin, 1842.

CASE XLII.

Syphilitic disease of the cartilages of the larynx; destruction of the cricoid cartilage by ulceration.

The subject of the present case was a man thirty years of age, by trade a cook. He consulted me at first with phagedenic ulceration of the fauces and pharynx. He was extremely emaciated, and said he had had diseased throat for seven or eight years. He first contracted syphilis eight years ago—that is, eight years before I saw him. I do not know what the primary symptoms were; but it appeared that, six months after their appearance, he had skin disease, which was said to be venereal, and no doubt was. This disappeared; but, soon after that, or about that time, he first began to suffer in the throat. The throat appears to have been better and worse during seven or eight years. When I first saw him, in October or November, he was suffering from phagedenic ulceration of the throat. The whole back of the pharynx was converted into an ulcer, having very much the character of hospital gangrene; and the whole of the soft part of the palate was gone, destroyed by previous ulceration. The voice was very hoarse; sometimes he was unable to speak. The bottom of the ulcer could not be seen. The windpipe was very much enlarged, and exceedingly tender. He was at this time directed to use a small quantity of the vapour of the grey oxide of mercury every morning to the throat, and in the intervals to wash it out with a kreasote gargle, consisting of ten minims of kreasote to half a pint of water, with an ounce of honey—an application, in many forms of secondary phagedena, I have found exceedingly useful. He took, in the shape of medicine, iodide of potassium with bark, and an opiate at night. The diet consisted of cocoa, milk, beef-tea, and wine-and-water. During the time he was under treatment, he had an attack of hæmorrhage from the throat. This was arrested by pressure on the carotid artery. After a month's treatment he got better; the ulceration of the throat healed; and he was able to return to his native place. He wrote some weeks afterwards to me stating that he was worse, and begging that I would take him into the hospital. I did so. He at that

time could not speak, and was even more emaciated than before. I have said that he could not speak, and he was irritated by my mistaking his meaning, thinking he said no when he meant yes. I mention this to show the state he was in. Very little was done for him ; in fact, very little could be done. I recommended him to smear the surface of the larynx with mercurial ointments, and put on a linseed poultice. He also inhaled the vapour of the tincture of conium ; but he was only in the hospital two days, when he died. He was found dead. The house-surgeon saw him at eight o'clock in the evening ; and, about two in the morning, he was discovered dead by the night-nurse.

On opening the windpipe, the disease was seen evidently external to it ; it was not in the mucous membrane of the larynx, but in the cricoid cartilage. The larynx, having been opened at the back, showed a small abscess surrounding the cricoid cartilage, which was denuded and partly destroyed by ulceration.

This was an example of venereal disease of the cartilages of the larynx, and resembles the history of syphilis as it often progresses in bones. In them, we find that the periosteum is surrounded by matter placed between it and the bone ; and if the nodes are opened, which they ought never to be, you will find analogous appearances to what I have here described as existing in the cricoid cartilages, on the surface of the bone denuded of its periosteum. This was not a disease of the epiglottis, glottis, or of the trachea. The whole of the mucous membrane of it was sound. There was, however, in addition, a considerable amount of œdema on the folds of mucous membrane on the sides of the epiglottis (the aryteno-epiglottidian folds).

Secondary syphilis of the windpipe may exist in two situations, in the cartilages and in the mucous membrane. The voice becomes hoarse and unpleasant ; the breathing more or less difficult, more or less spasmodic ; with cough, or rather a hawking up of pus, mixed with blood, and sometimes small sloughs. In the commencement of the disease in this case, the voice was very much altered ; in the latter stages, it was altogether destroyed. The patient is also generally much

emaciated; and there is also frequently an enlargement of the parts. It is true, in this case the emaciation was extreme, and therefore it would give the appearance of greater enlargement than really existed; but the larynx was quite one half larger than it ought to have been.

Syphilitic diseases of the windpipe are always preceded by other symptoms of constitutional syphilis. The patient I am speaking of had a primary sore, then skin disease, then throat disease, then phagedenic ulceration of the fauces; then the windpipe was affected. There is, in fact, a connecting link of symptoms all through.

There is little to be said as to remedial agents in such advanced stages of disease as that of which I have just spoken; but these conditions of the windpipe are immediately preceded, and generally for long periods, by other symptoms of constitutional syphilis which are curable; and these symptoms are seated in the throat, fauces, and pharynx in the various forms of ulceration. It is easy to conceive, when we reflect upon the continuity of the mucous membrane of the throat and larynx, how very probable it is that ulceration of the throat and palate, continuing year after year, should ultimately, in many cases, extend to the windpipe and the œsophagus; and this is actually the case. One of the most troublesome and dangerous forms of throat disease is that with which the patient whose case I have just detailed was affected, viz. secondary ulcerative phagedena.

There are several modes proposed of arresting this kind of phagedena; one is by the application of strong acids. Strong nitric acid has been recommended for this purpose. When used, it requires great care in its application. If the ulceration is extensive, it requires still greater care, and should be applied only to a small part of the diseased surface at a time. The fumes should be suffered to escape before the acid is passed into the fauces: carelessness on this point has produced fatal asphyxia. I prefer the hydrochloric acid: it is safer, and certainly more efficacious.

A case was admitted recently into the Queen's Hospital, of extensive phagedena of the fauces. The man appeared in tolerably good health, and he had been treated with the chlorate

of potass and various remedies, without success. He was directed to wash the throat with the kreasote lotion; he was placed on good diet, and rubbed in small quantities of the unguentum hydrargyri fortius under the armpits, and the fumes of the grey oxide of mercury were directed into the throat every morning. In about three weeks, the cure was perfect. I have seen the man lately, and he remains very well. With regard to external applications, in the shape of blisters, counter-irritants, or similar remedies, they are of little or no benefit. Mr. Carmichael proposed tracheotomy as a mode of curing venereal ulceration of the mucous membrane of the windpipe, on the principle, that the constant current of air kept up the ulceration; and he contended that no remedies had much chance of curing, whilst the ulcerated surface was constantly exposed to a current of air. Therefore he recommended that the windpipe should be opened below the ulceration, a tube put through it, and thus give the ulceration time to heal by diverting the current of air through another channel. But it is necessary, that in such case there must be disease of the mucous membrane, and not of the cartilages.¹

In such a case as that just related, tracheotomy could hardly be attended with more than a momentary benefit. Mr. Carmichael has related one or two cases of success by opening the windpipe, and he refers to Mr. Porter, of Dublin, who wrote an excellent book on the windpipe, as corroborative of the benefit of tracheotomy. On referring to Mr. Porter's work, however, you will find that gentleman's opinions are very different indeed; and I quite agree with him in what he says. He says that if you have approaching asphyxia, produced by the situation of the ulcer, you are perfectly warranted in protracting the patient's life by tracheotomy; but, at the same time, he thinks it unwarrantable in the early stages of the disease, where so much

¹ A patient was operated upon by Dr. Hamilton, in Stevens's Hospital, Dublin, for obstruction in the glottis, produced by syphilitic disease of the cartilages of the windpipe; the arytenoid cartilages had exfoliated. The immediate or urgent symptoms of suffocation were relieved by the operation, and the patient was discharged, wearing a tube in the trachea: the canal of the glottis was not restored; it remained imperious to air, or nearly so.—'Dublin Hospital Gazette,' March 16, 1860.

may be done by other remedies. Certainly, tracheotomy is not to be thought of under ordinary circumstances, or in the earlier stages of the disease, and is only to be adopted with the view of relieving immediate and distressing symptoms. Moreover, it is, as I have said, only of use where the mucous membrane is affected, and it is of no use where the cartilages only are attacked, except suffocation be threatening.

Phagedenic ulceration of the fauces is a very important disease, not only in itself, but in its consequences; that is, the ulceration is likely to extend into the larynx and œsophagus. I have mentioned remedies generally useful in such states, and which I am inclined to recommend from experience in their use and from their known benefit; namely, weak solutions of nitrate of silver, kreasote, hydrochloric acid, or the liquor hydrargyri per-nitratis, as local remedies; with the mercurial fume, frictions, or baths, with large doses of the iodides of potassium, sodium, or iron, as constitutional ones. I know a case in which ulceration of the fauces was arrested after the patient was immersed in the mercurial vapour bath three times. I have shown that with regard to phagedena of the throat, it may be arrested and cured. In speaking of the case of syphilis just detailed, we see the man had primary disease, then skin disease, then throat disease, then disease of the windpipe. It is the treatment of the first attack of syphilis upon which the protection of the patient in after-life depends. It is a difficult and uncertain, though not an impossible matter, to cure syphilitic ulceration of the windpipe, or necrosis of the cartilages of the larynx. But if the patient applies with the symptoms which precede such diseases, it is but rarely that he may not be put in a good state of health, and the more serious and complicated diseases which sometimes follow prevented.¹

¹ Note added, 1870.—Syphilitic inflammation of the mucous membrane of the larynx, commonly succeeds to or is complicated with secondary ulcerative phagedena of the throat or fauces; the disease even extends to the bronchial tubes, and in many cases the lungs themselves are affected. In a well-marked case of this kind the dissection of which was made by Dr. Wilks, of Guy's Hospital, "the tracheal mucous membrane was found highly inflamed, of a dark-purple colour, and in parts of a greenish hue, and was filled with purulent secretion, and slightly adherent patches of lymph. The bronchial tubes

throughout were in a like condition, of dark-greenish and purple hue, and filled with mucus; the lungs were almost solid throughout, and in several parts gangrenous with a very strong fetid odour. The sections of most parts showed old lobular consolidations, being speckled with a number of small white masses of hepatised tissue; the intervening structures were in a state of red hepatitis; there were large masses of lung also which had been wholly consolidated, but which were now breaking down. In the upper part of the left lower tube was a large sloughing cavity; the pleura over these parts was covered with a layer of lymph." 'Med. Times and Gaz.,' August 24th, 1861, p. 189. Tracheotomy relieved the urgent laryngeal symptoms in this case, but the patient died soon after from pneumonia.

CHAPTER XXX.

ON SECONDARY SYPHILIS AS IT AFFECTS THE UTERUS.

I HAVE already alluded to primary syphilitic ulcers of the uterus; but, in addition to these, there is a class of morbid actions to be found in the uterus, which appear to be dependent on the existence of a confirmed constitutional taint, whose presence in the system is marked by other symptoms apart from those which are found in the uterus, which are of an undoubted syphilitic nature, such as ulcerations of the throat, eruptions upon the skin, and others of a like character. It is beyond all question certain that secondary syphilis attacks the uterus, and the symptoms about to be mentioned are found in the uterus, very frequently in the cases of those who exhibit other symptoms of secondary syphilis. These secondary syphilitic affections of the uterus are of especial importance in their relation to conception and pregnancy, and to the health and life of the fœtus *in utero*. Such conditions of the uterus are not a hindrance to conception, but it is extremely improbable that pregnancy should attain its full period, or that a healthy child should be born under such circumstances, even if the father be free from a syphilitic taint. By referring to the tables of Dr. Mackenzie, which will be found at p. 1035 of the 'Association Journal' for 1854, it will be seen that two children only out of twenty-two births could be considered healthy when born of women thus diseased, and seventeen of the children died at very early periods after birth; the greater number of whom exhibited unequivocal symptoms of syphilis. The fourteenth case recorded by Dr. Whitehead at p. 133 of his work already alluded to, is a well-marked illustration of the position just laid down. In this case the patient was diseased by her husband:

she was never pregnant, had indurated sores, a puriform discharge from the vagina, enlarged nucleated glands in the groin, scaly eruptions on the face, forehead and arms, and a sore throat. She became pregnant by a second husband fifteen years after having been diseased by the first, and gave birth to a child, which in the fourth week after birth became covered with scaly blotches; the voice was husky, the breathing snuffling, and the mouth and lips sore. The child died. On examination of the mother, the cervix uteri was found unusually large and firm; the boundary of the orifice was covered with granulations, which appeared to extend into the anterior of the organ; the outer margin of this ulcer was a defined wavy elevation, external to which the surface of the cervix was of a dark red colour. The discharge had never disappeared during the whole interval of time mentioned.

On examining the wombs of those females who exhibit symptoms of constitutional or secondary syphilis, certain alterations will be found, which, as far as my own observations go, I have found pretty constant, and which, when other symptoms are present, must be considered as due to syphilis. But an important question arises, whether such symptoms are ever found in the uterus, if the patient has never had syphilis; or whether these symptoms, being found in the uterus, and no other symptoms of syphilis elsewhere, we are warranted in pronouncing them as syphilitic.¹

The symptoms found in the uterus of females who have other symptoms of secondary syphilis, are: 1. Purulent discharges; 2. Enlargement and tenderness of the whole vaginal portion of the uterus, or one segment only, generally the lower; 3. Patches of redness, sometimes of a very dark colour; 4. Ulcerations

¹ The syphilitic virus is the cause of many diseases of the uterus. The observations which I have made and the facts which I have collected at the Lourcine Hospital do not permit me to entertain a doubt on this subject. The very remarkable labours of Dr. Bernutz, which he has given an account of before the Medical Society of Hospitals, have thrown new light on this subject. M. B. has clearly demonstrated that syphilis of the uterus assumes many varied forms, and frequently appears with symptoms very analogous to those which the syphilida assume on the surface of the skin. Becquerel, 'Traité Clinique des Maladies de l'Uterus et de ses Annexes,' Paris, 1859, tom. 1, p. 185.

varying in size and appearance. Perhaps one of the most frequent symptoms attendant on secondary syphilis is a purulent or muco-purulent discharge from the uterus itself. This discharge is present in a great majority of females labouring under confirmed lues; sometimes it is present without other symptoms, but much more frequently, under such circumstances, is associated with greater or less enlargement of the neck, with more or less eversion of the lips of the uterus, and with certain alterations of the mucous membrane, consisting in red patches, excoriations, or superficial ulcerations. I believe this discharge to be, under such circumstances, a symptom of secondary syphilitic disease of the uterus. It is true such a discharge may be a simple leucorrhœa, or it may be due to gonorrhœa, or it may be symptomatic of a concealed chancre of the canal of the cervix; but where it occurs with a constitutional taint, and where it is associated with those other morbid changes I have alluded to, and where, again, the patient was free from such discharges till she became diseased, there can be little reasonable doubt of its nature. "In every instance where the mothers of syphilitic infants have been under treatment, the existence of syphilitic disease in the uterus, with discharge containing more or less of pus, has always been found." (Whitehead, 'Third Report of the Clinical Hospital, Manchester,' p. 106.) Dr. Tyler Smith, at p. 98 of his 'Treatise on Leucorrhœa,' says: "It appears to me that, in almost all cases in which leucorrhœa and disease of the os and cervix uteri are present in women suffering from constitutional syphilis, the uterine symptoms are a genuine manifestation of the constitutional or secondary disorder." Neither the microscope nor chemistry, as far as I know, have yet furnished us with any data which would enable us, by the mere examination of the secretions, apart from the history of symptoms, to found a diagnosis. In reference to this point, Dr. Whitehead says that the "stain in venereal affections is different from that communicated by the product of simple ulcerative or inflammatory action; although in what this difference consists, chemically, I do not exactly know.

I could adduce a great number of cases in support of the views I have just set forth, did time and the limits of this chapter permit. I may be perhaps permitted to allude to one

or two, which present some features of rather peculiar interest. A patient consulted me, some months ago, respecting some superficial ulcerations of the penis, which invariably made their appearance on the day after intercourse with a female with whom he lived *par amours*, but to whom he was not married. He was most anxious that she should be carefully examined, and she was sent to me for that purpose. She had the remains of an old syphilitic eruption upon her. I could detect no further change in the uterine organs than a profuse muco-purulent discharge. She subsequently became pregnant. In the sixth month of her pregnancy, she was delivered of a dead and putrid foetus. I have watched this case for four years. The patient had miscarried twice, and has been prematurely delivered of two dead children. The uterine discharge has never ceased during the whole period.

A girl, of very healthy constitution, was admitted, under my care, into the Queen's Hospital, in September, 1857. She had indurated chancres of the labia, enlarged glands in the groin, a well-marked eruption of syphilitic lepra, and a profuse vaginal discharge. On examination, the whole of the vaginal portion of the uterus was found swollen and intensely red: this redness ran into the canal of the cervix, from whence issued a most profuse muco-purulent discharge. The symptoms of syphilis disappeared after a prolonged treatment, which had no effect on the discharge: it subsequently yielded, and almost altogether disappeared, under one or two cauterisations of the orifice of the uterus with the nitrate of silver, and the application of a pledget of lint to the upper portion of the vagina, soaked in a solution of the chlorate of potass in the proportion of a drachm of the salt to half a pint of water.

These secondary syphilitic uterine discharges are, perhaps, of all the symptoms of secondary syphilis, the most troublesome and difficult to cure. In fact, my object in alluding to the last case was chiefly to show that the treatment which generally succeeded in removing the external manifestations of syphilis had frequently little or no effect on those discharges from the uterus which have been deemed of a syphilitic nature; and this is constantly the case. They require a combination of both local and general treatment. Local treatment will not remove

them without constitutional treatment, neither will the latter succeed without the former. Sometimes they are rebellious to all treatment; and this may possibly depend upon the location of some mischief in the interior of the uterus, beyond the reach of remedies. In this respect, they may resemble those chancres situated in the interior of the bladder which have been described by MM. Ricord and Vidal de Cassis.

These difficulties in treatment have been noticed by other observers. Dr. Mackenzie, in reference to this point says: "Moreover, in determining the relations of these discharges to syphilis, there is this additional difficulty, that the actions of the disease are both local and constitutional; and hence abnormalities in regard to these secretions may arise from the local irritation of the disease, rather than from its more specific and constitutional action." These remarks just state the difficulty with regard to treatment; and I venture to assert that the most judiciously framed general plan has little or no effect upon the particular symptoms I have alluded to, without the aid of topical medication.

These discharges may continue through a long series of years; in the case quoted from Dr. Whitehead, for seventeen years, doubtless, of a syphilitic nature; for a diseased child was born at the end of this period, and no other symptoms of taint discoverable either in father or mother, except those seated in the uterus. This is not surprising, when it is considered that, when medical men treat secondary syphilis in the female, the uterine organs are very rarely examined, unless some special circumstance direct their attention that way. And, again, vaginal discharges, from a variety of causes, are so common in females, that they commonly attract but little attention; and, even if their existence be inquired into by the surgeon, it is most frequently denied by the patient.

It will be found, on examination, that a great number of patients suffering from secondary syphilis, I believe the majority, have the neck of the uterus very much enlarged; and this enlargement is, in many cases, so marked as to constitute a distinct and positive abnormality. This enlargement or hypertrophy will be found more frequently to affect the lower segment or lip of the uterus, than the upper; and that frequently in a

very marked degree. The mucous membrane covering the uterus so affected may not present many very marked deviations from the healthy condition; but more frequently it does so. The mucous membrane looks red, shining, or excoriated, not a generally diffused redness, but in patches: some of these patches have a deep livid colour, and generally they have a tendency to run towards or into the orifice of the womb itself.

There is little doubt but these symptoms are due to syphilis. If the patient have at the time other marks of constitutional disease, it amounts to little short of absolute certainty; or if, again, the uterus be examined soon after the disappearance of the other symptoms, and such conditions of the uterus are found, they may be pronounced syphilitic; for it must be borne in mind that the symptoms of uterine syphilis will remain for long periods after the apparent cure of other manifestations of the disease. The discharges from the os uteri, to which I have just referred, are also most commonly associated with this enlargement of the neck, and the changes just mentioned in the appearance of its mucous membrane. In the married female, or in those who have borne many children, hypertrophy of the neck of the uterus may probably be attributed to other causes; but, as I have said, the simple hypertrophy seldom exists alone, without the other symptoms I have mentioned: and, again, this enlargement is equally well marked in syphilitic females who have never borne children. Dr. Whitehead says: "When the lower section of the uterus, in a state of hypertrophy, presents a dark red surface, somewhat variegated or mottled, or measly, and especially if it appear tense and glistening, it may pretty confidently be asserted that the patient has a syphilitic taint, and that she will be liable to transmit the evil to her offspring." (P. 291.)

The symptoms of secondary syphilis, as they affect the uterus, consist chiefly in discharges from the os, enlargement of the neck, with redness and superficial ulceration affecting the neck externally, as well as the orifice and canal of the cervix. These symptoms are rarely met with singly; they are frequently all present; but two or more generally coexist. It may be asked, Are these pathognomonic of the existence of syphilis in the system? Would it be safe to assert that such symptoms are

syphilitic apart from the existence of other and the more well-known manifestations of the disease? It may be answered, that such conditions of the uterus are infrequent, apart from either the present or antecedent symptoms of syphilis. I have already said that, in secondary syphilis in the female, the uterus suffers in about sixty per cent.: probably the throat suffers in about an equal degree. We know that ulceration of some part of the throat is common in secondary syphilis; but it is not met with in all cases.

If the state of the uterus be examined in patients who have never had syphilis, the symptoms I have mentioned, or others closely resembling them, are not found, or rarely found; whilst in syphilis they are, as we have seen, pretty constant. "Mr. Pollock, in a paper read before the Medical and Chirurgical Society in 1852, stated that, on examining the uterus in 583 women who had died of various diseases, in only 23 was the mucous membrane of the cervix or os found diseased or altered. In 708 cases of persons dying of various diseases examined by Dr. Boyd, of the Marylebone Infirmary, 13 only had congestion or inflammation of the uterus. Dr. Allen, of the same institution, and Mr. Prescott Hewett, of St. George's, have also investigated the condition of the uterine organs in a great number of persons dying of various diseases, and they respectively concur in the statement that these lesions of the cervix are rarely met with."—(Mackenzie, p. 1055.)

If a female give birth to a syphilitic child, and on examination the uterine organs present the symptoms I have described. I think, although no other symptom be present, we may safely declare them syphilitic, and recommend a course of treatment to prevent a similar occurrence on the part of the offspring, in the event of future pregnancies. These symptoms in the uterus, however conclusive they may be as far as the mother is concerned, would not, if cured, necessarily prevent the future birth of diseased children, unless the health of the father be determined. (See the chapter on Infantile Syphilis.)

I have already remarked that general treatment, apart from local, rarely succeeds in curing syphilitic diseases of the uterus, whether these be primary or constitutional.

If the disease assume the character of a primary sore, of

which I have reported several instances, there is no reason why such sore may not be treated locally in the same way as chancres situated in other parts. For instance, it may be destroyed with caustics, such as the nitrate of silver, or the acid nitrate of mercury: these may be applied with perfect safety through the speculum where the ulcer is situated on the lips or on the external portion of the os uteri. The latter caustics may be easily applied on a camel-hair pencil, or on a small pledget of lint; but, in the event of liquid caustic being used, care should be taken that no more is put on the brush or lint than is required, and that none of the caustic drop on the healthy portion of the vagina.

After the application of the caustic, a soft pledget of lint should be soaked in some weak astringent lotion, such as sulphate of zinc, or acetate of copper with alum, in the proportion of about two grains of the salt to an ounce of water. This should be gently placed over the whole vaginal portion of the uterus and renewed daily.

The patchy shining condition that I have spoken of may be pencilled over with a solution of nitrate of silver, in the proportion of a drachm to the ounce, and then dusted over with calomel. If there is an extended, spongy, granular, secreting surface, equal parts of calomel and alum may be used; and afterwards some dry, soft lint, or charpie, placed over the whole. The lint should be changed, and the dressing of calomel, or calomel and alum, renewed daily. The purulent or muco-purulent discharges from the uterus, which so constantly complicate secondary syphilis, are exceedingly difficult to cure. Simple vaginal injections have little or no effect on them. Such discharges may be symptomatic of disease in the canal of the cervix, or probably still further in the interior of the uterus: I have previously alluded to cases where no reasonable doubt could be entertained that ulceration existed in the canal of the cervix. Vaginal injections fail, because they do not reach the seat of disease; the os itself being commonly occluded by discharges of various kinds. In order to do any good in such cases, these discharges should be carefully washed away by means of a syringe used through the speculum. A stream of tepid water may be directed against the os till all the

discharge is washed away; or a soft piece of sponge or lint may be dipped in warm water, and the secretions cleansed away with it. When this is done, a stick of nitrate of silver may be introduced into the canal of the cervix, and the whole surface well cauterised with it; or a camel-hair brush may be dipped in a dilute acid nitrate of mercury, and the same part well dressed over with it. These remedies are perfectly safe; I have used them hundreds of times, without the least accident. I mention this simply on account of some unfavourable results which have been said to attend the intra-uterine injections practised by the late M. Vidal, to which I shall presently allude.

In addition to the cases of presumed chancre of the canal of the cervix uteri which I have already mentioned, M. Robert has cited four cases of discharge from the os, which yielded a characteristic pustule when tested by inoculation; from this fact it was believed that such discharges were symptomatic of chancre situated within the canal of the cervix uteri. There was no external trace of ulceration, and the successful inoculation of the pus discharged was the only symptom which led to the suspicion of the existence of such chancres. (Quoted from a paper by Dr. Achille Dron, in Diday and Rollet's '*Annuaire de la Syphilis*,' &c., p. 220.)

In those uterine discharges which complicate secondary syphilis, intravaginal injections may be employed through the speculum with great benefit. The os uteri should be well brought in view, and a continuous stream of fluid thrown directly upon it. The fluid used may be a solution of nitrate of silver, very weak (four grains to the pint), a weak solution of sulphate of zinc, of acetate of copper, or of alum, or a strong decoction of the walnut-tree leaf.

These injections should be used about twice a week. They have an advantage which no one can dispute; they free the neck of the uterus from mucosities and secretions, which are more or less acrid, and which may exert a greater influence in perpetuating ulceration than is generally imagined. (Vidal, Blackman's translation, p. 182.)

After the injection, a pledget of lint should be placed over the os, which should be changed daily.

In very obstinate cases, where the disease is located in the canal of the cervix, or even still deeper, injections may be practised through the os tinæ into the canal itself. If the quantity of injection used be small, and the injection carefully made, this may be done with perfect safety. Such injections have occasionally been followed by abdominal and pelvic pains, which have been more or less acute, have continued for longer or shorter periods, and then disappeared. These injections may be made through a small elastic gum catheter, or canula, one end of which is introduced into the uterus, and the other connected with a small syringe. The most convenient injection is a solution of the nitrate of silver, in the proportion of one grain to four ounces of water; of this, one drachm is to be used for each injection. The injection must be made slowly and without force. This may be repeated as frequently as may be thought necessary, and the strength increased if required. Much additional and valuable information on "Intra-uterine injections in various forms of disease" will be found in the late M. Vidal's work, '*Maladies Vénériennes*,' chap. iii.

The general conclusions that I feel disposed to come to, from the facts just detailed, are—

I. The uterus is capable of being primarily inoculated with syphilis, in the same way that we observe similar occurrences take place on the penis and elsewhere. That such primary sores may be situated on the external portions of the neck of the uterus, within the os or canal of the cervix, or probably still more deeply; that these occurrences, as far as they have been at present observed, are rare; but, as structure in other parts exerts a powerful modifying influence on the appearance of a chancre, that these primary sores on the uterus may be more frequent than has hitherto been imagined.

II. Like other parts, as the throat, skin, and elsewhere, the uterus is liable to be attacked with the symptoms of secondary or constitutional syphilis, which are distinct from the primary disease; that these symptoms are found in more than half of the patients who suffer from confirmed lues; and that the symptoms which characterise them are pretty uniform; consisting in discharges from the canal of the cervix, general or partial enlargement of the neck and lips of the uterus, with

congestion and inflammation, and superficial ulceration of these parts.

III. These symptoms are most likely syphilitic, since they are found in the cases of those who labour from confirmed syphilis; but are not found in anything like an equal degree in persons labouring under diseases which are not syphilitic.

IV. The symptoms of uterine syphilis will remain for years after the disappearance of the other symptoms; and this condition of the uterus is the source of infection to the fœtus, even when the female is pregnant by a man who has never had syphilis.

V. The examination of a female labouring under confirmed lues should never be considered as complete till the uterine organs have been thoroughly inspected; and in reference to treatment, it may be asserted—

VI. That no treatment is likely to be successful which does not combine topical medication of the uterus with any constitutional remedies that may be indicated or thought necessary.

The facts and opinions which I have stated in the foregoing chapter have recently received ample confirmation from the researches of M. Bernutz at the Lourcine Hospital: these researches have been corroborated and witnessed by M. Becquerel. M. Bernutz has not as yet published a detailed account, but he has arrived at the following conclusions:—

The uterus is the seat of syphilitic symptoms of varied character, which may be legitimately classed under three heads:

1. Primary diseases, comprising chancres and chancrous balanitis; all inoculable.

2. Secondary diseases, comprehending the following alterations seated on the mucous membrane of the neck: these are red patches, vegetations, erosions, and various forms of the syphilida. They are not inoculable, although they may be contagious.

3. The tertiary symptoms comprise tubercles and gummata.¹

¹ Becquerel, *op. cit.*, page 168.

CHAPTER XXXI.

ON THE SYPHILITIC TESTICLE.

THE syphilitic testicle is a totally different disease to that which I have already described under the name of "consecutive gonorrhœal orchitis." The diseases are different in their nature, their symptoms, their pathology; and they require also different remedies for their cure. This affection is commonly called syphilitic sarcocele, and also the syphilitic or venereal testicle.

Symptoms. Diagnosis.—When a gradual enlargement of the testicle comes on without pain in individuals who have suffered from a well-marked constitutional syphilitic taint, however long such symptoms may have disappeared, and whether any other symptom of secondary syphilis be present or not, there is reason to suspect that the disease in the testis may be of a syphilitic character. This enlargement takes place gradually, without pain in the part, and without pain in the back or loins. When it is handled, there is little or no tenderness present, unless the organ be firmly pressed. The tumour is smooth and heavy, occasionally, however, lobulated or uneven on its surface, and in its more advanced stages no trace of the epididymus can be felt, and the spermatic chord appears quite free from disease. There are many other diseases of the testis with which the syphilitic testicle may be confounded, and from these it is of the first importance to distinguish it, since in a majority of cases this disease is very amenable to treatment, and the records of surgery show that many testicles have been removed under the suspicion of their being cancerous, which were, in fact, nothing more than ordinary syphilitic sarcocele, occurring as an isolated symptom of secondary syphilis long after any other manifestation of this disease. The diseases with which

syphilitic sarcocoele may be confounded, are : 1. Chronic inflammation and enlargement of the testes from causes which are not syphilitic. 2. Scrofulous enlargement of the testes. 3. Scirrhus of the testes ; and chronic consecutive gonorrhœal orchitis. I think it is hardly possible to confound this disease with either hydrocele or hæmatocele.

Whenever gradual enlargement of the testes takes place without any evident cause, and under the circumstances already mentioned, and the patient has previously suffered from symptoms of constitutional syphilis, there is great reason to believe the disease syphilitic, and such a supposition should always be acted upon before any more active measures be resorted to, particularly those which have relation to any operative procedure. In the more acute forms of consecutive gonorrhœal orchitis, the testicle is red, shining, and intensely tender and painful ; in the syphilitic sarcocoele, the tumour is indolent from the commencement, is not painful, and is not tender even when hardly pressed. In the more chronic forms of consecutive gonorrhœal orchitis, there may be no tenderness or pain, but the tumour is not heavy or smooth, like syphilitic sarcocoele, and the epididymus, to which the enlargement in the former case is chiefly confined, may be distinguished separately from the body of the testis itself.

With the scrofulous testis, and simple chronic enlargement of the testis, syphilitic sarcocoele may be confounded, without great care in the analysis of the history of the case. The effects of treatment, however, will frequently clear up doubts when any exist on this point.

“Though a late symptom,” says Mr. Hamilton,¹ “yet between it and the primary affection there is generally a chain of connection by some well-marked secondary affection (not always). When the sarcocoele is unaccompanied by these, its previous existence and history help to distinguish it from simple chronic enlargement, from which there is otherwise no local difference or mark of distinction.”

This disease very often occurs as an isolated symptom of constitutional syphilis, when the patient has been supposed well

¹ ‘Essays on Syphilis—Syphilitic Sarcocoele.’ By John Hamilton, Surgeon to the Richmond Hospital, Dublin.

for years ; and these are just the cases, where the health is otherwise good, that constitute the difficulty in diagnosis. At other times the disease is associated with the sloughing ulcer of the pharynx, with various forms of skin disease, or pains in or disease of the periosteum and bones.

The syphilitic sarcocoele, although easily distinguished from simple hydrocele of the tunica vaginalis, is sometimes complicated with a small effusion of fluid into this part, and then the disease is named hydro-sarcocoele. This form of hydrocele does not require operation ; if a trocar be pushed into it, the body of the testis is sure to be wounded ; the fluid is generally absorbed as the testicle approaches the healthy condition. Should it not do so, the fluid is easily evacuated in puncturing the scrotum with a fine needle.

In syphilitic hydro-sarcocoele, the testis is large, the fluid small ; in ordinary hydrocele, the size of the testis is not increased, and the collection of fluid large ; a precisely opposite condition to the former.

The syphilitic testicle may certainly be mistaken for certain forms of schirrus of this gland. Dupuytren, Ricord,¹ and M. Helot,² believe that numbers of testicles have been amputated under the suspicion of their being cancerous which were syphilitic. The condition of the inguinal glands will sometimes, but not always, assist us in forming a diagnosis on this point, as the absorbents of the testes open into the lumbar, and not into the inguinal glands.

Pathology.—In one form of disease the effects of chronic inflammation only are detected, and this has been termed by Mr. Hamilton, "simple syphilitic sarcocoele." It consists in the "deposition of firm lymph, of a pale yellow colour, into the interstitial cellular tissue external to the tubuli testes, as well, probably, as into the tubuli themselves."³

In this form of sarcocoele, the marks of inflammation are found

¹ 'Gazette des Hôpitaux,' Aug. 25, 1846.

² 'Gazette Médicale,' Oct. 18, 1845.

³ Syphilitic sarcocoele occurs under two forms : one of chronic or sub-acute inflammation of the testicle and its coverings ; the second of a specific character, in which a change of structure or deposit of a specific morbid character takes place in the substance of the testis itself.

both in the testicle and its coverings; the tunica albuginea and the tunica vaginalis become thickened and adherent, or a small collection of fluid takes place in the latter. In the testicle itself the inflammation attacks the tubuli seminiferi, the coats of which become thickened, and in the advanced stages of the disease completely atrophied, and converted into a homogeneous semi-tendinous mass, in which all trace of the tube is lost. In addition, a deposit of lymph takes places between the tubuli. There is little vascularity, and little tendency to softening or suppuration. The testicle diminishes in size, and becomes indurated. As this form of disease is generally curable by appropriate treatment, few opportunities of examining the part are met with. Virchow states that during the outbreak of cholera in 1848, he had opportunities of examining the testes of several syphilitic patients who died of the epidemic.

“A much more common pathological appearance of syphilitic disease of the testicle, is the presence of one or more tubercles in the epididymis or body of the testes. These tubercles are of a yellow colour, of a consistence rather less firm than that of coagulated lymph. Very small at first, they gradually enlarge, and, according to their duration, may vary from that of a hemp-seed, or split-pea, to that of a chestnut, or even larger. They have a well-marked cyst, which can, by careful dissection, be separated from the yellow inorganic substance contained in them, and from the glandular substance of the testes in which they are imbedded. The yellow substance with the cyst has sometimes a laminated arrangement. In some preparations the yellow tubercle has gradually so increased as to have caused absorption of the glandular structure of the testicle, and, finally, to have taken its place.”

“When the progress of the yellow tubercle is not stayed by treatment after having attained a certain size, it begins to soften in the centre, or at the side nearest the surface of the testicle, where it causes an inequality; adhesion takes place between the tunica vaginalis and scrotum, and at last, these structures, with the tunica albuginea, give way, and the surface of the tubercle becomes adherent to the skin of the scrotum. Suppuration of a slow indolent character ensues, the abscess bursts, and discharges very little matter, and very thin, and

terminates in fistula or lipoma, and total disorganisation of the testicle: the same disorganisation may occur without any suppuration. The tubercles are absorbed, but, at the same time, the glandular structure of the testis disappears; nothing remains in the place of the atrophied testicle, but a hard, irregular, fibro-cartilaginous, contracted mass, in which ossific matter is sometimes deposited.¹

From the ulcer in the scrotum produced by the bursting of the abscess occasioned by the softening of the yellow tubercle, there frequently protrudes a soft, granular, fungoid mass; this is fungoid syphilitic sarcocele. This does not always take place: I have frequently seen cases where a process of slow softening or suppuration has taken place in the testicle in syphilis; an abscess bursts externally, and continues to discharge, but no fungus protrudes. I have seen this take place in both testes; the fistulæ thus produced continue to discharge small quantities of pus, the glands atrophy and harden, no spermatozoa are found in the pus thus discharged, and the virile power is quite destroyed; thus a so-called "spermatic fistula" is produced, which is anything but spermatic, since none of the elements of semen can be detected in the pus, and, in all probability, the secreting structure of the testes is altogether destroyed. A gentleman who had suffered from various forms of constitutional syphilis for some years, perceived, one day after riding, one of his testicles somewhat enlarged, and, after a short time, the other also. The swelling gradually increased, without pain, till each gland had acquired the size of a large lemon; a small abscess formed in each testicle, without pain, broke and discharged. Various plans of treatment were resorted to, with little success: the testes were not reduced in size; the abscesses gradually discharged less and less, till only a few drops of pus occasionally appeared. I examined the discharge from the testes frequently, but never detected any trace of semen. In this state my patient married: he had firm erections, but emission never took place. Shortly after this he died of apoplexy. I believe that in this case the whole secreting structure of the testes was destroyed by the effects of chronic inflammation, and the deposit of lymph both

¹ 'On Syphilitic Sarcocele,' by J. Hamilton, Surgeon to the Richmond Hospital, Dublin, pp. 21, 22, 25. See also Virchow, *op. cit.*, chapter iv.

in and around the tubuli seminiferi; this appeared to be proved by the absence of semen in the discharge from the abscess, and the want of emission during sexual intercourse.

CASE XLII.

Fungoid syphilitic sarcocele; cure by mercurials and the iodide of potassium.

A patient, about thirty years of age, was sent to me by Dr. Henry Porter, of Peterborough, in 1858, who had suffered for some time from syphilis. He had had a phagedenic chancre and an ulcerated throat: these symptoms yielded to the use of the iodide of mercury, the iodide of iron, and cod-liver oil. About two months after the disappearance of these symptoms, he re-applied to Dr. Porter, with "an enlarged testicle, much indurated, the skin being inflamed and tense, in a few days breaking out into a cancerous-looking ulcer, the size of a shilling, which soon increased to that of half-a-crown." In this state he was sent to me. At that time there protruded from the ulcer a soft, granular fungus, as large as a pigeon's egg. He was cachectic, weak, pallid, troubled with night-sweats and pains in the joints. He was directed to take two grains of calomel and one of opium every night, and decoction of bark with the iodide of potass in the day; the fungus was dressed with an ointment composed of one drachm of the ung. hyd. nit. oxyd. and half an ounce of zinc ointment. Subsequently the treatment was a little modified: the calomel was changed for blue pill, and the quantity of opium increased; the iodide was continued. "Under this treatment, the ulcer and fungus in the scrotum entirely healed and disappeared, the testicle assumed nearly its natural size, and his health improved, the rheumatic pains giving way very gradually."

It frequently happens that medical treatment has little or no effect on fungoid syphilitic sarcocele, although the disease is occasionally curable. In many cases the testicle is so completely disorganised, that there is no remedy but castration; the diseased parts must be removed by the knife. I have been compelled to perform this operation in several instances. Mr. de Méric has recorded a case of fungoid syphilitic sarcocele;

M. Rollet, of Lyons, several;¹ and Mr. West, one.² There can be no doubt as to the syphilitic origin of these diseases of the testes; they arise late in the history of a venereal taint, but have always been preceded by marked symptoms of syphilis; these symptoms may be present at the same time as the disease in the testes, or no symptoms of syphilis may have occurred for years. Where a testicle slowly enlarges without pain, and the patient, at any former period of his life, have had well-marked constitutional syphilis, especially if he has suffered from extensive ulceration in the throat, there is always a suspicion that the disease in the testis is of a syphilitic nature; and the patient should be placed on an anti-syphilitic treatment, by mercury and the iodide of potass. In many cases this will succeed in curing the disease, especially in its earlier stages, and in the simple inflammatory forms without change of structure. Even in the earlier stages of the deposit of the yellow tubercle, we may be successful; but where this has proceeded to softening, little benefit can be expected from treatment of any kind.

The virile power is not affected in the earlier stages of syphilitic sarcocoele, unless the disease extend to both testicles; but in the advanced stages, or in protracted cases, especially where suppuration has taken place, and an ulcer or fungus formed, the virile power is always more or less weakened. The desire for intercourse is not lost, neither is erection much weakened; but the ejection of semen does not take place, simply from the fact that the glandular secreting structure of the testes is destroyed. I believe that when this is the case, the secreting power of the testes is never recovered. I have watched several cases of this kind for some years, and no improvement in virility has taken place. I have repeatedly examined the discharge from spermatic fistulæ in these and similar cases, but never in one single case have I been able to detect any spermatozoa.

In the earlier stages of what has been described as simple syphilitic sarcocoele, local depletion by means of a small number of leeches may be employed, if much tenderness be present. The

¹ 'Mémoire sur le Sarcocoele Fongueux Syphilitique, par M. J. Rollet, Chirurgien en Chef de l'Antiquaille,'—'Annuaire de la Syphilis, &c.,' page 90.

² 'Dublin Journal,' Nov., 1859.

patient should at once be placed upon a mild mercurial course, suited to his age and constitution. He should take calomel and opium at night, or blue pill and opium ; with iodide of potass in the day, with bark or sarsaparilla, and above all use regularly the mercurial vapour bath. If cachectic or weak, or troubled with night-sweats, cod-liver oil and iron may be added. In many cases the health has been broken by other symptoms of syphilis, frequently of a formidable kind, especially secondary phagedena of the fauces ; and in such states large doses of opium should be combined with the mercurial. Alone, the iodide of potassium will frequently disappoint us, and will not cure the disease. As local applications, frictions, with mercurial ointment and the extract of belladonna, the compound iodine ointment, or the ointment of the iodine of lead, are useful ; the two former irritate the scrotum, the last does not, and, therefore, I prefer it. In some obstinate and perfectly chronic cases, I have blistered the testes with great benefit. Where sarcocoele occurs as a complication, and other and perhaps more important syphilitic symptoms are present, the treatment passed in review may require modifications to suit the particular circumstances of the case, more especially where the disease of the testes is complicated with the sloughing ulcer of the pharynx or fauces.

CHAPTER XXXII.

ON CONSTITUTIONAL SYPHILITIC DISEASES SEATED IN THE MUSCLES AND TENDONS.¹

CASE XLIII.

Syphilitic tumour in the muscles of the fore-arm.

M. V— was admitted, under my care, into the Queen's Hospital, in April, 1853. She had had primary sores five years previously, and since that time had suffered from various forms of skin disease, ulceration of the throat, and alopecia. She was admitted for a large circumscribed tumour, which appeared imbedded in the flexor muscles of the right fore-arm; the tumour was as large as an orange, not very tender to the touch, the skin covering it not altered in appearance. I considered it of venereal origin—in fact, a muscular node; it coincided with severe nocturnal pains in the bones of the head and legs. The tumour disappeared after six weeks' treatment by the iodide of potassium and the biniodide of mercury, with occasional blisters, pressure by means of iodine and mercurial plasters, and frictions with the ointment of the iodide of lead. The patient had also another large tumour in the muscles of the thigh, also one on the back. She had also pains in the head. The limbs where the tumours existed were the seat of peculiar cramps; they were undoubtedly of syphilitic origin.

I have described in another part of this work, other tumours of syphilitic origin, which are seated frequently on the tendons near their insertions; M. Lisfranc has described such diseases under the name of "white nodosities of the tendons." M. Bouisson, who has written a very good monograph² on syphilitic diseases of the muscles, mentions a case where the tumour was

¹ "Tumeurs gommeuses"—"Gummata."

² 'Gazette Médicale,' July 11-18, 1846.

seated in the substance of the tendo Achillis, and was cured by the iodide of potassium. I have seen another tumour of this kind in the substance of the gastrocnemius, and they have been observed by M. Bouisson in many other muscles. M. Bouisson thinks they are peculiarly liable to occur in the tongue and lips. These tumours occur late in the history of a constitutional syphilitic taint, and have, in most cases, been preceded by other and more common symptoms of secondary syphilis, which renders their nature probable, if not certain. The general remedies best suited to such cases, are the iodides of mercury, potassium, sodium, and iron, with the mercurial vapour bath; locally, blisters, and frictions, with pressure: should any attempt at extirpation be made under a mistaken idea as to their true nature, it is all but certain that the wound thus produced would assume all the characters of a syphilitic ulcer.

The tendons of muscles are subject to the formation of swellings upon them, in consequence of a syphilitic taint, which closely resembles bony nodes. In such cases, the tendon first becomes stiff and painful to move, then tender on pressure; afterwards it thickens and enlarges to a considerable extent, and becomes the seat of a tender, circumscribed tumour, which more or less impedes or totally destroys, for the time, the action of the muscle to which the tendon is attached. These tendinous nodes occur late in the history of a venereal taint, and are commonly associated with or preceded by other symptoms of constitutional syphilis, which leaves little doubt as to their nature. I was consulted by a gentleman who had suffered from constitutional syphilis, in various forms, for ten months; when I first saw him, he had a large foul ulcer on the tongue, and a tumour, as large as an orange, on the tendo Achillis of the left leg. Both symptoms yielded rapidly to the combination of mercurials and the iodides of potass and iron. The dispersion of these tumours, if obstinate, would be much hastened by rest and the application of a blister.

CHAPTER XXXIII.

SYPHILITIC DISEASES OF THE PERIOSTEUM AND BONES.

(OSTITIS, PERIOSTITIS, CARIES, NOCTURNAL PAINS, ETC.)

AFFECTIONS of the periosteum and bones constitute a most important class of secondary syphilitic diseases, varying in their nature from pain in the bone simply, without apparent alteration in its structure, to complete destruction and disorganisation.

*Pains in the Bones.*¹—These pains are seated in various parts of the osseous system, principally in the bones of the head and extremities; they are generally worse when the patient is warm in bed, but at times they are present in the day also. The parts which are the seat of such pains are sometimes tender to the touch, occasionally hot, or slightly enlarged; in other instances such symptoms are not present, and the disease seems to consist in a lesion of sensibility merely. I do not think, however, that this is the case; or if it should be, the instances are very rare. In the shafts of the long bones, it is exceedingly probable, if not certain, that these pains are due to syphilitic inflammation of the medullary membranes of these bones. I have elsewhere shown this to be the case.²

These pains have been supposed by many to be due to the mercury which has been given for the cure of antecedent constitutional syphilitic symptoms. To this it may be replied, that mercury given for the cure of other diseases, not venereal, does not produce such pains; that workers in the fumes of mercury are not so affected; that such pains occur where mercury has

¹ "Douleurs ostéoscopes."

² 'On the Nature and Treatment of some Painful Affections of Bone:' Churchill, 1853.

never been given for the cure of syphilis, and, again, such pains are frequently cured by mercury.

The treatment best suited to these pains consists in the administration of the iodide or bromide of potassium, in full doses, which may be advantageously in some cases combined with colchicum and opium; if the parts be tender, or the pains fixed and not fugitive, blisters are exceedingly useful: should these all fail, mercury may be tried. This treatment should be associated with the mercurial vapour bath twice or thrice a week. I have treated two cases with complete success, with full doses of the iodide of potassium and colchicum, and the mercurial vapour bath, where the pains had never been absent for one night in one case for seven, and the other for thirteen years. I think division of the periosteum a desperate and uncertain remedy, unless there be well-marked fixed tenderness and severe pain, and all other treatment has failed, and even then it disposes to necrosis, or caries of the superficial laminæ of the bone. Where the pain appears to be seated in the medullary canal of the shaft of a long bone, as the tibia, the canal may be opened with safety and success (after the failure of the other remedies), on the plan already recommended and practised by me.¹ The iodide of potassium is the remedy, *par excellence*, generally prescribed for these pains; it relieves them doubtless, but when omitted the pains very frequently return with their usual intensity. I have known this medicine continued for years without producing a cure, whilst the pains have entirely yielded and never returned after a methodical treatment by mercurial vapour.²

¹ 'On the Nature and Treatment of some Painful Affections of the Bones.' By Langton Parker. Churchill.

² The iodide of potass, combined with ammonia and opium, gives great relief in nocturnal pains. The following form is the one I generally prescribe:

℞ Potass. iodid., ʒj—ʒiss;
 Ammon. sesquicarb., ʒj—ʒij;
 Syr. zinzib., ʒss;
 Tinct. aurantii, ʒj;
 Liq. opii sed. (Battley), ℥xx—xxx;
 Aquæ fontanæ, ad ʒviij. M.
 Cochlear. ʒj lar. bis terve die.

CASE XLIV.

Nocturnal pains for ten years; suspension of the disease by the iodide of potassium; cure by mercurial vapour.

A gentleman came from the United States to place himself under my care, for severe nocturnal pains of syphilitic origin, which had harassed him for ten years, during the whole of which time he had taken the iodide of potassium. The attacks of pain recurred about every month, and were always relieved and entirely taken away by the iodide of potass; but after this remedy had been discontinued for a week, they always returned. I placed him under the use of mercurial vapour three or four times a week, and administered at bed-time half a grain of the iodide of mercury, with one of opium, each night. This treatment was continued for about six weeks, when the patient left me. Writing to me nearly a year afterwards, he says, "You may remember that it was in November last I first applied to you for advice, and that I was then suffering from one of my painful attacks, which have generally come on once a month for the last ten years. Since the treatment I went through with you, I have no return of these attacks, and have never had any nocturnal pain whatever."¹

CASE XLV.²

Severe pains in the leg; failure of all ordinary treatment; cure by operation.

E. C— entered the Queen's Hospital, under my care, in August, 1851, with various secondary syphilitic symptoms. Her chief complaint was of severe nocturnal pains in the tibia of the right leg, which was somewhat enlarged, and tender to the touch; the pain in the bone was so severe as to prevent rest altogether. She took the iodide of potassium, and the biniodide of mercury,

¹ "The iodide of potassium palliates these pains more frequently than it cures them without relapse; but, to compensate for this, the relapse, though it be frequent, never fails to obey the remedy."—M. Diday of Lyons, 'Dublin Journal,' May, 1854, p. 487.

² This case is given at length (with remarks) in my work already alluded to, 'On some Painful Affections of Bone,' p. 15.

with little or no benefit; blisters afforded, at first, a temporary alleviation from pain for a few days, but at length ceased to afford even a slight relief. The patient suffered so much, that she repeatedly begged of me to amputate her leg. The case was one of secondary syphilitic inflammation, affecting the medullary membrane of the shaft of the tibia, which, in a minor degree of intensity, is, in my opinion, a very frequent cause of pains in the long bones. I determined to trephine the bone, to open the medullary canal, and let the blood flow from the divided vessels of the bone and medullary membrane. This was done, whilst the patient was under the influence of chloroform, on Sept. 21. I opened the medullary cavity with a long crowned trephine. On removing the bone, the medullary membrane, turgid with black blood, which ran from it in a stream, protruded through the opening; the perforation was filled with a piece of soft lint dipped in oil. No medicine was given.

On the 24th, the pain was no longer felt; the opening closing rapidly with new bone.

On Nov. 7th, I removed a second piece of bone, which was carious, with the trephine; and in doing so, I penetrated the medullary canal a second time. Not the slightest constitutional disturbance followed either operation. The patient left the hospital well on Dec. 10th.

The bones are generally, but not always, amongst the last organs to be affected by the venereal poison: hence Hunter places them amongst the second order of parts affected in constitutional syphilis; and Ricord ranks them amongst his tertiary symptoms, in which, says he, the syphilitic virus is completely transformed. Exposure to cold whilst suffering from other forms of syphilis, or when using, or after having used, mercury, are considered by many writers as the chief causes of these forms of disease of the bones. These diseases are also much less frequent in hot countries than cold, and in those places where a systematic simple treatment without mercury is followed. They are said to be rare in Sweden, Denmark, Hamburgh, and Vienna, where such treatment is adopted. On the other hand, such diseases of the bones are unknown, except syphilis have existed in the constitution; though they are more frequent,

perhaps, when mercury has been given for its cure, if the patient be of bad habit of body, and exposed to cold during its administration.

Nodes, as they are commonly termed, result from an effusion or deposit between the periosteum and bone, the result of inflammation affecting one or both of these parts. Very commonly they are dependent upon a superficial inflammation of the bone itself. These effusions between the periosteum and bone may consist of serum, pus, or lymph. Again, nodes are produced by an effusion of a proper osseous matter, similar to the provisional callus first thrown out in cases of recent fracture. Some nodes, very likely, are thus formed, since they present the feeling of a true enlargement of the bone itself. This is, most probably, the first effect of the inflammation of the surface of the bone, and the effusion of pus and serum are subsequent, supposing the inflammation to proceed unchecked by remedies.

Nodes may be situated on the sternum, the clavicle, the tibia and fibula, the radius and ulna, and on the bones of the head. Nodes are common on the external surface of the sternum; they have also been described as existing on its inner surface, where the pressure of the node on the organs within the chest has produced severe and alarming symptoms. A presumed case of this kind, coexisting with nodes on the head and on the external portion of the sternum, has been detailed by Dr. Owen Daly, in the 'Dublin Hospital Gazette' for March 15, 1857. The symptoms of intra-thoracic pressure disappeared with the node on the head and external surface of the sternum under the use of blue pill and iodide of potassium. Again, effusions within the cranium, or thickening of the membranes of the brain, frequently accompany external cranial nodes.

A gentleman under my care, who had suffered from nodes on the head for some time, which always disappeared under the iodide of potass, but constantly recurred after its omission for a short time, was suddenly seized with giddiness; and this giddiness appeared at the same time with two large nodes, one on the parietal, one on the frontal bone. A blister was applied to the nape of the neck, and calomel and opium with the iodide of potass given. As the nodes disappeared, the giddiness became less, and at length totally disappeared. With the exception of

the giddiness, the patient was quite well; no fever or acceleration of pulse, appetite good, bowels regular. I believe that in this case effusion within the cranium, probably between the dura mater and the bone, corresponded with the appearance of the external nodes. In reference to this point, Virchow says (op. cit., page 50), "I have always found corresponding with syphilitic bony diseases of the external surface of the cranium pathological changes, modifications more or less important, on the internal or free surface of the dura mater, of a fibrinous or hæmorrhagic character." Some illustrative cases bearing on this subject are related by Dr. Todd, in his 'Clinical Lectures on Diseases of the Brain,' Lecture xvii.

CASE XLVI.

Node of the right temporal fossa; two attacks of hemiplegia; cure by blisters, calomel and opium, with the iodide of potass.

A gentleman was brought to me by a surgeon; the former having had secondary syphilis in a variety of forms, lepra, papulæ, tubercles of the skin, and iritis. When I first saw him he had intense pain in the head, especially in the right temple, where there existed a large node filling up the right temporal fossa. He had suffered from two attacks of hemiplegia: first one side was affected, and then the other. He was even then partially paralytic. There could be no doubt of the syphilitic nature of this disease of the brain. I recommended blisters, calomel and opium, with the iodide of potass; under this treatment the patient improved much, but after a long period some slight paralytic symptoms still remained.

There is another situation in which nodes form. I will not say they are common there, but I have seen certainly as many as eight or nine cases of nodes in this situation, and I am not aware that they have as yet been particularly described. I mean on the roof of the mouth. On this part nodes sometimes form, and although they are unimportant from their size, their terminations and consequences are occasionally exceedingly serious and important. Patients suffering from constitutional syphilis, either having other symptoms of the disease present or having

recently suffered from them, sometimes complain of pain at the roof of the mouth; on examining more particularly we find a little red swelling, tender to the touch. If the disease goes on unchecked this swelling gets large and breaks, and gives issue to a small quantity of pus. If a probe is passed into the orifice it detects a rough surface; this is a portion of denuded bone, of bone deprived of its periosteum; and in such cases the disease continues till a small portion of bone has exfoliated and come away. In bad cases a hole is formed, which goes all through to the cavities of the nose, and I believe the disease commences there; for previous to the discovery of the node on the roof of the mouth these patients have suffered from discharges of pus and blood from the nose for some time. Every means should be resorted to to prevent the node suppurating and breaking; should it do so we have a long-continued affection to combat. In the event of it being merely an exfoliation of a thin lamina of bone, the process of separation is slow and tedious, and if the bone be completely eaten through into the nasal fossa it becomes still more tedious, and in most cases requires some artificial means to restore the integrity of the hard palate. The best mode of treatment consists in the administration of large doses of the iodide of potass, from ten to fifteen grains, calomel frictions on the gums or frictions under the armpits, with the mercurial vapour bath. The mixture of the biniodide of mercury with the iodide of potass also answers very well. I have seen it most beneficial in these cases. If obstinate, the node might be carefully blistered by means of the acetum lyttæ, or the iodine liniment, carefully applied with a camel-hair pencil.

Nodes may terminate in a great variety of ways. First, by resolution, *i. e.* by the subsidence of the inflammation of the bone and periosteum which produced them, and the absorption of the fluids or matter effused. In other instances, after the node has disappeared, the surface of the bone remains uneven, depressions exist in it, as though a portion of the bone had been eaten away, which is the case. This either arises from the pressure exercised by the effusion of the fluid between the periosteum and bone having produced absorption, or from the bone having become softened and carious from inflammation of

the bony tissue itself. If the node has suppurated, and has either burst of itself or been punctured by a lancet, and the surface of the bone has been exposed, caries commonly follows to some extent, and the soft parts run into ulcers exceedingly difficult and sometimes impossible to heal. Ulcers of this kind, to which every variety of application has been used, at times get nearly well, and then suddenly begin to ulcerate again, having thickened edges, not unlike a primary venereal sore on other parts. In some instances, where osseous matter has been thrown out between the periosteum and bones, such effusion remains permanent; the inflammation accompanying, or dependent upon such state, subsides under proper treatment, but the deposit of osseous matter remains permanent, and produces one form of exostosis.

It is possible that venereal diseases of the bones and periosteum, but more particularly inflammation of the latter, causing effusion between it and the bone, may be mistaken for or confounded with periostitis arising from other causes, and more particularly where these are of rheumatic origin and character. In drawing a differential diagnosis between cases of rheumatic periostitis and venereal periostitis, we shall be guided by the history of the case, and the preceding occurrence of some of those forms of constitutional syphilis which belong to secondary symptoms.

I am not aware either that periostitis, arising from causes not venereal, is complicated or succeeded by those diseases of the bones ending in caries, which we so commonly notice in the disease when it has a venereal origin. I do not think that the symptoms immediately preceding the development of nodes would enable us to form a very certain diagnosis of the nature of the affection; they are both preceded, for some time before the appearance of nodes, by nocturnal pains. The seat of the pains may in some measure guide us. In the rheumatic forms of disease, the pains are situated in the joints or fleshy parts, as the shoulders; in those of venereal origin, the pains are more in the shafts of the long bones, particularly of the radius ulna, tibia, fibula, and in the bones of the head; in the rheumatic forms they sometimes, but rarely, affect the parts I have mentioned.

The prognosis in venereal diseases of the bones and periosteum is not always favorable. If the health of the patient be unbroken by previous courses of mercury, incautiously administered, we may hold out hope of recovery with some degree of certainty; but if the constitution has been impaired by poverty, debauchery, bad living, mercury, and syphilis, all contributing their part to the destruction of the patient, we have a disease to contend with which will sometimes baffle all our treatment, however skilfully it may be framed, and however unweariedly it may be followed out both by practitioner and patient. At any rate, no rash promises must be made as to certain and speedy amendment, since relapses after partial restoration are so frequent.

The treatment of syphilitic diseases of the bones and periosteum must be both constitutional and local. By the former we endeavour to correct the poisoned condition of the system from which the local disease had its origin, and upon which it depends. By the latter we endeavour to remove the local effects which such a condition of the system generally has produced.

Most of the earlier modern writers on syphilis, from Hunter downwards, recommend full mercurial courses for the cure of syphilitic diseases of the bones and periosteum, such as those I have described. Amongst the more prominent of these writers, I may mention Hunter, Bell, and Swediaur. The latter says, "All syphilitic complaints of the bones require a complete mercurial course, continued longer than for the affections of the soft parts; for it is sometimes necessary to continue the use of mercury for three or four months, in order to obtain a radical cure." Bell says (p. 239, vol. ii), "In every affection of the periosteum and bones arising from the syphilitic virus, mercury should be given immediately, for it is upon this remedy that we chiefly depend." The same opinions will be found reiterated by all modern writers, from Hunter downwards, till the therapeutic effects of the hydriodate of potass attracted attention in certain forms of constitutional syphilis. We find Sir A. Cooper inculcating the same line of practice. Modern surgeons now generally treat consecutive venereal diseases of bones with the preparation of iodine instead of mercury; in fact, it has almost become a therapeutic axiom that the iodide of potassium is the

remedy in such cases. To a certain extent this is true. I have, however, been constantly disappointed with the effects of the iodide of potass; cures do take place by the use of the iodide alone in some cases, but these cures are only obtained after long periods and after a series of relapses. I have already mentioned cases of this kind in which the iodide has been taken for years without effecting a cure, when with the addition of small doses of calomel and opium, or the mercurial vapour bath, the disease has permanently yielded after two or three months' treatment. I do not banish the iodide from the treatment of such cases; I recommend the other remedies in addition, when frequent relapses after the use of this remedy take place. "What has been already said by M. Diday on the use of the iodide of potass in osteoscopic pains is also applicable to periostitis, nodes, exostoses, &c., in which I every day see that the iodide of potass exercises but a moderate effect; if we depend on it alone, a cure only takes place after relapses, and is but rarely obtained as decidedly as though mercurials had been used. From the frequent occurrence of such instances at the Hospital of St. Ursula, we have been led to the following therapeutic axiom: That the iodide of potass is the best substitute for mercury, but that the latter is the anti-syphilitic remedy *par excellence*, and that it increases the beneficial effect of the iodide of potass if mercury have been administered before it."—Gamberini "On the Truces of Syphilis," from 'Dublin Journal,' May, 1854.

Almost all the varieties of venereal nodes are, on their first appearance, tender to the touch; the first effect of the hydriodate is a diminution of this tenderness, then diminution of the node itself, which, in many cases, gradually and entirely disappears under the use of this salt. If, after the continued use either of this medicine or mercury for a reasonable length of time, the node have diminished to a certain point, and then remains hard and stationary, without tenderness, we are to look upon this as effused osseous matter, constituting a true exostosis, which is hardly likely to be removed by a further continuance of medicine, although its dispersion is very frequently obtained at this period by local treatment.

The local treatment of venereal diseases of the bones and

periosteum is also of great importance. As many of them are ushered in with symptoms of inflammation more or less acute, an antiphlogistic local treatment, suited to the degree of inflammation present, should be adopted; several relays of leeches should be placed over the node till all tenderness shall have disappeared; these are to be succeeded by blisters, which should be dressed with the stronger mercurial ointment. The continued application of blisters, even after all constitutional treatment appears to have lost its effect, will often succeed in reducing very considerably the size of a venereal node. Many other remedies may be used, with the view of dispersing a node when perfectly chronic, *i. e.* when all symptoms of inflammation have disappeared; amongst these may be mentioned frictions with mercurial ointment and camphor, the hydriodate of potass ointment, the application of the tincture of iodine, or the solution of iodine in the hydriodate of potass, so generally used, and with such signal success; pressure and strapping with the emp. ammoniaci cum hydrargyro, which I have so usefully employed in the same way in affections of the testes which succeed to gonorrhœa. A question of great practical importance remains to be here considered, in reference to the treatment of collections of fluid which succeed to or accompany venereal ostitis and periostitis. If fluctuation be evident in a tumour of this kind, and no redness or thinness of the integument have taken place, I do not think any author imprudent enough to recommend the opening of such an abscess, with a view of discharging its contents: should this be done, we are very likely to produce caries and exfoliation of the bone beneath, the extent and consequence of which it is impossible to foresee. Sir A. Cooper mentions the case of a person who died in consequence of exfoliation produced by the opening of nodes on both his tibiæ. In these cases we are on no account to lay open these collections of fluid, but by a perseverance in the constitutional method of treatment, and the repeated application of blisters, to endeavour to procure absorption of the fluid effused. Where the existence of pus is rendered still more certain by the redness and shining appearance and thinning of the integument covering the tumour, I cannot follow the advice of Sir A. Cooper, "to make an incision down to the bone." I would rather press

the importance of the advice given by Mr. Colles in reference to this point. "Some," says Mr. Colles, "have proposed the early opening of the tumour, and the evacuation of all the contained fluid. To this proposal I would object, that in some cases this particular practice is followed by painful suppuration, and by very copious discharges, and not unfrequently by caries and tedious exfoliation of the bone. It seems preferable in all cases to try the local and constitutional effects of mercury and iodine, and by means of these to endeavour to avert suppuration and ulceration. This rule should be most strictly adhered to in the case of nodes on the forehead, or on any exposed part of the body; for when a node has been of long standing, we often find that a sort of chronic suppuration is established; the integuments become thin and sometimes red; at other times they are reduced to the utmost degree of thinness, and yet may retain their natural colour, so that a surgeon is actually tempted to give vent to the fluid by the puncture of a lancet. Yet if he will but resist the temptation which the very thin state of the skin offers to him to open it, and will still apply repeated blisters, he will have no reason to lament his forbearance; for as soon as the mercury or hydriodate of potass comes to act favorably on the system, he will perceive that the fluid begins to be absorbed, and that this process will finally be terminated by the adhesion of the skin to the surface of the bone. From the depressed position of the skin after adhesion has taken place, and the sunken unequal surface which the bone presents to the touch, we are convinced that an absorption of the bone has gone on to some depth."¹

In such cases, it might be well, if much distension present, not to lay the abscess open with a lancet, but to puncture with a very fine trocar. This mode of practice will relieve the distension, and give time for other treatment to be brought to bear; at the same time the puncture will be so small that no air can possibly be admitted, the surface of the bone will not be exposed, and the risk of caries and exfoliation will certainly not be increased.

¹ Colles, p. 187.

Note added 1870.—Epilepsy, paralysis, loss of sensation, and affections of the special senses, such as deafness, &c., are produced occasionally by syphilitic diseases of the bones of the head, the disease ultimately extending from them to the brain and its membranes. Such affections have been occasionally cured by removing the diseased portions of the bone by the trephine, after the failure of other remedies. See some cases detailed by Mr. H. Lee, 'Lancet,' November 24th, 1860, p. 502. Occasionally, however, symptoms resembling epilepsy occur in patients who are labouring under a constitutional syphilitic taint, where no disease of the bones of the head can be detected.

Mr. B—, a butcher, previously healthy, had been under my care for a scaly eruption, which was very obstinate and very difficult to cure. He was seized one morning with twitching of the muscles and foaming at the mouth, and was totally unconscious of the attack. He had another attack in the evening and a third the day but one after. They left behind them weight in the head, with pain and giddiness; but he recovered under antisiphilitic treatment. See Lagneau, 'Maladies Syphilitiques du Système Nerveux.'

CHAPTER XXXIV.

ON SYPHILITIC DISEASES OF THE LUNGS.—SYPHILITIC
PHTHISIS.—CHLOROSIS.—CACHEXIA.

THERE can be no doubt that a profound alteration in all the humours and solids of the body takes place in many constitutions in the latter stages of constitutional syphilis: at such periods the body wastes, the appetite is lost, the patients assume a white cadaverous appearance, the strength diminishes, and night-sweats, diarrhœa, and cough set in. If this state continue, uninfluenced by treatment, a fatal termination may take place, of which I have seen some instances.

To this array of symptoms, the term "Syphilitic Phthisis" has been given. The name also of "Syphilitic Chlorosis" has been applied to similar constitutional states due to the same cause. The older writers, particularly Portal, Bell, Lagneau, and others, believed in the existence of a true venereal phthisis. That patients may die of wasting of the body, with cough, and night-sweats, and even spitting of blood, as a consequence of prolonged syphilis, is quite certain; but whether a true "tuberculosis" is ever produced, or even developed by syphilis, is a matter of great doubt. Hunter says, "This disease seldom or ever interferes with other disorders, or runs into or terminates in any other, although it has been very much accused of doing so." The cases recorded by authors of the cure of syphilitic phthisis by courses of mercury, and other modes of anti-venereal treatment, were clearly not cases of "tuberculosis;" for the treatment which is said to have been successful in such states, is clearly the last which would be applicable or beneficial in tuberculosis.¹

¹ The syphilitic virus is probably never converted into tubercle. Mr. Ancel ('On Tuberculosis,' p. 391) says, "the only point of view in which

The assemblage of symptoms I have mentioned as constituting what has been termed "syphilitic phthisis," are due to the existence of a syphilitic taint in the system, more particularly affecting the blood and humours of the body, and are not commonly met with apart from some other local and unequivocal symptoms (either present or immediately preceding) of syphilis, such as old secondary ulcers, diseases of the bones, throat, or larynx. It frequently happens that the local disease, or previous history of the patient, is not sufficient to account for the profound cachexia under which the patient labours. Manifestations of constitutional syphilis are frequently met with of a very formidable character, and of long standing, where the general health or constitution of the patient has suffered very little; in other instances, this chlorotic condition is very quickly induced, and appears to arise from a more direct action of the syphilitic poison upon the blood itself; hence the pallid countenance, the thin, weak, frequent pulse, and the muscular weakness.

It will be seen that this state of constitution sometimes comes on very quickly, and therefore is not, in all instances, due to the time a syphilitic taint has been in existence, but to a more immediate action of the poison on the blood, instead of on the skin, bones, or other parts.

If cough or diarrhœa be present, the condition of the patient resembles very much one of phthisis; but auscultation must soon clear up any doubt as to the condition of the lungs themselves.

If such a state of constitution be due to the poison of syphilis alone, it is quite clear that those remedies which will neutralize or eradicate the poison, are the only ones from which

the doctrine can be held is the absolute transmutation of the syphilitic poison into the tuberculous element of disease."

"There is no fact or experiment which conclusively proves that a single case of tuberculosis was ever produced by syphilis alone. . . . At the same time, syphilis, by its deleterious effects on the constitution of the parent, may probably weaken the reproductive faculty, and lead to the conception of children who, from poverty of blood and debility of organization, are predisposed to tuberculosis." (Op. cit., pp. 391, 392.)

the patient is likely to derive permanent benefit, to whatever state of weakness he may be reduced; and experience bears out the fact of the failure of all remedies except those I have mentioned. I have frequently known patients put on courses of cod-liver oil, and removed to the sea-side, and to other climates, without the slightest benefit; when they have recovered completely and rapidly on being submitted to a methodical and properly framed anti-syphilitic treatment, more particularly one by the moist mercurial vapour.

There are, however, some forms of constitutional syphilis which resemble very closely consumptive diseases from other causes; and these are syphilitic ulcerations of the windpipe.

CASE XLVII.

Syphilitic disease of the windpipe; cure by mercurial fume locally applied.

A middle-aged female was admitted into the Queen's Hospital, under my care, in June, 1848. She had three years before been treated, as an out-patient, for primary venereal sores, and in the interval had had ulceration of the throat, and some pustules upon the skin, which I did not see. When admitted, she was much emaciated, had profuse night perspirations; expectorated large quantities of purulent matter streaked with blood, had completely lost her voice, and the larynx was enlarged, tender, and painful. I drew the tongue forwards, and passed into the larynx a bent piece of whalebone, armed with sponge, which was soaked in a solution of nitrate of silver, and directed the vapour of one grain of calomel to be inhaled every morning. The gums were made sore after the fourth application, and the remedy was used less frequently. No alteration was made in the treatment, and at the end of six weeks she was discharged in tolerable health, having recovered her voice, though it remained hoarse, and having lost entirely the night-sweats, the cough, and the expectoration.

There could be no doubt as to the nature of this case; it was one of syphilitic ulceration of the larynx: but if the previous history of the patient had been unknown or mis-

stated, there must have been great difficulty in discriminating between such a disease and one of ordinary laryngeal phthisis.

Drs. Stokes, Graves, and Munk have spoken of syphilitic diseases of the lungs; but I have seen no facts recorded which prove the production of a true tuberculosis by syphilis. I have seen no case of the syphilitic tubercle developed and softened in the lungs, and cannot suppose that such cases can be frequent, since amongst the great number of syphilitic patients daily treated at the Queen's Hospital, where every case in my practice is carefully recorded, none have been met with. Should such cases occur, I know of nothing that would enable us to distinguish them from cases of ordinary tuberculosis, except the previous history, and concomitant state of the patient; since, apart from such considerations, both the rational and physical symptoms of tuberculosis and syphilitic tubercle would most closely resemble each other.

The remedies best suited to the forms of disease I am considering, are the iodide of potassium, iron, the extract of opium, the cold infusion of sarsaparilla in lime-water, sarsaparilla broth, the moist mercurial fume, and residence in a fresh, pure, dry atmosphere.¹

¹ I must here refer the reader to the ninth chapter of Virchow's work, already quoted, 'On Syphilitic Diseases of the Lungs.' I have already recorded several cases of syphilitic disease of the windpipe, about the nature of which there could be no doubt; but there is no certain sign by which we are enabled to pronounce a disease of the lung syphilitic. Whilst admitting this, Virchow says that "he is more than ever inclined to believe in the existence of 'pulmonary syphilis.'"

CHAPTER XXXV.

ON SYPHILIS AND ITS TREATMENT IN INFANTS, PREGNANT WOMEN, AND NURSES.

THE subject of infantile syphilis is one of grave interest and importance, bearing, as it naturally does, not only on the health and life of the individual concerned, but involving many delicate and serious questions which relate to the mode in which, or from whom, the disease has originated or has been produced. An infant who exhibits symptoms of a syphilitic taint sooner or later after birth derives this from one parent or from both; and hence it becomes a matter of the first importance to determine whence this has proceeded, as it is evident that unless the latent taint be eradicated from the diseased parent, diseased offspring, or the premature birth of a dead child, will, in the event of succeeding pregnancies, probably take place. In examining this most important question, I shall confine myself chiefly to the consideration of facts which I have myself observed, corroborating my opinions by references to well-authenticated cases, selected from authors who have themselves carefully observed, and whose opportunities and talents for observation are well known.

INFLUENCE OF THE FATHER.

I shall first consider the influence of a diseased father in the production of a diseased infant, the mother never having been diseased. I will suppose that the father, at some indefinite period before his marriage, has suffered from well-marked constitutional syphilis, but that for some time previous to that event he has exhibited no signs of disease. He marries a healthy woman, and she gives birth to an infant, which sooner or later after birth—*i. e.*, in the course of the first month or so—shows

symptoms of a syphilitic taint. Let me illustrate this by the detail of a few cases.

CASE XLVIII.

In August, 1852, I treated a patient for a well-marked attack of syphilitic lepra. The symptoms disappeared under the treatment, which was not very protracted, nor was it very regularly followed. In 1854 this patient married a healthy-looking young woman, who in 1855 was prematurely delivered of a dead child. In 1856 she was delivered, at her full time, of an infant, which appeared well and hearty for three weeks. It then began to "snuffle," then had puckering of and a dry eruption about the mouth, and two large vesicles, resembling pemphigus, on the thigh and on the side. The child was treated by mercurial inunction on flannel bandages round the knees, and cured. In this case the father remains without symptoms of syphilis for more than three years, yet the disease breaks out in his offspring. Mark what takes place on the part of the mother in the meantime: a premature birth of a dead infant, and a diseased living child cured by mercurial inunction. The father during this interval has had no symptom of syphilis; the mother never had any in her life; the ova suffer, and doubtless by impregnation with diseased semen.

In this instance, it must be observed, the mother escapes contamination; she contracts no disease, either from a diseased husband or a diseased foetus. This, is, however, not always the case. I adduce this case, of common occurrence, as the type of a class which is frequently met with in practice. There are others, which I shall presently mention, where, during pregnancy, or immediately after delivery, syphilis appears in the mother, without any primary disease ever having existed.

CASE XLIX.

A. B— was treated by me in the Queen's Hospital for a pustular syphilitic disease of the skin, of a very formidable character. The symptoms disappeared under the treatment employed. Whilst he was in the hospital, his wife brought her

infant to me, covered with scaly blotches. The child was plump and apparently healthy when born, but a few weeks afterwards the patches broke out and the health began to decline. The mother had no symptom of disease; her breasts, as well as the infant's mouth, were free from ulceration. She was extremely anxious to be examined, fearing she might be labouring under some disease of the parts themselves. I instituted the most careful examination with the speculum, not only once, but four or five times, and could never discover the least local disease. The child in this instance was alone treated and cured. I purposely abstained from treating the mother, whom I watched for nearly two years. She has never suffered from syphilis in any form.

Many cases have been selected by M. Diday¹ from different authors, which are very similar to those I have just related. They tend generally to show that a father having symptoms of constitutional syphilis at the time of marriage, or at periods more or less remote before it, may procreate a diseased infant, and that the mother may never exhibit any symptoms of disease: "*Les mères étaient saines, rien ne faisant présumer qu'elles eussent été infectées.*"—P. 22.

The explanation of these cases appears to be, that the ovule is impregnated with diseased semen, and its product is consequently diseased. By referring to Dr. Tyler Smith's sixth lecture in the '*Lancet*' for Feb. 9th, 1856, it will be readily understood how this takes place. It is very common to see symptoms of constitutional syphilis appear many years after the healing and supposed cure of the primary disease, and on the same principle must be explained the procreation of diseased offspring by men who have exhibited no outward mark of syphilis for long periods.

M. Diday puts the question: Will a man who has had syphilis, but exempt at the time of marriage from all symptoms of disease, procreate a syphilitic infant? No positive answer can be given to this; neither can any answer that will apply to all cases. He may do so, but not necessarily. In some cases

¹ '*Traité de la Syphilis des Nouveaux-nés, &c. Par P. Diday.*' Paris, 1854.

where the outbreak has been very violent not long before marriage, a healthy child is sometimes born ; but this is not always so, as the details of Case XLIX sufficiently show.¹

CASE L.

A. B—, the father of four healthy children, unfortunately contracted chancre, which was followed by a most formidable attack of syphilitic lepra, and a sore throat. I saw this case soon after the constitutional symptoms manifested themselves, and attended to it throughout. The patient was treated by mercurial vapour for three months. After a lapse of two months, he was treated again by the same remedy for two months more. I then believed him well, and consented that he should resume intercourse with his wife. He did so. Since that period three healthy children have been born at their full time. Neither wife nor children have ever had symptoms of disease.

If we compare Cases XLIX and L, it will be observed that they are very similar in their history. Both had formidable attacks of constitutional syphilis, yet one begets a diseased child, and the other a healthy one. This is to be explained, doubtless, by the fact that one patient was submitted to a prolonged and energetic treatment ; whilst the other had been submitted to no treatment before his wife conceived, or to one badly framed and irregularly carried out.

The history of Case L shows that constitutional syphilis may, by proper treatment, be perfectly and really cured—a fact doubted by many authors of established reputation.

M. Ricord has been made to say, that when one patient only has been diseased, the other transmits to the infant the immunity which such parent enjoys.² M. Diday also states, that the cases which he has detailed in reference to the point in question establish, without contradiction, the law that an individual who

¹ In reference to this point, I know the case of a gentleman, who has exhibited unequivocal symptoms of constitutional syphilis for nine years ; he has been married five, and his wife given birth to three healthy children, which, as yet, continue in perfect health. They have never shown the least symptom of syphilis.

² M. Prieur, *Thèse*, 1851, p. 28, quoted from Diday.

has suffered from constitutional syphilis may procreate a healthy child, if such influence (*i. e.*, the morbid tendency of syphilitic taint) is corrected during the act of impregnation by that of a healthy individual—*i. e.* of one exempt from any syphilitic diathesis.¹

Both these theories, for as such they must be looked upon, are most unsatisfactory, and explain nothing; they are of no service in practice, and cannot be referred to in any way as a basis or guide upon which to form an opinion. The facts which clinical experience teaches are these: that any father who has been once affected with constitutional syphilis, although he may have been for some time free from any outward marks of the disease, may, in cohabiting with a healthy female, procreate or beget a diseased child; but the chances are in favour of the infant escaping if the outbreak of disease have been very violent—*i. e.*, if the skin have been loaded with eruption, or the patient have followed a prolonged and energetic treatment, one ingredient of which consists in profuse and periodical sweating.

In all the cases which I have detailed, it will be noticed that the mother has escaped; there has been no syphilis communicated to her; but there is another class of cases in which the mother does not retain this immunity. At a variable period after conception she exhibits well-marked symptoms of syphilis, both in the genitals and in other parts of the body. I will mention a case which I observed and treated that puts this beyond a doubt, where no primary disease existed in the husband at the period of marriage, but where the symptoms of constitutional syphilis were manifest in the wife soon after the commencement of pregnancy.

CASE LI.

C. K— married a healthy lady, having had no symptom of syphilis of any kind for a year previous to his marriage. Shortly after marriage his wife became pregnant, and the husband again suffered from copper-coloured blotches on the skin; he had ulcers in the throat, and lost his hair and eyebrows. The wife was prematurely delivered in the fifth month of her pregnancy

¹ Diday, *op. cit.*, p. 55.

of a dead child. She had about this time copper-coloured blotches like her husband, a sore throat, and lost her hair and eyebrows. In this case, and I dwell especially on the fact, no sexual mischief existed. The wife was carefully examined: she had never suffered from ulceration or discharge of any kind; the vagina and mouth and neck of the uterus appeared totally free from disease.

The organs of generation do not always escape; they are, indeed, very commonly affected, but with symptoms very different from those of a primary disease. Again, a proof that the mother derives the disease in such cases from her foetus is to be found in the fact that the symptoms of syphilis, as far as the mother is concerned, very frequently disappear after abortion or delivery, even without treatment; and should she become pregnant again by a man who has never been diseased, she brings forth healthy children. A very remarkable case in support of this view, of the contamination of the mother by means of the foetus in utero, is given by Dr. Balfour.¹

CASE LII.

“A respectable young woman, from the north, was married to a tradesman, who had no trace of syphilitic disease at the time of marriage; but he afterwards acknowledged that, two years before, he had disease, followed by slight secondary symptoms, which had entirely disappeared under medical treatment, and he had seen or felt nothing since. This woman complained of nothing until about three months after she became pregnant; then, however, symptoms of secondary syphilis became apparent; spots of psoriasis appeared on various parts of the body; hard knots were felt in the perinæum and on the external labia, and within the vagina was hard, knotty feeling all over the mucous surface. Her child exhibited a distinctly syphilitic appearance, which was removed by treatment. Shortly after delivery, all symptoms of syphilis entirely disappeared, and as she shortly afterwards went into the country, she was subjected to no medical treatment. A few months afterwards her husband died.

¹ ‘Edinburgh Medical Journal.’

She subsequently married a farmer. About six or eight months since I saw her, and she has borne three children to her second husband, and certainly more healthy children could not be seen. She informed Dr. Balfour she had never been under medical treatment since he attended her, and had had no medical man near her, except at the period of her confinements; she at the same time stated that she had never suffered, during any of her pregnancies, from anything like what she had done during the first one."

The two last-quoted cases prove very strongly the position, that a mother, healthy at the time of marriage, and becoming pregnant by a man with latent constitutional syphilis, becomes herself diseased through the medium of the fœtus. Hence, Dr. Montgomery has said, "A woman so married to a man who has latent constitutional syphilis, by which she is infected, will show no symptom of the contamination until she conceives or perhaps miscarries, and then the taint is manifested by the development of secondary symptoms in the course of a few weeks, as if the infection was at first communicated and confined to the product of the ovary, and the general system became thence contaminated."

This is, doubtless, the true explanation of the matter, and one which, I think, must be generally admitted. Mr. Jonathan Hutchinson laid before the Hunterian Society, in October, 1856, a table of fifty cases in which he believed the mother to have been thus contaminated. In a correspondence with me on the subject of this communication, Mr. Hutchinson says, "In the discussion yesterday evening Drs. Oldham and Lever both expressed themselves as very positive as to the not infrequent occurrence of the transmission, by men at the time in apparently perfect health, of constitutional syphilis to their wives. They hold, in common with many others, that the contagion is effected by the seminal fluid, and not by the fœtus, and maintain that they have met with women who have so received the disease without ever having conceived. In an inquiry which has extended over many years, Mr. Hutchinson states that he has met with but one instance of this, and here believes that an abortion at an early period had been overlooked. Mr. Hutchin-

son also states that Mr. Paget had been equally unsuccessful in finding a case in which constitutional syphilis had been contracted by a woman without either primary syphilis or pregnancy having preceded it.

The opinions of the late Mr. Colles on this subject are well known;¹ and Professor Porter, of Dublin, has lately² detailed several cases which seem to prove that syphilis may be communicated by the husband, apparently free from the symptoms of syphilis, to the wife, without the intervention of pregnancy or primary disease; these opinions agree with those of Drs. Oldham, Lever, and others just alluded to. I mention one case that I personally observed and treated, about which there can be little doubt.

CASE LIII.

In January, 1853, J. K.— consulted me for secondary syphilis, characterised by a scaly eruption, and sores; where the crusts and scales had fallen off, large, foul ulcers had succeeded; he had also a sore throat, and ulcers on the soft palate, and red, indurated spots on the centre of the tongue. Six months previous to the commencement of these symptoms, the patient had suffered from primary sores.

In May, J. K.— married, no symptom of syphilis being then evident. In September his wife came to me; she had then hard, solid lumps on the labia, thickening of the labia majora and minora, which were red, and internally covered with a white adhesive mucus; the irritation was intense. On the skin of the thighs there were a number of circular, red spots; and copper-coloured, scaly blotches existed in various parts of the body. She had never been pregnant.

INFLUENCE OF THE MOTHER.

In the cases just recorded, I have endeavoured to illustrate the influence of a diseased father upon his offspring, the mother remaining healthy. In some instances I am about to bring forward, I shall show that there are certain circumstances under

¹ 'On the Venereal Disease,' chap. xiii.

² 'Dublin Quarterly Journal,' May, 1857.

which the mother may be the source of the disease, the father remaining healthy, never having been diseased.

The mother may be the source of disease to her fœtus, or infant, in four ways :

1. She may be diseased before conception.
2. She may become diseased after she has conceived.
3. She may disease her infant in its passage through the vagina or external parts ; a source of infection formerly supposed to be very common, but in reality very rare.
4. She may disease it after birth.

The first mode of infection has been commonly called hereditary, the second congenital, and the two last acquired. It is not always easy, or even possible, to point out the separate or distinct influence of each parent in the production of a diseased child ; but the cases I have adduced in reference to the father, I think, must be convincing, and I am about to detail two others, which, on the part of the mother, will in all probability be found equally so.

CASE LIV.

A. C—, a very healthy woman, married to a healthy man, a tradesman, gave birth to four healthy children during the first seven years of her marriage, all now living. Whilst nursing her fifth child, she had occasion to send for a woman to draw her breasts. Soon after this, she perceived ulcers about the nipples ; to these succeeded copper-coloured blotches, spread pretty extensively over the body, and a sore throat : the child she was nursing dwindled away and died. The next three children were born dead ; two others soon after birth had eruptions on the skin, and wasted away and died. The disease on the part of the mother was not suspected, nor was she, during the time I have mentioned, treated. Her husband during all this time remained in the best health. After the death of the fifth child, she consulted me about ulcers on the legs, which were due to the detachment of the crusts covering some of the blotches I have just mentioned. I examined her carefully. She was then suffering from a distinctly and well-marked syphilitic lepra, the symptoms of which disappeared under a treatment by mercurial vapour. In this case, the separate

influence of the mother is well shown. We observe a healthy father, a healthy mother, four healthy children; then the breast diseased by a suck pap followed by an eruption of marked character, a sore throat, and the child then sucking, wasting, and dying; and subsequently three children born dead, and two dying of wasting of the body, preceded by eruptions on the skin; all this time the father having no symptom of disease. A similar series of phenomena might follow if a diseased child were placed with a healthy wet-nurse. If the nurse became again pregnant, she might probably give birth to a diseased child. I quote a case from M. Cazenave to illustrate this.

CASE LV.

A wet-nurse, previously healthy, received an infant to suckle, which, fifteen days after birth, had blotches on the vulva and ulcers on the mouth. It died at the age of three months. Soon after the death of this infant, the nurse perceived tubercles on the genitals. Six months after she was delivered of a daughter, which, at its birth, appeared healthy, but soon afterwards had condylomata of the vulva and perineum, and an eruption on the thighs.

The mode of infection, and the influence of the mother, is precisely the same in this case as in the last, although it is not as remarkable, neither is its history so defined and clear. I shall adduce one other instance before leaving this part of my subject.

CASE LVI.

A healthy man married a very healthy woman. I knew them both. At the usual period, and at her full time, she was delivered of a remarkably fine boy. All went on well for three weeks, when the breasts became troublesome, and a suck-pap of confessedly indifferent character was employed. Soon after this an ulcer formed near the nipple, which was difficult to heal, but at length got well under the use of blackwash. Soon after this the patient became covered with an eruption, which I saw: it was a syphilitic roseola. The infant had a similar eruption, and then a large sore near the anus. The mother also had a

very sore mouth, and ulcers on the tongue. The symptoms disappeared under treatment. The patient became again pregnant. She aborted, or was rather prematurely delivered of a dead child in the seventh month of pregnancy. She became pregnant a second time, and was again prematurely delivered in the seventh month of a dead infant. During the whole of this period the father remains perfectly healthy, and has never suffered from syphilis.

I could cite many more cases of a similar character from my own practice, and that of others; but those which have been already given are sufficient to show the occasional separate and single influence of the mother in the procreation of syphilitic offspring. What length of time the taint may remain in the mother, if not properly treated, it is difficult to say: I am of opinion, for long periods, as Case LIV shows. I have very little faith in syphilis, in such instances, wearing itself out.

It will be observed, that the influence of the mother in the production or communication of disease to her offspring is different in the cases I have just recorded. In the first instance, she is healthy, and gives birth to a healthy child; she then becomes diseased, and communicates such disease to the sucking infant. This is what I have described as acquired syphilis; and the prospect of cure by judicious treatment is much greater than in the second case, where the mother remaining uncured, again conceives, and gives birth a diseased child. Here the disease becomes hereditary. The parent diseased before conception gives birth to a diseased child, which is then formed and developed in the womb of a tainted mother.

In the first case the infant may generally be cured; in the second, if the child is born alive, the prospect of cure is uncertain and improbable. Hence M. Lagneau has said, "Infants conceived and developed in the womb of a female suffering from constitutional syphilis seldom live beyond the period of the first dentition; if they survive this period, their health is generally delicate and precarious, in spite of the most rational treatment that can be adopted.—'Syphilis de la Femme Enceinte,' p. 283; Paris, 1817.

It will be observed that, in the cases I have hitherto men-

tioned, the infant is diseased in three different ways ; and I think a different prognosis attaches to each mode of origin. In the first case, the father impregnates the ovule with diseased semen, constitutional syphilis in him being either latent or manifest, but the product of the ovule, the fœtus is nourished and developed in the womb of a healthy female. In such case if a diseased child be born, a reasonable hope of cure may be entertained, and such hope is commonly fulfilled.

In the second case, where the mother and father are both healthy, and the former becomes diseased after birth, and communicates such disease to her offspring in the way already described, the infant may generally be cured.

In the third case, where the infant is conceived and developed in the womb of a mother diseased before conception, the prognosis is, as I have already stated, most unfavorable.

When, at the time of conception, both parents are labouring under well-marked constitutional syphilis, there is no chance of a healthy child being born. Of course, the nature and previous duration of the disease in the parents would much modify the condition of the health of their offspring ; but I cannot conceive it possible that an infant should, under such care, be born and continue healthy : neither is there much probability of treatment eradicating the taint in the infant so diseased. I have shown, in many of the cases just detailed, that a diseased father frequently begets a diseased child, without the mother exhibiting any symptoms of disease : in reference to this fact, the late Mr. Colles observed, "that a child born of a mother without any obvious venereal symptoms, and which, without being exposed to any fresh infection subsequent to its birth, shows this disease when a few weeks old,—this child will infect the most healthy nurse, whether she suckle it, or merely handle and dress it ; and yet this child is never known to infect its own mother, even though she suckle it, whilst it has venereal ulcers of the lip and tongue !"¹ In this case, the mother is precisely in the same condition as a female labouring under secondary syphilis, who cannot be inoculated with matter taken from her own sores.

Syphilitic diseases in infants are either primary or constitu-

¹ 'On the Venereal Disease and the Use of Mercury,' p. 304.

tional; the latter by far the most common. In the former instance, the child must be inoculated during its passage through the vagina of the mother, she labouring at the time under primary sores, or it must be inoculated after birth. If a female, not constitutionally affected, at the time of her delivery be labouring under a primary venereal disease, it is not impossible that such disease may be communicated to the infant during its birth, and thus a primary disease be produced in the offspring. These cases are, however, rare, and persons of the greatest experience, amongst whom may be mentioned M. Gibert, have hesitated to determine whether the ulcers or discharges with which some new-born infants, born of parents labouring under primary venereal diseases, are affected, are due to a primary infection, or to a constitutional taint contracted "in utero." Bertin, to whom we have already alluded, has, however, recorded many cases of children born of women labouring under primary symptoms, and not evidently constitutionally diseased, who have presented, shortly after birth, ulcers, buboes, or discharges which had all the characters of primary venereal diseases, and were, in all probability, due to infection during the progress of labour. I have never witnessed a case of this kind; I have seen eighteen or twenty cases where accoucheurs have contracted the most marked forms of chancre, from attending women labouring under primary sores at the period of their delivery, but I never heard that such women had diseased their infants.¹

Primary venereal diseases in the infant produced by disease in the passages of the mother are, at least, rare diseases. Drs. Maunsell and Evanson state ('Diseases of Children,' p. 351, ed. 4), that they do not remember a case of this nature. I have seen the most marked form of indurated chancre, with indolent buboes in each groin and a leprous eruption, in very young children. A little boy, aged about three, was brought to the Queen's Hospital labouring under a well-marked syphilitic lepra. On stripping him, I found an indurated chancre on the prepuce, and indolent buboes in each groin. This was difficult

¹ I do not include here purulent ophthalmia and vaginal discharges, sometimes contracted during labour; the mother in such cases suffering from gonorrhœa, or secondary syphilitic discharges from the uterus.

to explain ; but, on diligent inquiry, it was found that his sister, aged about eighteen, had been recently admitted into the hospital under my care with chancre and an eruption ; before her admission, her brother was in the habit of sleeping with her. There are numerous accidental circumstances, doubtless, under which an infant may be inoculated with a primary sore. M. Diday has collected several curious histories of this kind. M. Ricord, in his 'Letters on Syphilis,' mentions cases which he observed, in which Jewish children received the infection, and contracted chancres on the prepuce, which had been divided in circumcision, and then sucked, to prevent hæmorrhage, by an operator in whose mouth primary sores existed. Another form of disease must be considered primary on the part of the infant. A child is born healthy, mother and father both healthy ; the mother cannot suckle her child ; it is placed out to nurse, or a nurse is hired for it ; soon after this, it is observed that the child is diseased, has ulcers in the mouth, and other marks of ill-health. On examining the nurse, she is found to have ulceration of a suspicious character about the nipples, which may or may not coexist with other well-known symptoms of constitutional syphilis : here a constitutional ulcer has been communicated, not a primary chancre, but still the disease is primary as far as the child is concerned. In reference to this point, M. Diday remarks that, "In the immense number of cases in which the disease has been communicated by the nurse to the child, it has very rarely happened that the constitutional sore on the nipple of the former has been the result of syphilis contracted in the usual way, after the development of a primary chancre on her own person : it has almost always been the consequence of the contact of the breast with the mouth of another infected child."¹ M. Cullerier has laid down some rules as a diagnostic guide in these cases, which are worthy of attention. 1st. If the breast of the nurse and the mouth of the infant are only and at the same time diseased, the question is one of doubt in which the disease originated. 2nd. If the breasts alone are diseased, and the infant has symptoms in other parts besides the mouth, it is very probable that the latter has been the first infected. 3rd. If the infant has the mouth alone

¹ Diday 'On Infantile Syphilis,' Sydenham Society's edition, p. 40.

diseased, and the nurse has other symptoms besides those on the breast, it is most probable the infant has been diseased by the nurse. 4th. If the nurse has general constitutional symptoms, and the infant only local symptoms, the disease probably originates with the nurse. 5th. If the infant has general constitutional symptoms, the disease is most likely hereditary.

The symptoms of a congenital or hereditary syphilitic taint consist in eruptions on the skin, of an erythematous, pustular, or vesicular character: ulcerations of mucous membranes, on the tongue, the vicinity of the anus, or inside of the lips and mouth; a characteristic snuffling, and a peculiar hoarse cry. These local conditions are manifested in conjunction with varied conditions of the general health of the child: sometimes it looks well and fat; at other times it is shrivelled, thin, and weak, with a peculiar aspect, looking like a little old man or woman. Affections of the bones and periosteum are rare, though I have seen them occasionally. Pemphigus or large bullæ, appearing in infants soon after birth, have been considered by Dubois as pathognomic of syphilis: this has been admitted by others. When, however, the bullæ of pemphigus appear in new-born children associated with other symptoms, there can be no doubt as to their nature. A child, four months old, was admitted into the Queen's Hospital, in March, 1856, under the care of Dr. Heslop. The child was illegitimate, reported to have been born healthy, but exhibited symptoms of disease soon after having been put out to nurse: the symptoms were snuffling, puckered mouth, a crustaceous eruption round the lips; large crusts on the head, which were due to the rupture of large vesicles: the skin-disease was a well-marked pemphigus; the child had also a node on the head. A peculiar snuffling, as though the infant had a bad cold and could not breathe through the nose, is one of the most common symptoms of infantile syphilis: I believe this depends on a pure syphilitic inflammation with ulceration of the mucous membrane covering the spongy bones of the nose; which ulceration extends to the bones themselves, which become carious and exfoliate. A young lady, aged 16, was brought to me, suffering from a most offensive discharge from her nose, accompanied by the coming away of large crusts having the shape of the spongy bones: these were occasionally mixed with

small pieces of bone.* The father had been badly diseased before marriage: this patient had an eruption when she was three weeks old with snuffling and discharge from the nose; at a month old the ossa nasi sank in nearly to the face. The discharge of pus, and crusts, and bits of bone, had continued ever since. The iodide of potass had been taken for years without any effect; mercury internally had failed. I succeeded in curing the discharge, and apparently the disease, by mercurial inunction to the axillæ, injections of chloride of zinc into the nostrils, and the local mercurial fume.

This characteristic snuffling is one of the most marked symptoms of infantile syphilis: "the puckered mouth, the position of a characteristic eruption round the lips and anus, in addition to the peculiar and fissured appearance of the surface from which the scales have faded, will seldom, if ever, fail to convert a suspicion of the disease into a positive certainty. Condylomatous excrescences from the margin of the anus have never, in any of the cases, accompanied the earliest development of the syphilitic affection, but were always secondary, being observed in those children only whose primary affection was neglected or incompletely eradicated. When the eruption occurring on the nates and face, in the first few weeks of life, had been promptly treated, no condylomata appeared on the anal margin, at least so long as the children were kept in sight. But, on the contrary, when the eruptions were neglected, condylomata were the almost certain results."¹

Occasionally infants at the moment of birth present the symptoms of syphilis, and, in addition to such symptoms, are shrivelled and emaciated, the skin hanging in folds in different parts of the body. It more frequently happens that these symptoms are not manifested till many days, weeks, or even months after birth. More commonly disease shows itself from the third to the sixth week: it may be however earlier, more frequently later. "In the majority of infants confided to my care, the disease has not appeared till the first, second, or third month, and frequently much later."² "The two physicians who had preceded me," continues this writer, "have, with me,

¹ Dr. Golding Bird, 'Guy's Hospital Reports,' April, 1845.

² Bertin, *op. cit.*, p. 97.

observed that infants born of infected parents have not presented the symptoms of syphilis till many months after birth, and sometimes not till they were weaned, and that up to this period they had appeared in the best health."¹ The records of the Venereal Hospitals "du Midi" and "Vaugirard" have shown that some infants born of diseased parents have never had symptoms of syphilis. In some instances these were the offspring of parents who had undergone treatment during pregnancy; or they were recently affected. In a second class, much smaller, the parents had never been treated, and yet the infants, watched for upwards of a year, had never shown any symptoms of venereal taint. I have already alluded to several cases, personally observed and noted, in which the father has been diseased before marriage, and even continued disease after marriage, and yet healthy children have been born, and these children have continued healthy for years. The case is different on the part of the mother.²

¹ M. Diday has collected 158 cases in which the date of the first outbreak of the symptoms of syphilis was noted. In these cases the disease appeared—

Before the completion of the first month after birth, in 86 cases.		
Before the completion of the second	.	in 45 "
Before the completion of the third	.	in 15 "
At four months	.	in 7 "
At five months	.	in 1 "
At six months	.	in 1 "
At eight months	.	in 1 "
At one year	.	in 1 "
At two years	.	in 1 "

² Infants conceived and developed in the womb of a female suffering from constitutional syphilis seldom live beyond the period of the first dentition; if they survive this period, their health is generally delicate and precarious, in spite of the most rational treatment to which they may be submitted. See Lagneau, *Ex-Chirurgien de l'Hôpital Vénérien*, 'Syphilis de la Femme Enceinte,' Paris, 1812, p. 283. See also Professor Paul Dubois' paper on the subject in the 'Annales de la Syphilis,' p. 78. 'Syphilis considered as one of the possible Causes of the Death of the Fœtus;' also the same paper, in the 'Gazette Médicale,' Août, 1850. The learned professor comes to the following conclusions: 1. That the presence of pus, either diffused or circumscribed in the thymus gland of new-born infants who have died with other symptoms of a syphilitic taint, is not to be considered as a coincidence, but as a pathognomonic symptom of syphilis. 2. That such a pathological condition, in the

When a child is born diseased, many questions of the highest importance suggest themselves at once in reference to points of treatment. There can be no doubt as to the propriety and necessity of submitting the infant at once to treatment in the manner subsequently recommended; but we must go further than this, and in order to prevent a repetition of the birth of a diseased child in the event of further pregnancies, it will become necessary to submit one or both of the parents also to treatment; for the very fact of the condition of the child becomes a demonstrative proof that taint must exist in one of them. It may happen that neither of the parents has exhibited any syphilitic symptoms for years, and it is very probable that the mother has never exhibited any symptoms at all. If it can be ascertained that the father ever had constitutional syphilis, there can be no question for a moment about submitting him again to a thorough and proper treatment, and of a different

absence of any other evidence of the cause of the death of the foetus, fully warrants a specific treatment of the parents, as the only means of averting a repetition of the same results. A pregnant woman may exhibit symptoms of syphilis for the first time during pregnancy, and this may arise from a primary disease being contracted after she became pregnant, or she may exhibit constitutional symptoms only, the disease being communicated to her by the foetus in utero. In either case she should be submitted to treatment; but this treatment of the mother does not always prevent a diseased child being born, although it may remove the symptoms of syphilis from the mother.

CASE.

Mrs. R— was admitted under my care into the Queen's Hospital, in the fifth month of her pregnancy, with well-marked indurations in each of the labia, and a characteristic syphilitic lepra: her health otherwise good. She was treated by mercurial frictions, under the influence of which the syphilitic symptoms entirely disappeared. She was delivered at her full time of a diseased child.

Two precisely analogous cases are recorded by Diday (*op. cit.*, p. 215). Both women were treated during pregnancy, and the symptoms of syphilis disappeared; they had both diseased children, who infected healthy nurses. In these instances it will be remarked that specific treatment cured the mother, but did not prevent or cure the disease in the child. Probably the treatment was commenced too late, or not persevered in long enough.

kind to that he has previously undergone ; if the mother has also exhibited any symptoms, both must be treated.

We must not pronounce the mother free from syphilis till the vagina and os uteri have been carefully examined. (See the chapter on 'Syphilis of the Uterus.') If the mother be found free from disease, and has never exhibited symptoms of disease, it is not imperative she should be treated ; but in the event of her giving birth to a second diseased child, which I have known happen under such circumstances, it becomes necessary to submit her to treatment, in order to prevent a repetition of the same misfortune. I have known six diseased children born, and the mother has never had a trace of disease, locally or constitutionally.

CASE LVII.

A gentleman married, after having been free from all symptoms of syphilis for some years. His lady aborted of her first child, and of her second : the cause was not suspected. The third child was born alive, but at six weeks old had snuffling, iritis, and condylomata round the anus : it was cured by mercurial frictions. The lady aborted of her fourth child ; the fifth and sixth had syphilitic symptoms. The mother never had any symptoms of syphilis : she was repeatedly and carefully examined. She was submitted to a full course of treatment by frictions and the mercurial vapour bath, and had a healthy child ; but she brought forth diseased children before this, although the father had been twice treated.

Some have supposed that a mercurial course predisposed a pregnant female to miscarriage. This, however, is incorrect. Bertin has stated (*op. cit.*, p. 169), that pregnant females with constitutional syphilis much less frequently miscarry when they are submitted to an appropriate treatment, than they do if the treatment be postponed till after delivery. The disease is here more to be dreaded than the treatment. If the treatment be adopted and conducted cautiously, there is very little to dread, either on the part of the female or the fœtus. The mother is very likely to be cured, and a healthy child born. If it be neglected, premature labour, with death or formidable disease in

the child are almost certain. For confirmed constitutional syphilis, or well-marked primary sores occurring in pregnant women, a modified treatment, the effects of which are to be carefully watched, is to be adopted and persevered in, till the symptoms have yielded. If mercury be used, the remedies best suited to these forms are frictions of small quantities of mercurial ointment, either upon the thighs or in the axillæ, with the mercurial vapour bath. These remedies are much safer and more certain than internal mercurial remedies. In the advanced periods of pregnancy, I would limit the general treatment to frictions only. The remedies must be suited to the form and variety of the disease with which we have to contend, according to the rules already laid down. A plan of treatment must be framed to suit the particular circumstances of the case, whether the disease be in the throat, bones, or skin, and the nature of the eruption, whether pustular, tubercular, or scaly.

It is certainly the correct practice to submit a pregnant woman affected with syphilis to an immediate and direct specific treatment. All experienced modern writers are agreed on this point. M. Vidal says, "When I directed the department of the nurses at the Lourcine Hospital, I treated syphilitic pregnant women in the same way as those which are not diseased." The same view is supported by Dr. Egan.

"Observation has taught me," says Bertin, "that diseased pregnant women more frequently miscarry when they have not been submitted to any treatment, than when they have been treated during pregnancy; and that when this event happens during the course of treatment, it depends commonly either upon the disease itself, badly treated, or treated too late, upon the state of cachexia or weakness to which the patient has been reduced by her disease, or upon the excesses she has committed during her pregnancy." The result of modern experience shows that a pregnant female constitutionally diseased may be treated with safety, and with a strong probability of cure both to herself, and possibly the eradication and prevention of disease in the foetus in utero.

It is not prudent to commence the full treatment of a pregnant female during the ninth month of her pregnancy. At this period a palliative treatment only should be adopted; if a

mercurial one, it should consist in frictions with small quantities of mercurial ointment every two or three days, leaving the full treatment to be commenced a month after delivery.

If a female contract primary sores during pregnancy, two things are to be feared: constitutional infection, both in herself and infant, and the contamination of the infant during parturition—a circumstance, though rare, sometimes happening. If the primary disease occur during the earlier months or middle of pregnancy, the female is to be fully treated, observing the cautions already laid down in reference to treatments during pregnancy, whether mercurial or not. Mercurial inunction is here also the best mode we can adopt, if mercury be indicated.¹

When a female is affected with primary ulcers on the genitals near the time of parturition, they must be destroyed by some appropriate caustic, to protect the infant from infection on the one hand, and the accoucheur or midwife on the other. I have seen many constitutions irreparably broken in medical men by syphilis, contracted from attending a female during parturition, with syphilitic affections of the vagina or os uteri.

When the symptoms of syphilis are first manifested in infants, treatment should be at once commenced, at whatever age these symptoms first appear. The treatment of syphilis in infants may be either direct or indirect: the patient may either take medicines by the mouth, or have them applied to the skin; or these may be given to the nurse who suckles the child, and the child thus influenced through the medium of the milk. Formerly it was the practice to shave the back of an animal, such as an ass or a goat, and rub into the animal a daily dose of mercurial ointment, the child being fed on the milk thus medicated. The latter treatment, full of inconvenience in its practice and uncertainty in its result, is now altogether abandoned; although Swediaur positively states that in a reigning family in Europe, *i. e.* in his day, “no child survived a certain age until this treatment was adopted.” Indirect treatments by means of the medicated milk of the nurse, however, are not altogether aban-

¹ “Je pense, comme quelques praticiens, que le traitement par les frictions mercurielles est celui qu’il convient le plus généralement d’employer dans la syphilis primitive des femmes grosses.”—Baumès, ‘Précis Théorique et Pratique sur les Maladies Vénériennes,’ Lyon, 1840.

done. "Bassereau mentions the case of a child affected with subcutaneous tubercles, manifestly tertiary, contracted from its father, who had reached the same phase of the evolution of the disease. Notwithstanding the gravity of the symptoms, the child recovered under the use of the iodide of potassium taken by the nurse. A most conclusive counterproof adds great value to this case. Four years later, the same man, still under the influence of the diathesis, begot another child: the latter was equally affected with syphilitic tubercles. This time, the nurse having refused to take the iodide, the child was subjected to mercurial inunctions; but it sank. Ricord and Bassereau speak of another new-born child, the subject of deeply-seated tubercles, which recovered by the use of iodide of potassium given to the nurse; but in this case mercurial inunction had at the same time been practised on the child, so that mercury may claim a part at least of the honour of the cure."¹

The treatment of the infant will depend very much on the character of the symptoms of the disease; and in affections of the bones or glands, or deep-seated tubercles of the skin, the iodide of potassium may be given either through the medium of the nurse or mother, or directly to the child. Nevertheless, in the cure of infantile syphilis the iodides play but a very secondary part, and our chief dependance is to be placed on mercury given by the mouth, or used endermically. The hydrargyrum c. cretâ, and calomel, are almost the only mercurial preparations that can with safety be administered internally to infants with a syphilitic taint. I have seen cases recover under the use of both these remedies; but I think they would more quickly, and with much less trouble, by the endermic method.

The best plan of treating infantile syphilis is that by frictions with mercurial ointment, in the way recommended by Sir B. Brodie.² "I have provided a flannel roller, on one end of which I have spread some mercurial ointment, say a drachm or more; and I have the roller, thus prepared, applied, not very tight, round the knee, repeating the application daily. The

¹ Diday, *op. cit.*, p. 250, Sydenham Society's edition.

² 'On the Administration of Mercury in cases of Syphilis,' in 'Lectures on Pathology and Surgery,' p. 248.

motions of the child produce the necessary friction, and the cuticle being thin, the mercury enters the system. This causes neither griping nor purging; in a child it does not even, in general, cause soreness of the gums; but it cures the disease. Very few children ultimately recover, in whom mercury has been given internally; but I have not seen a single case in which this other method of treatment has failed." The ointment may be rubbed on the soles of the feet, and woollen socks worn; this answers very well: or a small quantity of the ointment may be smeared on the axilla, and worked in by the motion of the arms. I have also wrought several very good cures by dusting calomel more or less over the body of the child: it does not salivate or purge, or produce any inconvenience; but it very frequently speedily and safely removes the symptoms of syphilis. Infants are not so liable to relapse after the disappearance of the symptoms of constitutional syphilis as adults: cures in them are commonly sound and permanent.

CHAPTER XXXVI.

OF THE EMPLOYMENT OF PARTICULAR REMEDIES IN THE
TREATMENT OF CONSTITUTIONAL SYPHILIS.

THE MERCURIAL VAPOUR BATH.

WHEN the bath is to be applied the patient should be placed on a chair, and covered with an oil-cloth lined with flannel, which is supported by a proper framework. Under the chair are placed a copper bath, containing from half a pint to a pint of water, and a tinned iron plate, on which is put from one to three drachms of the bisulphuret of mercury, or mercurial preparation;¹ under each of these, a spirit-lamp. The patient is thus exposed to the influence of three agents, heated air, common steam, and the vapour of mercury, which is thus applied to the whole surface of the body in a moist state. After the patient has remained in the bath from five to ten minutes, perspiration generally commences, and by the end of twenty or thirty minutes, beyond which I do not prolong the bath, it is generally very free. The lamps are now removed, and the temperature gradually allowed to sink; when the patient has become moderately cool, the coverings are removed.

The apparatus requires some modification and arrangement to suit particular cases. Where it is wanted to induce a quick and decided action, the whole power of the bath should be brought into operation, and the largest quantity of mercury should be employed. In rapidly-spreading ulcers this is re-

¹ I now use two mercurial preparations only, calomel and the bisulphuret of mercury, either alone or in a state of combination. This I shall allude to more particularly presently.

quired. Again, in chronic skin or throat diseases, where a powerful action would rather oppress the patient than cure his disease, the power of the bath should be modified, and not so great a heat or so much mercury employed. This is accomplished by using smaller spirit-lamps, or, when perspiration has once been induced, by the removal of one lamp, leaving the patient thus exposed for a time to the mercurial vapour alone. This should be done when the patient has been broken down by long-continued disease, in bad or weak subjects, or where a more prolonged action is required to eradicate the more deep-seated effects of the venereal poison, as in diseases of the bones, or indurations on the penis. Each particular case would require a greater or less modification of this kind. The form of mercurial employed is also of consequence. In skin diseases, the bisulphuret is to be preferred; in diseases of the throat or nose, calomel is better, because the patient can bear the head immersed without sneezing or coughing, which he cannot do when bisulphuret is employed.

A short preparatory treatment should be adopted before using the baths. The bowels should be kept free, and the use of wines, spirits, &c., prohibited.¹ The patient should be free from fever, the tongue clean, and the freedom from organic diseases, such as those of the heart and lungs, more particularly, should be ascertained. Should such or other complications be present, they might require modifications of treatment, but would not prevent its employ, as this is not only the most certain, but the safest way of curing most forms of constitutional syphilis.

This plan of treatment does not commonly require that the patient should forego his ordinary occupations of business, or that he should be confined to the house during its use. It must be admitted that its effects would be accelerated by confinement to bed, or to a couch in a moderately warm room; but this is by no means imperative, and I have very rarely advised it, except in such cases where exposure or exercise would be positively mischievous, as in the cases of sloughing, or rapidly-spreading ulcers in the throat or elsewhere.

¹ This depends to a great degree on the patient's age and previous habits.

The diet should be light, nutritious, and unstimulating : milk, chocolate or cocoa, night and morning ; animal food for dinner, with weak wine-and-water. Where the patient has been reduced by mercury given internally, or by a combination of syphilis and mercury, the diet may be more nutritious ; but stimulants should be avoided. Smoking must be prohibited, particularly in disease of the throat and nose.

In a great majority of cases the moist mercurial vapour, employed as I have directed, is capable of curing the disease without the assistance of internal medicine ; but the cure is sometimes expedited by the administration of other remedies. It may be very advantageously combined with frictions of small quantities of the stronger mercurial ointment, or calomel, either in the axilla, or on the gums, or on other parts. (See the chapter 'On Mercurial Treatment.')

The time occupied in the cure of venereal diseases by the mercurial vapour bath is vastly less than that consumed by any other kind of treatment ; its effects are commonly immediate, one full bath very frequently making at once an impression on the disease. Where the hair has been falling rapidly, one bath has arrested this ; ulcers which have been rapidly spreading have been rendered stationary by one bath. After two or three baths the improvement is in most instances marked ; and the cure is effected in one fourth, or even one sixth, of the time required for the success of ordinary treatments. The nature of the cases determines the time occupied in the cure. In superficial skin diseases, or superficial ulcers of the nose and throat, the cure is very rapid. I have constantly known affections of this kind entirely cured in a fortnight or three weeks, with pleasure rather than inconvenience to the patients.

In enlargements of the bones and testes, in indurations of the penis, persistent induration of the cicatrix of a primary sore, the cure is necessarily more tedious ; the change of structure produced in such diseases must have time for removal : nevertheless, in these cases, which require months of treatment, under common circumstances, and which are not unfrequently considered or given up as incurable, the moist mercurial vapour will do more in a month than any other treatment in six. I have known cases of induration of the penis removed in three

or four weeks, which have not shown the slightest disposition to amendment after months of ordinary internal treatment.

The effects of the mercurial vapour bath upon the patient vary under different circumstances. If the general health of the patient be apparently good, and we have to control a single isolated symptom of disease, such as a primary sore, an enlarged testis, or an indurated cicatrix, and the baths be used too frequently, the patient would become a little languid, and probably a little thinner; this would be avoided by properly timing the intervals between the baths. Should the patient be labouring under general constitutional taint, and exhibit as local symptoms loss of hair, sore throat, ulcers of the nose, or skin diseases, he almost invariably gets fat under the treatment. The mouth is commonly affected, after using four or six baths, more quickly if the head be immersed, which is better; some patients can bear the head in the bath for five, ten, or even twenty minutes without inconvenience; patients vary in this particular; and it depends very much on the form of mercurial employed. The gums, when affected, are red, elevated, and tender; but the baths very rarely produce salivation.

Some forms of constitutional syphilitic diseases more readily yield to the use of the vapour than others. Some are cured with an extraordinary degree of rapidity, and are perfectly cured, which is proved by their not having relapsed, or presented a fresh venereal symptom after many years. These forms are superficial diseases of the skin, loss of hair, superficial ulcerations of the nose and throat. Some varieties require a longer treatment, as diseases of the deeper-seated parts of the skin, some forms of ulcerations, diseases of the testicles and of the bones.

To most forms of constitutional syphilitic disease the treatment by vapour is applicable, and beyond all doubt the most speedy, certain, and safe remedy that can be employed; yet there are some forms of disease which yield with greater rapidity than others. That which gives way with the greatest difficulty is the induration which succeeds to the healing of a primary sore. I do not mean that soft fulness which is sometimes found in such situations, but that specific induration which is met with under the skin, and which is sure, sooner or later, to end in local or

constitutional mischief. I have seen cases which have resisted all modes of treatment but the baths; to these they yield but slowly, but they do yield, after other plans of treatment have been followed for months without success, or with but partial amendment.

The analogy has been made with the dry fume, which sometimes has produced such an effect: the mixture and dilution of the vapour of mercury with common steam, and the sweating induced by the bath, entirely removes any fear of this kind, and I would stake my reputation that with proper management it cannot occur.

I must not be understood to say that I consider or recommend the mercurial vapour bath as a specific remedy in all forms of constitutional syphilis, but I repeat that it is the most powerful therapeutic agent in the removal of disease, and the least harmful to the constitution of the patient, of any remedy with which I am acquainted; neither am I so prejudiced in favour of this remedy as to reject the assistance of all others, which, as we shall presently see, when associated with it, under certain circumstances, produce the best effects, but which effects, I am bound to say, would not, under many circumstances, occur without the assistance of the vapour, since in numerous instances these remedies have failed in curing the disease when used alone.

It is now nearly eighteen years since I first introduced this method of treating syphilis, and some other forms of disease, by moist mercurial and sulphur vapour, *i. e.* by the mixture of the fumes of various preparations of mercury, and iodine, with common steam. This method has been attended with a very remarkable degree of success, not only in my own practice, and in this country, but in that of other surgeons in most parts of the world.

An American physician, D. L. P. Yandall, who lately visited this country (in 1868), bears the following testimony to its value: "During the last twelve or fifteen years I have, in my brother's practice and in my own, treated at least fifteen hundred cases of constitutional syphilis by the mercurial vapour bath; my faith in the treatment increases every year. I considered the mercurial vapour bath to be in syphilis what quinine is in intermittent fever." Dr. Gross, of Philadelphia, one of the

most eminent surgeons in the United States, says, "Another method of employing mercury is by a combination of the fumes of mercury with common steam, which Mr. Langston Parker, of Birmingham, the inventor, terms the 'mercurial vapour bath.' I can testify, from considerable experience of this plan, having effected some very extraordinary cures with it, after all other methods of treatment had failed. I recollect in particular the case of a young gentleman from Arkansas, who was under my charge on account of tertiary syphilis of long standing, accompanied by an enormous amount of rupial action of the skin, one of the sores being fully as large as a dinner plate, who was promptly cured, comparatively speaking, with the bi-sulphuret of mercury, after a great variety of other means had been fruitlessly employed. My opinion is that this method of treatment is not sufficiently appreciated; it certainly deserves the highest encomiums."

I have now adopted this treatment in many thousand cases, in almost every form of primary and constitutional disease, and although it would be too much to say that all were cured by it, still I must look upon the mercurial vapour bath as beyond all question the most powerful, and what is more, at the same time, the least harmful therapeutic agent that can be employed in the treatment of syphilis.

The mercurial vapour bath acts with more certainty in some forms of disease than others. It acts better in the dry or scaly forms of disease than in the moist; it is more certain in lepra or the dry than in the pustular or moist forms; in the former it is almost a specific. The skin diseases, which are symptomatic of syphilis, may be referred to two great classes, the dry or scaly, and the moist or suppurative. In the former I include the various forms of lepra and psoriasis, and in the latter, pustular, vesicular, and tubercular diseases, the latter when softened; over the former the mercurial vapour bath has a most marked and certain influence, and is in fact the most reliable therapeutic agent that can be employed in their treatment.

The dry or scaly forms of skin disease almost always yield to a course of vapour, and they are frequently as rebellious to other forms of treatment. These forms of disease appear to follow a certain law, which I have so frequently observed that I have at

length been led to look at it as a part of the natural history of the disease. The scaly affections almost always return in the same form after the patient has been apparently cured; but they return in a milder form, and always yield again to the mercurial vapour bath. This may occur once or twice, in a still decreasing degree, always yielding with certainty to the same treatment, and at length returning no more.

In a disease like syphilis, which sometimes lies dormant for so long a period of time, no plan of treatment can have any claim to confidence that has not received the sanction of time and experience; and twenty years' practical experience in the treatment by mercurial vapour has taught me that in the great majority of cases of constitutional syphilis, there is no remedy so effectual, and certainly none so little injurious to the patient; in fact, in many instances the general health improves under its use.

If the treatment of constitutional syphilis by the mercurial vapour bath be compared with any of the other modes of treatment commonly adopted, it will be found to possess incalculable advantages over them. It spares the stomach, it does not interfere with the general health, and in a vast majority of instances it removes the symptoms of the disease. Those who object to mercurial treatment very commonly fall back upon the iodides as remedies; but I here wish to repeat an opinion which I have long held and taught on this subject, that prolonged treatment by the iodides are more injurious than those by mercury. In a great majority of instances iodine suspends the symptoms of disease, but does not cure.

I have seen patient after patient infected with a fear or dread of mercury, who have pursued steadily the treatment by the iodides in almost poisonous doses for years, where the disease has been kept in abeyance by the remedy, but invariably returns after its discontinuance for a few weeks.

Such treatment are not without their dangers; far greater than any produced by the judicious administration of mercury. They undermine the muscular strength, seriously impair the digestive powers, render the testicles loose and flabby, and produce a condition of iodic cachexia, from which the patient recovers with difficulty, or does not recover at all. The only

other methods of treatment worthy of notice, as curative agents, in the treatment of syphilis, are syphilisation, and Zittman's decoction.

Very few persons have either the time, the constitution, or the courage to undergo the latter treatment. It consists in a rigid abstinence, and swallowing some quarts of decoction of the woods; sarsaparilla, &c., daily; and this continued for several weeks. It is a favorite treatment in Germany. I have treated and cured several patients by the mercurial vapour bath, in which this treatment has signally failed. I especially call to mind the case of one gentleman, who had a scaly eruption on the skin and secondary ulceration of the tongue. During the time he was under treatment the eruption upon the skin disappeared; the ulceration of the tongue did not yield at all; when however he resumed his ordinary mode of living, the disease returned, and in a few weeks was as bad as ever. Previous to this treatment by Zittman's decoction, this gentleman had taken so much iodine that, during the sweating process, it could be smelt, and the perspiration turned his linen brown. A month's treatment by the vapour of calomel and the bi-sulphuret entirely removed every symptom of disease, and the patient has never relapsed.

The plan of treatment by the mercurial vapour bath does not imperatively require that the patient should be confined to the house during its use. He should, of course, take rather more than the ordinary precautions against cold, damp, and night air. It must be admitted that its efficacy would be enhanced by confinement in a moderately warm room, but this is not absolutely necessary, and the patient in most cases recovers very well without it. There are cases certainly in which exposure or exercise would be positively mischievous under any plan of treatment.

In most cases a liberal, but not stimulating diet, should be associated with the bath treatment, and it is owing to the neglect of this that failures sometimes occur. In fact, I have frequently seen little or no impression made on the disease, when the patient lived low; whilst he has immediately improved, under the same treatment, when this was associated with better living. The same remarks apply frequently to a change of

climate as well as to diet, for although syphilis is to a certain extent independent of climate, still I have occasionally seen some remarkable cases where a change of air, associated with the use of the mercurial vapour bath, has brought about a cure, which otherwise appeared hopeless. I shall now detail a few cases by way of illustrating the efficacy of the mercurial vapour bath, making a few comments upon them as I proceed.

A gentleman, about forty years of age, who had suffered from various forms of constitutional syphilis for many years, was suddenly attacked with a rapidly spreading ulceration of the throat. The disease came on suddenly and increased with frightful rapidity; in forty-eight hours half the soft palate was gone. He was sent from some distance to be placed under my care. I placed him at once in a strong bath, composed of half a drachm of calomel and a drachm and a half of the bi-sulphuret of mercury; he was kept in the bath forty minutes. The next day the bath was repeated, and the next after in a milder form. The first bath arrested the ulcerations. I gave him large doses of opium night and morning, and continued the same plan of treatment, in a modified form, for some days. In less than three weeks the ulceration had healed, leaving a smaller destruction of tissue than I at first thought would be the case.

There are two or three points in this case that demand attention. In the first place the occurrence of acute symptoms, without any warning, in a constitution long tainted with syphilis; and secondly, the effect of the vapour treatment on such cases.

I have so frequently seen the occurrence I have just described in constitutions long tainted with syphilis, that I am led to look upon it as part of the natural history of the disease. It especially is likely to occur in weakly subjects where the health has been broken down by long-continued internal courses of mercury or iodine; but it very rarely occurs if the first symptoms of constitutional disease, and the earlier relapses, have been thoroughly treated by the mercurial vapour bath. In this case, again, it must be observed, that the vapour arrested the ulceration at once, and in such instances it almost invariably does so.

I have so frequently seen secondary ulcerations in the soft

palate, such as those just described, arrested at once by the mercurial vapour bath, that I should have hardly thought this case worth recording, but for another circumstance attending it. When this patient first consulted me, he said, "Doctor, I have lost the sight of the right eye for some years, owing to an attack of iritis. I suppose you can do nothing for that?" I replied, "I am afraid not." But towards the end of the treatment, in the third or fourth week, to my great astonishment, and his greater delight, he said, "I can see a little with the bad eye." He so far recovered the use of it as to enable him to shoot—a sport he had been obliged to abandon for some years. Since that time I have seen more than one case where the vision, partially lost from iritis, has been restored more or less completely by the mercurial vapour bath, and I have no doubt that such improvement in this case was entirely due to it.

Again: a gentleman, twenty-eight years old, consulted me respecting some unpleasant symptoms, which he thought might be due to a syphilitic taint, having suffered from various symptoms of constitutional disease for three years. The symptoms now troubling him were œdema of the legs, which were much swollen. On examining his urine it was found highly albuminous; the vision of the left eye was much impaired, the pupil contracted, the iris muddy, and the whole eyeball generally congested. Apart from these symptoms the health was pretty good. He was directed to use the mercurial vapour bath four times a week; composed of half a drachm of calomel and one dram of the bi-sulphuret of mercury for each bath. In three weeks the œdema of the legs was gone, the albumen had nearly disappeared from the urine, and the condition of the eye much improved, but it was not till after a six weeks' treatment that the eye was perfectly restored.

It will be recollected that it was three years from the time this patient was first diseased, till the occurrence of the symptoms I have just described; but another accident occurred which corroborates what I have just said with regard to the occurrence of rapid secondary ulcerations and mutilations taking place in persons who have been long tainted with syphilis, coming on without any warning.

On one visit this patient complained of soreness in the roof of his mouth. On looking I found a red, hard, elevated spot in the centre of the hard palate, on the right side, neither more nor less in fact than a node. In a day or two this broke, gave issue to a small portion of offensive pus, and, on examination with a probe, I found the bone rough and denuded. In estimating the value of the curative effects of any remedies, especially in reference to syphilis, those only can be considered valuable which have stood the test of time and experience, and when we call to mind that it is almost a law in the pathology of syphilis that the symptoms pertaining to it lie dormant for many years and then break out with violence, it is necessary to be especially cautious in saying that such a remedy has cured the patient. The disappearance of a symptom is certainly not the cure of the disease.

If no other advantage could be claimed for the mercurial vapour bath than that of certainly arresting in many, nay, in most instances, those rapid ulcerations, and mutilations which sometimes occur in patients, where the syphilitic virus has lain dormant for long periods, it would have accomplished much; but I can say, without the least exaggeration, after twenty years' use of the remedy, and its personal administration in many thousand cases, that no remedy is so likely to prevent relapses, and none is entitled to anything like the confidence that may be placed in it, in arresting those sudden outbreaks of disease that mutilate and disfigure the patient. I may perhaps be permitted to quote the experience of another medical man, himself a sufferer from a very formidable outbreak of secondary syphilis, which had resisted various modes of treatment, but which yielded quickly and permanently to a course of treatment by the mercurial vapour bath. "I can never be too thankful," writes he, "for your excellent treatment, and never lose an opportunity of recommending it to every friend I meet similarly affected. I myself shall never adopt any other abroad, and hope to be able to write to you from New Granada, and give you still further proofs of its efficacy in a tropical climate."

An old friend and pupil of mine, Mr. W. J. Moore, who has long practised in India, and who is the author of two standard

works on 'The Diseases of India,'¹ thus expresses himself with regard to the treatment of constitutional syphilis in India:—"I hold that the internal exhibition of mercury is uncalled for; especially is this the case in India. Happily, there is another method of effecting all the good which is capable of resulting from mercury; this is the mercurial vapour bath, originally recommended and so long and so successfully employed by Mr. Langston Parker. I may be permitted to state the result of my experience, which is, that for secondary symptoms occurring in India, of whatever variety, there is *no remedy so efficient*, and less hurtful to the constitution, as the mercurial vapour bath has proved to be."—'Manual of the Diseases of India,' p. 187.

The mercurial vapour bath is especially serviceable in secondary ulcerations: those forms which have resisted ordinary treatment for long periods of time. A gentleman, about twenty years of age, was sent to me a little time ago, with a serpiginous ulceration, resulting from an open virulent bubo. The ulceration had extended down the thigh, and up the abdomen for a considerable distance; some of the sores were as large as a cheese-plate; they had resisted treatment for more than a year and continued to extend. They were entirely healed by the mercurial vapour bath, used as I have directed and described, in five weeks. I believe, before the end of the sixth week, they were all entirely closed with a good, firm cicatrix.

In the secondary ulcerations, again, which follow the rupture of the vesicles, or pustules of secondary syphilis, or the softening of tubercles in tertiary syphilis, the bath sometimes produces remarkable cures. A young gentleman was sent to me two years ago, whose health was entirely broken by repeated outbreaks of constitutional syphilis, which had extended over a period of more than three years. Various plans of treatment were adopted, but without success, the ulcers healed, and broke open again, and one form of skin disease was succeeded by another, till he was reduced to a state of great weakness. In

¹ 'A Manual of Diseases of India.' By W. J. Moore, M.D., &c., in medical charge of the Sanatorium for European Troops on Mount Abou, &c., &c. London: Churchill, 1861. 'Health in the Tropics, &c.,' by the same author, Churchill, 1862.

this condition he was placed under my care. Previous to my seeing him he had been submitted to one or two courses of mercury, pushed to salivation. This patient, when placed under my care, was in a most deplorable state. He had four distinct forms of skin disease. 1. Dark-coloured marks, left by the healing of old ulcers. 2. Red puckered cicatrices, due to the same cause. 3. Large, foul ulcers. 4. Tubercles, not yet softened. These consisted in large, red, hard circular swellings, varying in size from a split pea to a large marble; they were scattered over the neck and trunk, forty or fifty in number. He had also nodes on both legs, and suffered much from nocturnal pains. In one fortnight after he commenced treatment the ulcers were healed, the nights good, the nocturnal pains gone. The cure, however, was not complete for nearly six months, although he was not confined by the treatment, and went about his usual pursuits during the time. The patient has not relapsed; he has now been well for more than two years.

This is a very remarkable case; the cure must be attributed to the mode in which the mercury was exhibited. He had been previously placed under mercurial courses, exhibited by the mouth, but without effect; and yet the disease yields to the same remedy employed in another way. This is very likely to be explained by the fact that in the mode of giving the remedy, the digestive organs are spared the irritation occasioned by frequent and repeated doses of mercurial medicines. In fact the gastric irritation thus produced frequently sets up a most formidable barrier to the cure of syphilis, and sometimes even to the treatment or palliation of the disease.

I am persuaded that the real way to cure syphilis is through the medium of the skin and not by the mouth. In a correspondence with the late Sir B. C. Brodie on the treatment of syphilis (whose letter from which I quote now lies before me), he says, speaking of some of my published opinions on this point, "I am glad to see that you call the attention of your readers to the advantages of the external administrations of mercury, as compared with those derived from the use of it as an internal remedy. The more I see of the treatment of syphilitic diseases, the more I am confirmed in my opinion on this subject."

It must not be supposed from what I have said that the mercurial vapour bath is capable of curing all forms of syphilis without the assistance of other means. There are cases in which the addition of other remedies to suit particular cases and circumstances are found advantageous; as there is no specific in medicine, neither is there any remedy with which I am acquainted that will cure all diseases. Quinine will not cure all cases of intermittent fever, but still it is the most powerful therapeutic agent with which we are acquainted in the treatment of that disease; yet it occasionally fails, and as Dr. Yandall has observed, I regard the mercurial vapour bath in syphilis, as I do quinine in intermittent fever. The mercurial vapour bath bears the same relation to the one as quinine does to the other.

The preparations of mercury that may be used for the baths are the bi-sulphuret, or calomel; this is the way in which I generally use them. The whole of the body should be exposed to the action of the vapour except the face. I use an apparatus which incloses all the body except the face, but an extemporaneous covering is easily adapted with a little management. I use also separate lamps, one for the mercury and the other for the water. There is a great advantage in this, as it enables one to separate the heat and moisture with a much greater degree of nicety, and also to leave the patient exposed to the mercurial vapour alone, when a sufficient amount of diaphoresis has been produced by the steam vapour. This also avoids any degree of debility that might be induced by too much heat, or too much perspiration.

The quantity of the mercurial proper for an ordinary bath would be from half a drachm to a drachm of calomel, and from one to two drachms of the bi-sulphuret.

I was consulted some short time ago by a surgeon, respecting the condition of a patient of his, who had secondary ulcerations of a most formidable character, resulting from the softening of syphilitic tubercles. I suggested the mercurial vapour bath, with the addition of a small quantity of the iodide to each bath. By some mistake he put the biniodide instead of the iodide; the effects were very severe upon the patient, producing sickness, pain in the bowels, and smart diarrhœa; but the effects were

also very remarkable upon the disease, for not more than two or three baths were given when the ulcerations healed rapidly. The patient, who was before cachectic and weak, became strong and fat; she soon after married, and had two healthy children. This was a case of hereditary syphilis, and there are several remarkable points connected with it, in reference to the procreation of diseased and healthy children. This, however, is foreign to the object of this paper, and I must refer the reader, who wishes to inquire farther into these points, to my work 'On the Modern Treatment of Syphilitic Diseases,' 4th edition, p. 296. The ulceration in this case resulted from the softening of the nodes on both tibiæ; the nodes on each leg suppurated and broke, and the bone exfoliated, as it always does in such cases, to a considerable extent. The cure was here perfect and permanent, and the lady is now and has been for some years in excellent health, and the mother of several healthy children. She lately consulted me on some matters unconnected with her previous illness, and I was surprised at her good looks. There are some other modes of using the mercurial vapour bath, locally or partially, where a general bath cannot be borne. It occasionally happens that an unfortunate patient shall be so much reduced and weakened by long continued disease, that he is unable to bear the general application of the remedy; though I must confess that it has hardly fallen to my lot to see more than a few such cases. They may, however, and do occasionally occur. A gentleman, upwards of fifty years of age, had a formidable attack of pustulo-crustaceous syphilis. He could not bear a general bath, however carefully administered; it struck him that a partial application of the remedy might do him some good, if it was not as beneficial as its general employ. He contrived an apparatus by which he fumed one leg only, and after using this for some time he fumed the other. The legs were covered with foul ulcers, resulting from the rupture of pustules; many of these covered with a dry, hard, rupial-looking crust of dark colour. He took plenty of porter, bark, iron, and cod-oil, and fumed his legs regularly with a mixture of calomel and the bisulphuret of mercury. In six months he was restored to a very good state of health. I may be permitted to quote, in his own words, his account of the effects of the vapour locally on himself.

"The moist vapour," writes he, "has turned out most beneficial in my case. I was in a sad, suffering state night and day. Night perspiration; the ulcers on the right leg had eaten into the muscular fibre of the calf, causing constant restlessness and great pain; the ulcer was covered with a green slough. In this state it occurred to me to try your bath locally to the right leg alone; the effect was surprising; the first bath of twenty minutes gave instant relief to the pain, and cleared off the green slough, and the bath the next day produced a square inch of healed surface. I then went on with the baths twice a week, taking the tonic as usual. At the end of April the right leg was soundly cured. I now began to vaporise the other leg, which, however, had greatly improved whilst treating the right leg; but a most curious thing occurred: the left testicle, which had been enlarged for many years, being half as large again as the right, is now reduced to the same size as the other; this clearly shows that the disease was latent in it."

The ordinary modes of conducting mercurial courses by the use of the drug internally given, not only frequently fail in curing the disease, or rather in removing the symptoms of the disease for which they are given, but a class of affections are commonly thereby induced, which are the result of such treatments; so that on many forms of constitutional syphilis being presented to our notice, it is difficult to say what has been produced by the disease, and what by the remedy employed for its proposed cure. Indeed, a peculiar form of constitutional disturbance is often set up, which has masked or changed the natural course of the disease, and which condition would not have occurred if mercury had not been given. It may be thought that I am too much wedded to my own views, and my own mode of treatment, but this is not so. When Dr. Yandall called on me from the United States, he said, "My faith in your plan of treatment increases every year. The more I see of its results the more confidence I have in it." Dr. Bumstead, Lecturer on Venereal Diseases in the College of Physicians and Surgeons of New York, says, "Mr. Parker's method is safer, quicker, and more certain, and less frequently followed by relapses, and more efficient in obstinate cases than any other, and from my own experience I can testify to its very great value."

I append a very few illustrations, selected from hundreds of others. These I have chosen simply because they show the remarkable effects of the treatment upon cases which, without the aid of the baths, as far as I know, must have been utterly hopeless. I say hundreds of others: this may seem almost an exaggeration, but when it is considered that I have now adopted this practice for more than twenty years, and have, during that time, superintended the administration of the baths, from three to five times every day, the numbers stated will be found not very far wrong.

CASE LVIII.

A gentleman, upwards of forty-five years of age, was sent to me from a distance, with a hope that I might be able to do something for him, in the way of relief. Cure, his friends thought, was out of the question. He had been confined to his house for many months, and the greater part of the time to his bed, with secondary sores, which resulted from the rupture of the pustules of secondary syphilis. The trunk, the arms, the legs, and the back were covered with these sores in various conditions; as fast as they healed in one place they broke out in another. He was weak and emaciated, and tormented with night sweats. He was so weak that he could not at first bear a general bath, and the lower half of the body only was exposed to the action of the vapour. He used ten grains of calomel and half a dram of the bi-sulphuret of mercury for a bath, continued for fifteen minutes every night. As he improved a general bath was used, and the whole body immersed; this was done three times a week. The progress of the case was exceedingly favorable, and in a few weeks most of the sores had healed, the patient was able to dress himself and ride out. At the end of about six months he was quite well, *i. e.*, all the sores had healed, but the skin presented a very curious appearance; it was rough, corrugated and uneven in places, owing to the puckering of the skin caused by the contraction of the cicatrices of the numerous sores he had upon it. It looked as though he had been burnt, and, in fact, the healing of such sores gives the idea that the skin has been burnt. I have noticed it time after

time, and should have supposed such had been the case did I not know the true cause of such an appearance.

It is almost impossible to convey a correct idea in writing of the formidable nature of the case I have just narrated, or the very great benefit he derived from the vapour treatment, when everything else had failed. Mercury by the mouth, by friction, the iodides, chlorate of potash, cod-oil, sea air, all had been tried without success. Yet he began to amend the third day after the baths were put into operation.

A gentleman who had been married for some years, and who had not had any primary venereal disease in any shape or form since then, consulted me respecting a painful affection of his arm. The chief complaint was of the left fore-arm, the bones of which were much enlarged and tender to the touch; the night, however, was the period of suffering; directly he got warm in bed the pains began, and to such a degree as to deprive him entirely of rest; he had not slept without pain one night for seven years. The disease was a syphilitic periostitis. Mercury by the mouth, iodine, blisters, &c., had all failed in giving more than transient and temporary relief. The bones of the nose were also thickened, and the seat of shooting pains, the left testis was five times the size of the right.

After the third bath the pains returned no more, the tenderness was gone from the arm, and he could bear the bone pressed and examined with a tolerable degree of freedom and force, although previously it had been exquisitely tender. The whole of the symptoms had disappeared after a three months' course of the vapour, which was interrupted from time to time. It has been said, and is generally supposed, that the iodide of potassium is all but a specific for periosteal inflammation of syphilitic origin, and nocturnal or bone pain, without evident marks of inflammatory action. Doubtless, in many cases, it is an excellent and efficient remedy, but its good effects are rather palliative than permanent; and there are also many cases in which it totally and completely fails; not so with the mercurial vapour bath, it is all but certain in its influence over the symptoms of disease I am describing, and the rapidity with which it removes them is sometimes very remarkable. M. Diday, a great authority on syphilis, says, speaking of the effects of the iodide over these

pains, "The iodide of potassium palliates these pains more frequently than it cures them, without relapse; but to compensate for this the relapse, though it be frequent, never fails to obey the remedy." As an illustration of this, I narrate the following

CASE LIX.

An officer on foreign service suffered in a very severe manner from these nocturnal pains. He had suffered for ten years, unless he was under the influence of the iodide of potassium. The attacks of pain recurred about every month, and were always relieved, and entirely taken away by the iodide of potassium; but if he discontinued the remedy he was never free from them for more than ten days. Weary of this constant recurrence of pain, and disgusted with incessantly swallowing physic, which always left a metallic taste in his mouth, from which he was never free, he got invalided, came home, and placed himself under my care.

He was under treatment for about three months, taking a general bath about four times a week, composed of ten grains of calomel, five of the iodide of mercury, and a dram of the bisulphuret. Writing to me more than a year afterwards he says, "You may remember that when I applied to you for advice I was then suffering from one of my painful attacks, which had generally come on once a month for the last ten years. Since the treatment I went through with you, I have had no return of those attacks, and have never had any nocturnal pain whatever."

CASE LX.

A young gentleman and lady married, with all the prospects of future happiness that fortune and apparent health could give. In due course the lady became pregnant, but miscarried. The same thing happened in her second and third pregnancies; a good deal of mental uneasiness was produced, and some suspicions arose. The fourth child was born alive, but at six weeks old had snuffling and the eyes became bad; condyloma also appeared about the anus. A neighbouring physician of

great local eminence was consulted, who said rather abruptly, "The child is diseased." The parents, as may naturally be supposed, were shocked and horrified beyond measure; the father having at a remote period before his marriage been affected with syphilis, but the mother had never exhibited the least symptom of the disease. He was put on a course of blue pill and iodide of potassium; the mother at first was not treated. A fifth child was born, who at the end of the first month had symptoms of syphilis. The father was again only treated, and a sixth child was born diseased. The mother was again examined, but no trace of disease could be found, in the throat, vagina, uterus, or elsewhere. The patients were now placed under my care; I recommended that both should be treated by a full course of mercurial vapour, and that no intercourse should take place during that period. The seventh child was born healthy, and has remained so, and neither father nor mother have as yet exhibited any farther symptoms of disease.

This case illustrates one or two very important points in the treatment of syphilis. First, it establishes the law, which should always be acted on, that in the event of two married persons, apparently healthy, having a diseased child born to them, that both should be treated, although the mother has never shown the least trace of disease. Secondly, it shows the efficacy of the mercurial vapour treatment, after the failure of several of the ordinary methods. It is true an exception might be taken to this, since the mother was never treated till the mercurial vapour bath was used; but, on the other hand, it is hardly probable that the father could have been cured by the previous treatments, or he would not have continued to procreate diseased children.

There can be no doubt that this plan possesses an efficiency, and produces results that can be effected by no other. In a great number of cases it is perfectly efficacious and curative alone, without the assistance of any other treatment. In other cases it acts as a powerful auxiliary, and so materially does it assist, that the remedies before employed do not cure or remove the symptoms against which they were directed till the mercurial vapour bath is used. It is free from all injury or risk, and does not disturb the patient's general health; if properly managed,

this commonly improves under it. In many cases such as I have described the remedies have been, under the old plans, if not worse than the disease, almost as bad. We need only go back to the late Sir Astley Cooper's account of the treatment adopted in Guy's Hospital in his day for an illustration of this.

Under the present plan experience has already proved, and I hope will still go further to prove, that a number of the evils attendant on the class of diseases I have been considering, may be mitigated, and in many altogether removed.

There are one or two points, in the management of the bath, which perhaps I have not dwelt upon with sufficient minuteness, and they are of very considerable importance. The quantity of water should not be too large, a pint, or a pint and a half, is quite enough. The diaphoresis should not be too great. If these points are not attended to the mercury becomes too much diluted, and the specific effect is weakened, or altogether lost. It is very important, again, that two receptacles should be used, one for the water and a separate one for the mercurial preparation, and that there should be a separate lamp for each. When the patient perspires freely, the lamp under the water should be removed, and the one under the mercury only suffered to remain till the operation is completed. At the end of that time, if the bi-sulphuret has been used, with or without calomel, the body should be wiped dry, and gently rubbed. If calomel alone have been used, and there is not much damp on the skin, there may be no occasion to wipe the skin dry. Mr. H. Lee thinks that, by suffering the deposit from the calomel to remain, a still further absorption of the mercury would take place, and its specific effect more surely induced.

THE CHLORIDE OF MERCURY.

Calomel may be administered internally, as an anti-syphilitic, united to opium, conium, or soap. Apart from its internal exhibition, however, it has various uses in the treatment of syphilis. Mixed with lime-water in various proportions, it forms a wash or lotion, exceedingly useful in dressing many primary and secondary venereal ulcers. Employed by way of friction on

the gums and tongue, calomel has sometimes a marked effect in curing chronic secondary syphilitic ulcerations of the throat, fauces, and tongue. When used in this way, the saliva which flows during the process of friction should not be swallowed; the mouth should be washed out with cold water before and after the operation. This mode, I believe, originated with Clare.¹ It was also highly spoken of by Swediaur and others. It had, however, as far as I know, totally fallen into disuse till I revived it. I could narrate a great many successful cases treated in this way, not only of the throat and adjacent parts, but of other forms of constitutional syphilis.² Calomel is also

¹ 'A New Method of Curing the Lues Venerea, &c.;' London, 1779.

² Cases showing the effects of calomel frictions:—

A. T., Queen's Hospital, a girl about 20 years of age, admitted with lichen, covering the face, back, and limbs; also bad ulceration of the tonsils. Treated in various ways, with varying benefit; at times she was better, and then relapsed. The ulceration of the throat remained after the other symptoms had disappeared. This is common in syphilis; one symptom will remain and prove obstinate and rebellious to the treatment which has cured the other. The ulceration of the throat quickly and permanently disappeared by rubbing three grains of calomel on the tongue, gums, and inside of the cheeks, night and morning. Mercurial vapour was not used.

CASE.

M. S. had indurated chancre, succeeded by lepra and ulceration of the tonsils; the lepra chiefly affected the hands with thick, hard scales. The case was very obstinate; the mercurial vapour bath was used with benefit; but whatever plan of treatment was adopted never succeeded in removing both the symptoms in the throat and on the hands; one symptom only yielded. A permanent cure was at length obtained by rubbing three grains of calomel twice a day on the tongue, and on the inside of the cheeks and gums. No salivation was produced, although the remedy was used for a month.

CASE.

J. M., æt. 28; constitutional syphilis for two years. All the symptoms had disappeared, except superficial aphthous patches on the fauces, tonsils, uvula, and roof of the mouth, which had rendered the mucous membrane of these parts thick and uneven. The parts surrounding the ulcers were red; if the patient drank or smoked, the parts became inflamed and painful. Various remedies employed without success; they had absolutely no effect on the throat, which seemed the same after all other symptoms had disappeared for twelve months. A perfect and permanent cure was obtained in six weeks by calomel friction. No salivation or stomatitis was produced.

useful dusted over various secondary syphilitic affections of the skin, especially secondary condylomata. Made into an ointment with lard, it is most useful as a dressing to secondary ulcers, or employed by way of friction in scaly diseases of the skin.

℞ Adipis ppt. ʒj;
Hyd. chloridi, ʒj. M.

Mixed with tannic acid or powdered acacia, in various proportions, it may be blown into the throat or nasal fossæ in cases of secondary ulcerations of these parts. I have practised this in the Queen's Hospital and in private practice frequently. After the failure of other means, M. Biett has used it in this way, with complete and prompt success.

℞ Hyd. chloridi, gr. ij—v;
Pulv. acaciæ, gr. v.
M. ft. pulvis ter die utend.

M. Biett has carried the insufflation of calomel to the extent of fifteen or twenty grains a day. Some very remarkable and good cures were thus obtained. All modes of administering calomel are open to the objection of occasionally producing salivation.

THE BICHLORIDE OF MERCURY.

The bichloride of mercury is a valuable remedy in the treatment of many forms of constitutional syphilis, particularly of those varieties which are complicated with ulcerations of the mucous surfaces. According to Dzondi, whose method of treating syphilis is extensively followed in Germany, and at La Charité Hospital of Berlin, the bichloride of mercury is the chief preparation of this remedy on which reliance should be placed in the treatment of constitutional syphilis. This was a favorite remedy of Dupuytren's, who gave it in small doses in the form of pills.

℞ Hydr. bichloridi, gr. ij;
Pulv. opii, gr. viij;
Pulv. guaiaci, gr. xxxii.
M. ft. pil. xvj; j ter die.

Dzondi's pills each contain one twentieth of a grain of the bichloride, united with a small quantity of opium. He

administered, in the commencement, four a day, half an hour after the dinner meal. Twelve grains of the bichloride are made with an inert powder, as liquorice, into 238 pills. Four of these pills are given the first day; the day but one after, six; increasing the dose two pills every day, and leaving one day's interval between each dose, so that, on the thirtieth day from the commencement, the patient takes thirty pills, or one grain and a half of the salt.

The bichloride of mercury is much better administered in solution. I so exhibit it, with some decoction of the woods, either of guaiacum or sarsaparilla. From twenty drops to a drachm or more of the liquor hydrargyri bichloridi may be given in a tumblerful of one of these decoctions, twice or thrice a day, with the best effect. United with bark and hydrochloric acid, it is also exceedingly useful in the advanced stages of constitutional syphilis in debilitated habits.

Mixed with lime-water, in the proportions of from four to eight grains to the half-pint, it forms a useful application to many secondary venereal ulcers. I exclude from consideration the method of Cirillo, which consists in using the bichloride mixed with lard, by way of friction, on the soles of the feet. By Continental surgeons the bichloride is used to produce the ordinary effects of mercury in primary syphilis, to which, in my opinion, it is little suited.

THE IODIDE OF MERCURY.

The iodide and biniodide of mercury were first introduced into the therapeutics of syphilis by Biett of St. Louis, and since largely employed in that hospital by his successor, M. Cazenave. They are most valuable remedies in the treatment of many forms of constitutional syphilis, and I have for years employed them both, but more especially the biniodide, with almost uniform success. Many surgeons who have employed it associate it with opium; but Biett and Cazenave state that its combination with opium destroys its curative properties, although its efficacy is increased by treating the patient with daily doses of opium for a few days before the use of the iodide

is commenced ; it is useful also to omit the remedy for a day every three, and give a full dose of opium. The iodide of mercury must be administered in the form of a pill combined with lactucarium, in doses of from one to three grains.

℞ Hydr. iodidi, gr. x ;
Lactucarii, ℥ij. M. ft. pil. xx.

From one to four pills a day (Cazenave). A very good way of administering the iodide has been suggested by Dr. Neligan, to substitute it for the calomel in Plummer's pill.

℞ Hydr. iodidi,
Antim. oxysulphuret, āā ℥ij ;
Guaiaci in pulv.,
Sacchari fæcis, āā ℥iv. M.

The iodide of mercury is indicated in pustular and tubercular diseases of the skin, in diseases of the bone and testes ; in secondary venereal ulcerations, where the constitution has long suffered protracted and varied treatments, and still the disease remains. It frequently cures after the failure of other remedies ; its employ should be associated with a nourishing, but not stimulating diet, decoctions of the woods, and the mercurial vapour bath. The iodide is an uncertain remedy, producing commonly griping pains, in however small a dose it may be given. M. Ricord employs it by giving one grain every evening, after the last meal. When the dose is to be increased, one is to be taken in the morning, and one in the evening. It is chiefly indicated in constitutional, not in primary syphilis.

THE BINIODIDE OF MERCURY.

I prefer the biniodide of mercury to the iodide ; I find it agree well with the gastric condition of the patient, which the iodide frequently does not. It is more manageable, and can be given in solution, a great advantage. I employ it in solution with the iodide of potassium, a combination which I have been in the habit of prescribing in the Queen's Hospital for years.

℞ Hydr. biniodidi, gr. iij;
 Potass. iodidi, ℥j—iij;
 Sp. vini, ℥j;
 Syrup. zinzib., ℥j;
 Aquæ dest., ℥jss. M.

Twenty or thirty drops three times a day, in half a tumbler of some decoction of the woods. M. Puch, of the Hôpital du Midi, employs a form somewhat similar. This remedy is indicated in the same cases as the iodide. Used in small doses, with the mercurial vapour bath, it produces excellent cures.

THE BICYANIDE OF MERCURY.

The bicyanide of mercury is frequently employed in secondary syphilis, and for the following reasons:—It is soluble and not liable to decomposition, acts quickly, and does not occasion those pains in the stomach and bowels that so frequently accompany the prolonged administration of some other preparations. According to the researches of M. Parent-du-Châtelet,¹ the bicyanide of mercury is not decomposed by either acids or alkalies, nor by decoctions containing azotized principles or gallic acid.

The bicyanide of mercury may be administered internally in pills, or in solution, and used externally in form of pomade or ointment. Externally, it is an extremely useful application to various forms of herpes, particularly that form termed by Alibert "herpes squamosus," the violent itching and irritation of which it allays. It may be employed externally also as a dressing to indolent syphilitic ulcers and scirrhus tubercles, or as a gargle in ulcerations of the throat. The dose of the bicyanide is from one sixteenth of a grain to a grain.

GARGLE OF THE BICYANIDE OF MERCURY.

℞ Hydrargyri bicyanidi, gr. x;
 Infus. lini comp. ℔j. M.

SOLUTION OF THE BICYANIDE OF MERCURY.

℞ Hydrargyri bicyanidi, gr. vj ad gr. x;
 Aquæ, ℔j. M.

¹ 'Revue Médicale,' Août, 1832.

Half an ounce for a dose, administered in a sudorific decoction of the woods, night and morning.

PILLS OF THE BICYANIDE OF MERCURY.

℞ Hydrargyri bicyanidi, gr. xxiv ;
Ammoniae hydrochloratis, ℥iij ;
Guaiaci gummi, ℥iij ;
Ext. aconiti, ℥iij ;
Ol. anisi, ℥xxiv.
M. mucilaginis, q. s. ft. pil. 400.

One or two twice or three times a day, the dose gradually increased. Each pill contains about one sixteenth of a grain of the bicyanide. These pills are a substitute for the bichloride of mercury, in many forms of secondary syphilis. M. Desmartis, of Bordeaux, says that the cyanuret (bicyanide) of mercury is superior to all the other preparations of this metal in the cure of constitutional syphilis. He has seen it restore to health patients whose cases seemed hopeless. He has found it efficacious in cases where the patients had suffered for long periods from pains, for which no cause could be discovered. It is indicated in syphilitic diseases of the nose and fauces. I have had some experience in the use of the bicyanide. It does not purge or gripe. A patient requested me to prescribe for him a mercurial that would not purge him ; he had a scaly eruption always benefited by mercury, but he could not continue the remedy long enough to cure him, as it always produced diarrhoea in any form that he had hitherto taken it. I prescribed the bicyanide, under the use of which the eruption disappeared without the usual ill effects accompanying the administration of the other preparations of mercury.

THE IODIDE OF POTASSIUM.

Iodine and its preparations, more particularly the iodide of potassium, are employed largely in the treatment of all forms of syphilis. Desruelles has recorded several cases of the cure of primary sores with the iodide. Hanck and Kluge have, on the contrary, given the results of four hundred cases of primary syphilis in which the iodide of potassium had little or no

effect. M. Payan has related some cases of indurated chancre, and primary sores with bubo, which yielded to treatment by the iodide. My own experience is against the use of the iodide in primary syphilis, except in some cases of phagedena, in bad habits of body, where I have seen it useful. M. Payan lays it down as a principle, that the efficacy of the iodide of potassium is in direct ratio with the long standing of disease; and hence many surgeons have been led to regard this remedy as almost specific in tertiary symptoms, such as nodes, tubercles, affections of the testes, pains in the bones, caries, and certain forms of secondary ulcerations. M. Ricord regards the iodide of potassium as a prophylactic against tertiary symptoms, when secondary symptoms have disappeared under the use of mercury.

It is certainly in the class of cases just alluded to that the iodide of potassium is most useful, and under many circumstances works remarkable cures. The iodide of potassium, as I have already said, is not to be depended on in the treatment of primary sores; neither is it generally indicated in the earlier stages of secondary eruptions in healthy subjects, nor in the confirmed or chronic stages of scaly or papular diseases of the skin. In such complaints, antimonials, or the bichloride or biniodide of mercury in small doses, in decoctions of the woods, are infinitely more certain and effectual.

In pustular and tubercular skin disease, or in the secondary forms of ulceration which succeed to these, more especially if mercury have failed in their treatment, or the patient be weak and debilitated, or over forty years of age, the iodide of potassium is a most valuable therapeutic agent.

There are, however, many cases of this nature in which the iodide rather suspends than cures disease; and its prolonged use disposes to wasting of the body, and under some circumstances utterly destroys the digestive powers. I have known cases where it has been taken respectively for three, five, nine, and ten years; and in these cases the symptoms have returned when the iodide has been discontinued. A case will be found in the next chapter, of a surgeon who took three daily doses for ten years, and yet his disease remained. Whilst he took the iodide, the symptoms were kept under; but when he omitted it, they always returned. Pains in the bones are very apt to

return directly the iodide is given up. Such cases are not singular; they are exceedingly frequent. I have in the chapter 'On Diseases of the Bones' recorded several cases of this nature. Dr. Neligan says, "Iodine and its preparations should not be trusted to alone with the intention of producing a specific action in the treatment of the secondary eruptions; their combination with mercurials is of especial service, but unless thus prescribed they usually disappoint. In scrofulous habits their administration should never be omitted, but still a mercurial must be given with them. The administration of the iodide of potassium is attended with the best results, as soon as the preparation of mercury which has been given evidences its action on the system by the mouth being affected."¹

The iodide of potassium cannot be taken by some patients: in many it produces swelling of the tongue, and salivation; in others, puffing and swelling of the face, and a stiffness of the muscles of mastication. I do not think it produces wasting of the glandular organs, such as the testes and mammæ. I have elsewhere ('Provincial Medical and Surgical Journal') recorded several cases of the prolonged use of the iodide where the testes, &c., were unaffected.

The iodide of potassium may be administered in doses of three to twenty grains three times a day, in distilled water, or some sudorific decoction, as sarsaparilla, saponaria, &c. By some surgeons its use has been carried much farther, and several cases have been recorded where the iodide of potassium has succeeded in large doses where it has failed in smaller ones. M. Vidal mentions a case of ulceration of the tongue, where the iodide had been taken for six months to the extent of twelve grains a day without benefit, which healed in thirty days where the patient took for the first few days thirty-six grains a day, and afterwards seventy-two grains a day. In small doses the iodide is tonic, and as such may be employed as a prophylactic of a further outbreak, when given after a mercurial course which has been employed for the cure of secondary symptoms, and which have disappeared under such treatment. The iodide should then be given in small doses, five or eight

¹ 'On Diseases of the Skin,' p. 398.

grains three times a day, in some sudorific decoction, for some time.

When, again, secondary symptoms do not yield to mercury, or only partially yield, or where the remedy appears to benefit for a time and then loses its effect, its use should be given up, and the iodine taken for some weeks in small doses; the mercurial course should then be resumed, with another form of mercurial remedy, and it will be commonly found that the symptoms very quickly yield.

It is in large doses, rarely less than from ten grains to a scruple, that the iodide of potassium acts as a direct anti-syphilitic. The iodide of potassium should not be given with a mercurial, except in the forms of the salts of iodine and mercury. The mercurial should be administered some hours before the iodide: thus, the mercury may be given at night, and the iodide of potass in the day; or, if two daily doses of a mercurial are requisite, the iodide should be given about four hours afterwards. "The mercury enters the blood, and accomplishes what it can: it is then ready to be removed; and this process, effected usually by the salts of the blood, especially the chloride of sodium, is hastened, as shown by Melsens, by the iodide of potass. In this way salivation is prevented, and the action of the mercury accelerated."—'British and Foreign Medico-Chirurgical Review,' April, 1854.

IODIDE OF SODIUM.

The iodide of sodium has lately been recommended as a substitute for the iodide of potassium by Dr. Gamberini, of the Hospital of Saint Orsola, Bologna.¹ The following are the conclusions made by Dr. Gamberini:

1. The taste of the iodide of sodium is much less disagreeable than the iodide of potassium.
2. It is much less likely to occasion iodism.
3. It is better borne than the iodide of potassium; and in consequence of this its dose can be almost daily increased, and it thus becomes a more efficient remedy.
4. It has succeeded where the iodide of potassium has failed.

¹ See 'Dublin Quarterly Journal,' Nov. 28th, 1852.

5. We may commence with doses of a scruple a day; two drachms a day have been taken without the slightest inconvenience.

6. The iodide of sodium is admirably suited to cases in which the corresponding salt of potassium is indicated.

7. The iodide of sodium is the best substitute for mercury.¹

IODIDE OF IRON.

The iodide of iron may be employed with or without the iodide of potassium, in many of the advanced stages of constitutional syphilis. The cases best suited to its exhibition are those of syphilitic cachexia, or chlorosis, complicated with old ulcers or diseases of the bones, in a strumous habit of body. Administered alone, the iodide of iron rarely, if ever, cures constitutional syphilis; but it may be prescribed with great advantage combined with the iodides of potass, sodium, or ammonium, after a mercurial, in many forms of constitutional syphilis, in weak habits of body.

℞ Syrup. ferri iodidi, ℥vj—℥j;
Potass. iodidi, ℥j—℥jss;
Decoct. sarsæ concent., ad ℥viij. M.

¹ I have used the iodide of sodium largely. It has been successful in those cases where the iodide of potassium might also have been beneficial, such as nocturnal pains, diseases of the bones, and the ulcerating forms of tubercle. In one case of syphilitic tubercle of the tongue, its effects were speedy and marked. It may advantageously replace the iodide of potassium in many cases where the latter cannot be borne, as it does not produce swelling of the tongue, discharge from the nose or eyes, pains in the muscles of the face, or any pustular eruption, so common under the use of the iodide of potassium. It is well known that some patients cannot take the iodide of potassium where it is strongly indicated, and here the iodide of sodium will prove useful; it is also exceedingly probable that it may cure where the iodide of potassium has failed. The iodide of sodium cured a case of secondary phagedena of the throat very quickly, where the iodide of potassium could not be borne, on account of the large pustular blotches it brought out. On the whole, my experience in the use of this salt has been such as to warrant my recommending it as a very valuable addition to the remedies at present employed in the treatment of constitutional syphilis, and it is exceedingly probable that many cases will occur where it may find its special application.

I have employed the iodide of sodium as an anti-syphilitic in doses of fifteen grains three times a day.

IODIDE OF AMMONIUM.

The iodide of ammonium is a yellow salt, and may be used in the same cases as the iodides of sodium and potassium. As the result of several trials made by Dr. Gamberini, of Bologna, it is stated—"1. That the iodide of ammonium is suited to all cases in which the iodides of potassium and sodium are employed. 2. It leads to a rapid cure. 3. The quantity daily given may be varied from half a drachm to half an ounce; intolerance is rarely exhibited. 4. Employed by way of friction with olive oil, it causes the disappearance of osteoscopic pains. 5. The symptoms of intolerance are a sense of burning pain in the throat, and heat in the stomach; these rapidly disappear on the suspension of the remedy for a couple of days. 6. Under the use of this medicine, indurations consecutive to hard chancres have disappeared, also the indurated ganglionic pleiades in the groin (?). 7. Arthralgias and rheumatoid affections, periostoses, enlarged glands, and papulo-vesicular syphilida, are the forms of constitutional syphilis which have yielded to this drug."—"Bulletin de Thérapeutique," vol. lvii, p. 365, and 'Medical Times and Gazette,' Nov. 29, 1859.

SUDORIFICS, VEGETABLE DECOCTIONS, AND INFUSIONS.

The various vegetable decoctions and infusions have been long, and are still, employed in the treatment of secondary and constitutional syphilis. To some of these a specific action has been attributed, whereas others must be looked upon as auxiliary remedies merely, whose action is comparatively feeble. Of themselves, it may, I think, be said that they never cure alone; occasionally some symptoms disappear under their use, but generally return when this remedy is omitted. In many forms of skin disease these decoctions of the woods are useful; as auxiliaries, they certainly assist the action of other remedies, and I always prescribe them with this view during the time a patient is using the mercurial vapour bath.

The remedies which are chiefly useful in this way are sarsaparilla, guaiacum, burdock, water-dock, saponaria, sassafras, dulcamara, mezereon, and elm-bark. I generally recommend the compound decoction of sarsaparilla, made according to the

form of the London Pharmacopœia, or what I think better, the compound decoction of guaiacum of the Dublin and Edinburgh Colleges, to be taken with the bichloride or biniodide of mercury, or the iodide of potassium. The saponaria is a favorite remedy with many Continental surgeons, who seem to place much faith in it as an auxiliary remedy. Mr. Whitehead speaks highly of the *Rumex hydrolapathum* (water-dock) in the secondary, or rather the tertiary forms of syphilis. Mr. Whitehead says its virtues as an anti-syphilitic cannot be too highly extolled. The only part recommended for use is the root. Most of these remedies may be employed in form of decoction, in the proportions of about an ounce to a pint. All these decoctions should be prepared fresh every two or three days.

In Germany especially, an empirical treatment by the decoction of Zittman is said to be very frequently successful; it is associated with aperients, rest in bed, and a most rigid diet. It is, as Mr. E. Wilson truly says, a compound of sweating, starving, and purging. I have seen several German patients who have been treated by this plan, and their diseases not cured. It reduces the patients to an extreme degree of weakness, and requires confinement to bed during the course.

ZITTMAN'S DECOCTION.

℞ Rad. sarsaparillæ, ℥xij;

Aquæ, lb xxiv.

Boil for two hours, and add—

Aluminis sulph. ℥jss;

Hydrarg. chlorid., ℥ss;

Antimonii oxysulphuret., ℥j

Boil down to two thirds, and add—

Fol. sennæ, ℥iij;

Rad. glycyrrhizæ, ℥jss;

Sem. anisi, ℥ss.

Infuse for an hour, and strain.

This is termed the stronger decoction. The weaker one is to be prepared by taking the residue which remains after straining the stronger, and adding

℞ Rad. sarsaparillæ, ℥ij;

Aquæ fontanæ, lb xxiv.

Boil for two hours, and add—

Corticis canellæ,

Corticis limonum,

Semmi cardamomi, āa, ℥iij.

Infuse for an hour, and strain.

The patient is directed to take half a pint of the stronger decoction the first thing in the morning, warm, and to remain in bed some time after taking it. During the day he should take at intervals a pint of the weaker decoction, and in the evening a second half-pint of the stronger. The last two doses are to be taken cold. Every fifth day the decoctions are to be omitted, and an aperient taken.

In some anomalous forms of scaly venereal diseases of the skin, arsenic has been recommended ; alone it is rarely, if ever, successful in pure syphilis ; with the iodide of potass or mercury it is sometimes useful. In Donovan's solution the arsenic is combined with both remedies.¹ I have found this remedy uncertain, sometimes inert, at others too active.

OPIUM.

Opium has, by a number of authorities, both ancient and modern, been extolled as a remedy of great value in the treatment of many forms of syphilis, and by many surgeons the dose has been carried to the extent of twenty or even thirty grains in the day. The cases in which opium is indicated, and in which I have employed it with success, are those of constitutional syphilis where the health has been broken by protracted disease and the use of mercury, when the nights are bad, and the patient emaciated and feeble ; where a general irritability, the result of disease and mercury, prevails, and appears to be wearing the patient out.

In exostoses, periostoses, local pains, and secondary ulcerations, occurring in constitutions and in persons thus circumstanced, opium in large doses sometimes acts magically. I have employed it also with marked success in secondary ulcerations of the throat which have remained after mercury had been a long time used, and the ulcers still remained rebellious to every plan of treatment. In protracted ptyalism, resisting local treatment, it is also very efficacious. In all these instances opium appears to subdue a certain constitutional irritability which keeps up the disease, and upon which the disease appears to depend more than upon any specific cause. It is surprising

¹ *Liquor arsenici et hydrargyri hydnodalis*, Ph. D.

what large doses of the drug patients in this state will sometimes bear without producing constipation or headache. I have rarely given more than four or five grains a day; but I have no doubt the dose, as recorded experience has already proved, might be carried much further without any risk, should the circumstances of the case require it. In summing up the history of the remedies employed in constitutional syphilis, Cazenave says, "We have yet another mode of treatment to recommend, by whose agency we have seen the most formidable symptoms yield, the most inveterate ulcerations healed, and the most durable cures produced, when all other remedies have failed. We speak of the aqueous extract of opium, a precious remedy, even in the most profound cachexia"¹

M. Rodet has given the following rules for the exhibition of opium in cases of syphilis:—"1. That the opium combined with mercury in the treatment of bad chancres acts as a powerful auxiliary. 2. That it cures ulcers of this description which have not yielded to mercury. 3. That it may ameliorate, but not cure, such ulcers when given alone and without having been preceded by mercury. 4. That it is well suited for allaying the inflammation which complicates syphilitic accidents."—'Med. Times and Gazette,' Aug. 16, 1859, from 'Bulletin de Therapeutique,' vol. xlix.

I have used opium very successfully in obstinate syphilitic sores, both primary and secondary. A girl, aged 26, had a large phagedenic chancre occupying a great portion of the perineum, running close up to the anus; the ulcer was as large as a cheese-plate. It continued to spread for weeks in spite of various treatments, when I placed her under the use of opium, the dose of which was carried to eight grains a day. No particular disturbance was produced by it, except constipation; the bowels were not evacuated for a fortnight, and I recommended her to do with as little food as possible. In three weeks the ulcer was soundly healed. I never saw a more successful or a more remarkable case.—A gentleman had a phagedenic sore surrounding the orifice of the urethra, and occupying the glans penis; he also suffered from ague. The ulcer healed by the use of opium alone, after the failure of many other remedies. I mention also

¹ 'Traité des Syphilides, &c.,' Paris, 1843.

another case, of a man who had a creeping phagedenic ulcer of the body of the penis. When I saw it, it had existed a year. Mercury, iodine, and other remedies had failed; but it healed in a few weeks by persevering in the use of large doses of opium. I had used the opium very largely in the treatment of syphilis before the appearance of M. Rodet's paper.

About the year 1864, M. Scarewzeo, clinical professor in the university of Pavia, published an account of some attempts made to cure constitutional syphilis, by means of hypodermic injections of mercurial preparations. Before I saw this paper, or the abstract of Lewin's elaborate paper, given in the 'Practitioner' and in the 'Biennial Retrospect' of M. and S., published by the Sydenham Society, I had thought this remedy as an additional and advantageous mode of treating constitutional syphilis, or at least mitigating its ravages.

This method consists in injecting various preparations of mercury under the skin, by which means equally beneficial results were attained, and the stomach and alimentary canal are spared the irritation produced by swallowing repeated doses of the drug. There is a strong analogy between this method and mercurial inunction; in one case the remedy penetrating the cellular tissue through the epidermis, and the second, it is passed directly without the interstices of any membrane or tissue. In both cases the alimentary canal is spared, and I have great faith in the dictum I have so often inculcated, that the way to cure syphilis is by the skin and not by the mouth.

The forms of disease to which the hypodermic method is most applicable are, as far as my experience has yet gone, the secondary forms of dry or scaly eruptions; it is over such forms of disease that ordinary mercurial treatments generally are most successful; and it is here that the hypodermic treatment is also most applicable, either as an ordinary plan or as a "dernier resort" when other remedies have failed, or in relapses after other modes of treatment. A daily injection of the bichloride here would perhaps be the best form of remedy; but there are other forms of disease where some of the other salts of mercury are very useful.

The most important work hitherto published on this method is that of Lewin, analysed in the 'Practitioner' for March, and

there is also a good résumé of it in the 'Biennial Retrospect' of the Sydenham Society. The original injection of Lewin consisted of three grains of the bichloride dissolved in one ounce of water, and of this one injection of fifteen minims was made daily. This was one eighth of a grain of the salt—about the quantity that would be administered by the mouth—two or three times a day. Injections of this strength produce very little local irritation on the tissues. If a strong solution be used, small abscesses might possibly form at the site of the injection.

Another form for injection has been recommended by a French physician, M. Aimé Martin, which is said not to be irritant to the tissues. It consists of four centigrammes of the biniodide of mercury dissolved in one drachm of distilled water, with the addition of a few grains of iodide of potass to render it more soluble.

M. M. reported a case to the Academy of Medicine of an aggravated nature, which had resisted several modes of treatment, and which was cured by two injections, of half a drachm each, of this solution, made at intervals of eight days.

The iodide of potassium occasions some irritation when injected, but the iodide of sodium is said not, and is equally efficacious as an anti-syphilitic.

The following remedy, after repeated trials to obtain a non-irritant, has been found very useful. It consists of twenty-three grains of the double iodide of mercury and sodium, dissolved in three ounces and three drachms of distilled water; of this solution ten drops or minims are injected every second day. It may be inquired, what, if any, are the advantages of this mode of treatment? It has many advantages.

1. It gives us another remedy to fall back upon when others have failed.

2. It can be used in patients who cannot bear mercury by the mouth, but here it possesses no great advantages over mercurial frictions or mercurial vapour.

3. It sometimes cures when other remedies fail.

4. Syphilitic symptoms diminish with great rapidity under its use.

5. It is very easy of application, and we can regulate the strength of the remedy with great precision and certainty.

Such are some of the advantages secured by this mode of treatment, and they appear to me very great.

It is on the other hand liable, like all other treatments, to some inconveniences and accidents, but these being known may almost always be avoided.

If the injection be too strong, or too much be used, it may be followed by shivering or symptomatic fever, or abscess of the tissues into which the injection is thrown; I have, however, injected in a great number of cases, and have only seen any accident of importance occur three times, and this has been owing to injecting too frequently into the same spot, or using the injection too frequently, *i. e.* twice a day. One injection should be given every other day, or certainly not more than every other day in acute cases, such as iritis; it may be used daily, but in chronic cases, every other day or every third or fourth day, according to the nature of the case.

The place of injection is of great importance. It should not be repeated on the same spot too frequently; if this is done, the subcutaneous cellular tissue becomes hard, a condition of hard œdema is produced, it becomes difficult to introduce the point of the syringe, which, if much force is used, is liable to break off, and, when introduced, the injection will not pass. Scarewzeo recommends the front and sides of the chest as the place of election, or the thighs or arms. I give preference to the abdomen; there is a large surface, the skin is easily pinched up, and the syringe introduced. Either little or no pain is felt and no irritation in a great majority of instances follows. I had a lady under treatment by this method alone, who made a very good cure by means of a daily injection of the bichloride of mercury. After two or three injections made by myself, they were made by the husband, and these were entirely confined to the surface of the abdomen.

The mode of performing this little operation is so simple that it is hardly worth while to describe it. It may be well, however, to do so. A portion of thin integument should be chosen, and then pinched between the fingers; this may be done by the patient. The point of the syringe is then pushed through with a screw-like or rotatory motion; the whole of the tube and the syringe should be inserted, and then withdrawn half way, so as

to leave room for the fluid to pass more easily down ; and after the whole of the fluid has passed withdrawn.

The accidents which occasionally follow the hypodermic method are no greater than those attending any other mode of treatment. In fact they are less : they are either constitutional or local. Salivation is rarely induced, although it has been so in a few cases. Gastric irritation, colic, diarrhœa, and other abdominal symptoms, which attend either a long course or an over dose of mercury, have been observed after the hypodermic treatment ; but if this be properly managed, and the dose not too large or too frequently repeated, these very rarely occur—in fact, the accidents are less than under the ordinary methods.

The local irritation may, without care, be troublesome. I have myself noticed abscesses circumscribed or diffused at the point of injection ; in one instance, where repeated injections were made in the thigh, a very large abscess was produced. But in almost every case these may be avoided, if the injection be not too strong, of not too irritating a character, and not repeated too frequently in, or in the neighbourhood of, the same place.

There is another great objection to the repetition of the injection in or near the same place. The cellular tissue loses its lax and yielding nature, it becomes hard, like a condition of hard œdema, the point of the syringe enters with difficulty, and even sometimes breaks off, and the injection only penetrates slowly and with great difficulty.

All modes of treatment are attended with some difficulty or annoyance, and the hypodermic treatment does not exceed, if it equals the average under this point, and it possesses several incontestable advantages. No treatment is attended with less trouble either to patient or to surgeon, and I have seen it work one or two excellent cures where most other means had failed.

In a question mooted at the beginning of this chapter on what are the advantages to be gained by this mode of treatment, the answer was “ that it gave us another form of remedy to fall back upon in rebellious cases and cases of frequent relapse.”

Every surgeon knows the difficulties which surround the treatment of constitutional and the frequency of relapses under almost any plan of treatment. In cases which have relapsed several times the hypodermic treatment is very useful.

The syringe used for mercurial injections is that commonly sold by instrument makers for injections of solution of morphia, and other salts. Mr. Coxeter has suggested an improvement in the construction of the ordinary syringe by making the orifice at the side instead of the point, and surmounting this with an exceedingly fine trocar. The advantages of this are that first the point penetrates the skin more easily and with less pain, and the tube is less likely to get stopped up. Sometimes a spot or two of blood follows the withdrawal of the syringe, and I have observed that this more frequently follows the use of the steel point than the electro-gilt one. If the skin be pinched up moderately tight, the insertion of the point of the syringe is hardly felt.

Sometimes a little soreness and stiffness is felt in the neighbouring parts for a day or two after the injection. It is hardly worth while occupying time by the detail of any cases, since what I have said has in the main been deduced from what I have observed in my own treated on this plan. I may, perhaps, be permitted to mention one or two cases which have possessed some practical interest.

A gentleman contracted eighteen years ago a chancre of mixed character; it presented no induration whatever; it secreted pus. There was no bubo either indolent or suppurative; in fact, so slight was it that I felt justified in telling him that I thought no constitutional mischief would follow. He took no mercury, neither did he use it by way of friction or vapour. Two months after this he consulted me respecting a few scaly blotches, which yielded to a course of treatment by the Hyd. Calcinatum. A few months elapsed when a second attack occurred, which disappeared under a course of calomel vapour. A third attack, which was treated in the same way, and the symptoms all went away, except a large scaly blotch on one leg, which the treatment did not touch, but which spot went away under frictions of calomel on the gums on Clare's plan. A fourth attack of four large scaly blotches—two on the palms of each hand. These spots were most rebellious. The iodides, mercury by the mouth, frictions, and vapour, all failed in making the least impression; but six injections of the bichloride, one every other day, of one eighth of

a grain at each injection under the skin of the arm, caused all the blotches, which had been in existence for six weeks, to disappear in about twelve days. Some stiffness and soreness were felt in the arm, but no serious local trouble followed.

It is possible that this mode of treatment might be followed by the evils which attend other modes of mercurial treatment, such as diarrhœa or salivation ; but it is less likely to do so on account of the small quantity of mercury used.

The operations may be rendered entirely painless by a few jets of æther used over the spot of puncture, and any causative evil made very improbable by closing the puncture with a little collodion afterwards.

In addition a few minims of the solution of muriate of morphia might be injected with the mercurial solution.

℞ Solut. morphiæ muriatis (Bell's form) 1 gr. to 6 minims. Of this injection 3 to 5 minims, with from 12 to 15 of the solution of the bichloride of mercury.

FINIS.

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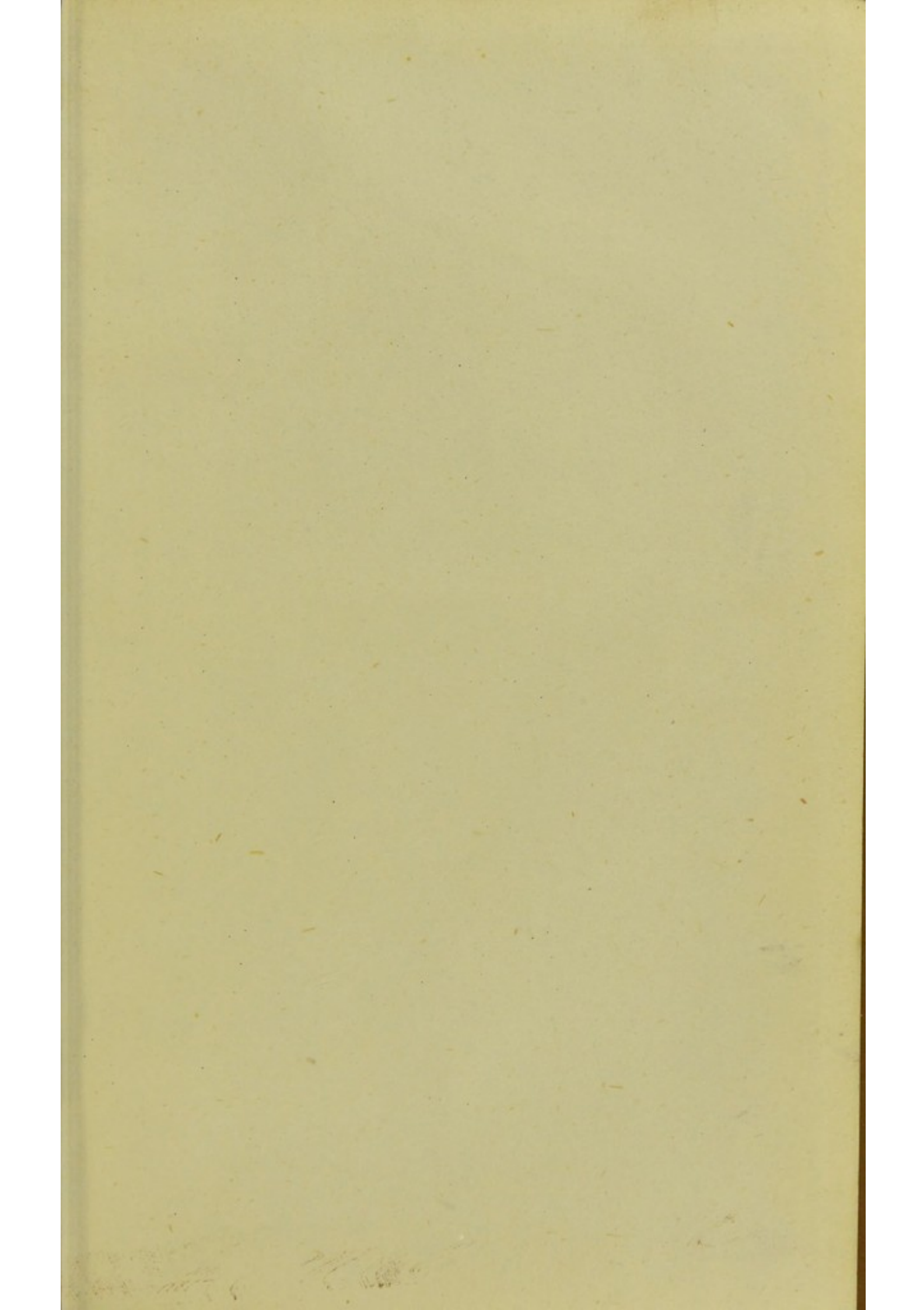
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