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FOREIGN OPINIONS

ON

SYPHILIS.

COLLECTED AND ARRANGED BY

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FOREIGN OPINIONS OF THE NATURE OF SYPHILIS.

I.—SIGMUND OF VIENNA.

The doctrines which systematise the views of different writers and observers on syphilis are so various and contradictory that a short *exposé* of the opinions of some of the most trustworthy observers may prove interesting. Several English surgeons have made the conclusions of Ricord, and of some other French writers, familiar to the medical public of this country; while the opinions of other observers are not so well known, or have been modified since the date of their latest publications on the subject. I propose, therefore, to offer some brief analyses of these, and to begin with the results of the observations of Professor Sigmund of Vienna, who has charge of the clinical venereal wards in the General Hospital there.

Dr. Sigmund has, from time to time, read papers on syphilitic contagion before the Medical Society of Vienna, in the *Transactions* of which body they have been recorded. In addition to these, the Professor condensed his views into an article for the *Vienna Medical Year-Book* for 1861. This article is entitled, "On the Difference of the Contagious Principles, and the Classification

of Venereal Affections dependent thereon." It is from this latter publication, and from the lectures delivered in his wards, that I have drawn my information of his views on this subject.*

Sigmund first eliminates gonorrhœa from the forms of syphilis, as being totally distinct from them. Next, he describes the transmission of the virus.

These are his views on the modes of, and results of, transmission of the virus of chancres, etc.

The vehicles of the contagious principle of the varieties of venereal sores are the pus, blood, and exudation fluids of syphilitic persons. All other fluids can convey this contagious principle only through admixture of these three. Transmission succeeds only on broken surfaces; never where there is no breach of continuity. The earliest symptom of inoculation or reception of the virus shows itself in these places as a circumscribed exudation or infiltration in form of an ulcer, pustule, or papule, appearing either very quickly in from one to two days; now and then, five days; or, as a rule, much later, between the fourteenth and twenty-first day; but never later than six weeks after contagion. All these introductory forms are called primary forms. Secondary forms are those which owe their existence to an infected state of the blood consequent on the absorption of the virus propagated on these local primary ulcers, etc.; therefore they appear scattered generally throughout the tissues.

Observations extending over years, of individuals well

* The Professor, in answer to a letter from me, asking for any later information he could give, has very kindly set forth his present opinions at some length. In some important respects, he has seen reason to modify his views. These modifications are inserted in the text. His letter is dated July 3rd, 1862. (M. B. H.)

known to Sigmund before they were attacked by venereal sores, proved to him that this general constitutional affection did not follow every transmission of the contagious matter. On the contrary, many of them suffered repeated contagions on various parts of the skin and mucous membrane, anus, navel, axilla, mouth, nipples, between the toes, tongue, palate, and tonsils, with no injury beyond purely local ulcers and inflammation of the nearest group of glands. To others of them, nevertheless, a single local affection, under the form of a pustule, papule, or ulcer, sufficed to induce constitutional symptoms. The period within which these constitutional symptoms, of which the enlargement of the lymphatic gland is the earliest, succeed the primary affections, is six or eight weeks, and never extends beyond twelve weeks. This exception occurs in persons debilitated by fevers, pregnancy, etc.

In consequence of the similarity of the primary forms in all these cases, it was impossible, in all cases, to distinguish the infected from the non-infected cases until this probationary period was passed, and the appearance or non-appearance of the lymphatic gland enlargement was established.

This indolent enlargement of the greater part, if not of all the lymphatic glands, is the earliest pathognomonic sign of syphilis. To it is owing the impoverishment of the blood, and thence the ill-nourishment of the tissues, etc.

Having thus described contagion and its consequences generally, Sigmund divides venereal sores and affections into three classes:—1. The primary contagious forms; 2. The contagious and infectious secondary forms; 3. Pseudosyphilis.

1. The first class includes the two varieties of chancre, the simple and the infecting.

Simple Chancres. These are their characters. They consist of ulcers and abscesses seated on the skin, mucous membrane, and subjacent cellular tissue, usually on or about the sexual organs. They invariably arise through the contact of virulent matter from similar sores with breaches of surface, unbroken surfaces being secure from contagion. The signs of contagion appear from one to two days after application of the virus—very rarely, indeed, the pustule may not appear till the fifth day—as pustules or suppurating wounds; if pustules, they soon become ulcers by increasing loss of tissue, and can thus be repeated far and near on the same individual. The further spread of the ulcer depends on accidental causes or individual peculiarities. Usually, these ulcerations are accompanied by inflammation of the nearest lymphatic glands, with formation of a pus which is inoculable. The course of these ulcers ends with these local complications. So long as they preserve these characteristics, no further affection of the system occurs. They can recur on the same individual indefinitely; they heal without any particular treatment; but they may be severe when occurring in exhausted or debilitated constitutions. These sores are circular, or inclining to circular, and have a sharply cut border. The border and base are at first dense and tough, and are saturated with thick pus; that is, the base is wormeaten and the spongy tissue thus formed is full of tenacious pus. The cicatrix is of similar density as the surrounding tissue. Now and then, long continued inflammation or irritation will cause the base and margin, and even the cicatrix, to thicken; but the glands remain unaffected in these

cases, or at most one or two of the nearest group are acutely inflamed.

A certain diagnosis that the soft chancre is a non-infecting one, depends on the absence of hardening of lymphatic glands during six or eight weeks of its course, and on repeated successful inoculations on the bearer during that time.

Infecting Sore. Its presence in men is indicated by the hard infiltration (sclerosis) of the skin and cellular tissue, etc. The hard chancre is, as a rule, the first appearance of syphilis; the papule is but an exceptional one.

Ulceration and suppuration are not necessary phenomena of this primary affection; when they occur they are produced by various irritants; for instance, uncleanly habits, allowing sebaceous matter, mucus, etc., to collect, and promote irritation and ulceration of the papule, which is but lowly vitalised tissue. Also pressure or laceration, etc., produce greater or less gangrene or decomposition of this syphilitic infiltration or induration matter. It is wrongly called an ulcer; it takes on a chancrous appearance only where an inoculation of the contagious pus of the soft chancre has taken place on it. The inoculation of the two principles may be simultaneous or successive; hence these cases are "mixed chancres"; on the surface lies the soft contagious ulcer; below, the syphilitic infiltration.

In women, the infecting sore is nearly always at first a papule; the hard chancre is very exceptional; and it remains small and ill-developed, so as to be readily overlooked.

Another peculiarity in women is, that not unfrequently the papule is followed by the appearance in its imme-

diate neighbourhood of similar papules just along the course of the superficial lymphatic vessels; whether by contact with the original one, or by percolation through the vessels, the virus reaches the new localities, cannot be decided. After this the infection may proceed to the glands, causing the usual adenopathy and other constitutional symptoms. Often, however, the process stops here without further infection; or, at most, there is a slight follicular swelling of the mucous membrane of the fauces, the tonsils, and soft palate, and this slight complication ends the syphilitic disease in these women. No further secondary or tertiary affection at all takes place.

Mixed Chancre. "I no longer doubt," writes the professor, "the existence of the mixed chancre, since I have produced it artificially by inoculation. I inoculated the pus of a soft contagious chancre, diagnosed according to the rules laid down in the description of that sore, on the infiltration (or sclerosis) of a hard chancre of which the skin remained unbroken. In from twenty-four to forty-eight hours (now and then a delay of two to three days occurred) an ulcer was formed which possessed exactly the characters of the contagious soft chancre. The pus it secreted I again inoculated on the patient, and on others, and reproduced soft chancres."

(In this inoculation experiment, the professor omits to state whether he first tested the hard chancre by inoculation on its bearer; also if the persons to whom he successfully transferred his soft chancre were previously syphilised, so that the syphilitic poison, if contained in the secretion of the mixed chancre, would have no effect. Probably that was the case.)

The border and base of this artificially produced ulcer

were hard; the infiltration was broader than the ulcer, which deepened if not cleaned and treated suitably at once; then it appeared similar to the chancre which at all times has been called the Hunterian chancre.

The same result is produced by inoculation of the soft chancre on an unbroken papule; and such, doubtless, is what occurs when papules on female genitals take on ulceration.

Incubation. The incubation of the simple chancre is almost *nil;* that of the infecting sore is usually from fourteen to twenty-one days, sometimes longer, but never beyond forty-two days. Now and then, exhausting fevers, pregnancy, etc., may cause still more lengthened incubation; but probably further observation will bring such cases within the range of six weeks after the infecting contact.

Consequent on the formation of the hard chancre or papule, whichever may be the primary affection, is the indolent general enlargement of the lymphatic glands. This enlargement occurs about ten or twelve days after the ulcer appears, or about five to six weeks after contagion; but it may also be delayed by exhausting disease until three months have elapsed, but not later.

The diagnosis of an infecting chancre cannot be made without the presence of a progressive adenopathy. Induration of an ulcer is a very deceptive sign. On the other hand, we know no constitutional infection but syphilis which succeeds a local plugging and enlargement of the superficial absorbents—*i. e.*, the chancre—followed by a similar infiltration of the group of lymphatic glands nearest to it, spreading gradually to the distant and most distant groups. If this regular con-

nexion and series of symptoms be not borne in mind, constant errors will be, and are, made daily.

2. The second class contains those affections and eruptions of syphilis which appear subsequently to the primary infecting chancres or papules. They comprise the ordinary syphilitic eruptions, and also the tertiary forms of the disease. Sigmund does not specify how many of them are contagious, but admits without hesitation that certain of them are so. *Plaques muqueuses*, papules, etc., have undoubtedly this property. These affections are almost always slow in their progress, producing wasting and debility of the organs and tissues of the body.

The constitution of the individual has an essential influence on the course of the disease; and, after the normal roseolous and papular eruptions have appeared, all the later affections are governed by the constitution and surrounding external influences of the individual; among which his treatment must, of course, be included. Treatment has no prophylactic power of preventing the earliest forms of syphilitic affections. Still it will be recollected that Nature cures many patients spontaneously; and treatment may do much to forward her effortsf, especially by removing the patients from their ordinary conditions of life, which militate greatly against cure.

The severer forms of syphilis occur in those who have debilitated constitutions, those suffering from tubercle, Bright's disease, etc. The more advanced these diatheses are, the deeper hold does syphilitic poison take of the constitution.

3. In the pseudo-syphilitic group are comprised those superficial affections which in their mode of origin, seat,

and course, resemble syphilitic complications. Lupus, for instance, may have a syphilitic or a scrofulous origin; and there are some papular and pustular eruptions which may be mistaken for syphilitic affections.

According to this division of venereal affections, Sigmund had in his wards, in 1861, 455 cases of gonorrhœa, 375 cases of primary contagious forms, 488 cases of secondary contagious forms, 83 of pseudo-syphilis.

The diagnosis between the second and third of these four classes was not made until the patient had remained some time under observation, and the general induration of the lymphatic glands had become evident. Sigmund, it will be seen, is tolerably well convinced of the existence of two contagious principles; but he objects to the doctrine that the chancres themselves are so different in form and character as to be at once distinguishable the one from the other. On the contrary, it is only when the syphilitic contagion has produced a considerable part of its effects on the system, independently of its action on the site of inoculation, that the distinction can be drawn absolutely. He allows that, in most cases, the distinctive characters show themselves sufficiently early to be of use in diagnosing a particular sore. But the doubtful cases are so numerous, that great caution must be exercised in pronouncing a chancre to be not syphilitic. He insists on the usual absence of induration in women—an opinion completely shared by M. Clerc of Paris, and other syphilitic authorities.

His observations for this view arrange themselves under the following heads:—

1. A chancre may remain soft a certain period; another indurates at once, and this induration is accompanied by induration of the glands and constitutional syphilis.

2. A chancre remains soft throughout its whole course; but the cicatrix indurates, and syphilis follows.

3. The chancre and cicatrix remain soft; but the lymphatic glands indurate, and syphilis follows. He assigns to these sores, in which induration is absent, the same localities, namely, the anus, vagina, etc., where Ricord, in his *Leçons sur le Chancre*, allows induration to be ill-developed. May it not be objected by the dualist, that he has overlooked the induration in his exceptional cases?

4. There are hard chancres which are unaccompanied by glandular enlargement or secondary syphilis. These occur in anæmic individuals, or where the inflammation has been long continued; and are found on the prepuce and skin of the penis and scrotum.

Specific treatment until symptoms of constitutional affection show themselves—namely, induration of the glands—should be withheld in all cases.

If Sigmund's views on chancre be compared with those set forth by Ricord (*Leçons sur le Chancre*) and others of the French school, he will be seen to agree with them in some respects, but also to differ from them in others. His description of the simple chancre, as to its form, absence of incubative course, liability to complications of sloughing and suppuration of the glands, etc., tallies with that of Ricord, so far as it goes; but it is not so minute as that of the French writer. He allows, but does not dwell on, the multiple character of the simple sore, and the solitary character of the infecting sore.

It is needless to observe that these two characters are strongly insisted upon by other dualists.

He avoids, in this article, discussing the question whether syphilis repeats itself; but in earlier writings he declares he has had patients who, after a long interval, have suffered syphilis a second time. Such cases, he admits, are rare nevertheless. In this opinion he is in accordance with most other authorities, who hold the immunity from syphilis to be like that of small-pox and other contagious diseases, usually but not invariably complete.

He passes over without discussion the supposed contagious power of the blood and non-contagious power of the pus of persons constitutionally syphilised. He is not content, as is Ricord, with the indolent enlargement of the group of glands nearest to the chancre, but requires that the glands shall generally show induration, for the positive diagnosis of constitutional syphilis.

Sigmund's chief conclusions are seven in number.

1. Two contagious principles exist causing venereal chancres: but the presence or absence of induration of the ulcer is not sufficient to decide the syphilitic or non-syphilitic character of a sore.

2. The matter of the soft chancre is the really irritating, ulcer-forming matter. The syphilitic virus does not produce ulceration *per se*.

3. The mixed chancre is a much more frequent occurrence than is generally believed.

4. The primary affection of syphilis may be either a so-called "hard chancre" or a papule.

5. General glandular induration, never delayed beyond three months, and usually distinct in six weeks, is the earliest pathognomonic symptom of syphilis.

6. The distinctive characters of chancres, assigned to them by dualists, are only frequently true, not invariably so.

7. Specific treatment should be always withheld until the pathognomonic sign presents itself; and cicatrisation should be forwarded by cleanliness and local astringent applications; the next potent aid to the cure being a good state of the general health. This general rule suffices for the treatment of ordinary cases; the complications of obstinate ulceration or sloughing require the means usually adopted to relieve them.

When specific treatment is requisite, Sigmund greatly prefers mercury to any other drug; and he holds the inunction of the grey ointment to be the best way of introducing it into the system. He has detailed his plan of treatment at great length in a special pamphlet (*Die Einreibungscur mit grauer Salbe bei Syphilisformen.* Braumüller. Vienna: 1859.) The preliminary treatment is to make the skin soft, and more ready to absorb the ointment, by a few warm or vapour baths. The diet should be light and nourishing; the patient, during the inunction, should remain eighteen hours daily in bed, in order to promote perspiration. The inunction should be repeated daily at bedtime, ten or twenty grains being rubbed in gently for ten minutes. The site of inunction should be changed from time to time, so as to avoid too great irritation. From forty to sixty applications, one on each consecutive day, are necessary for a course. When the course is finished, the patient should pass a month or two at a bathing-place, to complete the restoration of his strength.

Sigmund has found it necessary, in some very exhausted individuals, to interrupt the treatment, and

send them to a warm climate for the winter, and recommence it the next summer. In this way he has succeeded in completely curing most obstinate cases.

Here ends this short notice of Sigmund's views, which are valuable because they are derived from independent observation, and because to a certain extent they corroborate the doctrines of Ricord and Rollet, though they do not admit all the conclusions of these eminent French pathologists. It appears from this paper that Sigmund does not wish to repudiate the French doctrines; but he believes they have arrived too rapidly at their conclusions, and that they have not succeeded in producing a satisfactory explanation of those cases which apparently upset their theories. This conviction is the more sustained by comparing his later with his earlier writings. In the latter he is more opposed to "dualism" than in the former, where he appears to be anxious to accept the doctrine, if possible; and now at length he has satisfied his scruples, so far as the existence of two contagious principles is concerned.

II.—VON BAERENSPRUNG OF BERLIN.

Professor von Baerensprung, of the Charité Krankenhaus, Berlin, agrees mainly with Ricord and others of the French writers on syphilis in his doctrines on chancre.*

He commences with two propositions, which express the result of an examination of the statistical records of his wards.

The first is: A chancre which heals without indurating is never followed by syphilis. The second: An indurated chancre is invariably followed by constitutional syphilis. These two observations, he remarks, are accepted pretty generally by all parties; but it now remains to prove that these two chancres are originated by independent causes. He announces himself firmly convinced of this fact. The most important proof of the distinct nature of the two sores, in his opinion, is that simple treatment is sufficient for the cure of the soft chancre, but that the consequences of the hard one require a special antisyphilitic course for their cure.

Chief Distinctions in the Form and Results of the Two Sores. In most respects the professor follows closely the order and description of Ricord. The characters of

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* In drawing up this *resumé* of Bärensprung's opinions, I have made use of the condensation of his views contained in Friedrich's *Lehre vom Schanker*, a small pamphlet containing most of the recent opinions of syphilitic writers in Germany, France, and England, and published at Erlangen, 1861.

the sores, for the better comparison, may be arranged in parallel columns.

Simple Chancre.	*Infecting Chancre.*
1. The contagious principle is contained in the pus of the sore, and in that of the suppurating bubo, which often accompanies it.	1. The syphilitic poison is contained in the secretion of the indurated chancres, mucous tubercles, and probably other secondary syphilitic results.
2. Transmitted by accidental or artificial inoculation, this pus in twenty-four hours causes the formation of a pustule, which quickly becomes an ulcer.	2. Similarly transmitted, this poison shews no immediately visible effects; after four weeks of incubation, a papule is produced at the seat of incubation, which ulcerates and forms an indurated chancre.
3. This ulcer is roundish, sharply cut; the borders are wormeaten; the floor furnishes plentiful greyish pus. Its base remains nearly always of the consistence of the surrounding tissue.	3. This papule increases in size and hardness, being lifted above the surface of the surrounding skin; its margins are no higher than the base, which is excoriated, and furnishes a little sanious pus.
4. This chancre is a simply local affection involving no constitutional disease. Its operations do not extend beyond the nearest group of lymphatic glands, which may inflame and suppurate from the irritation of the chancrous pus. The pus of the bubo is inoculable. The great cha-	4. The so-called indurated chancre is at no period of its existence a local affection, but from its very commencement a product of the action of the poison on the blood. It is little irritable in its nature, so that sloughing is rare, and suppuration of the lymphatic glands equally

racteristic of this sore is its irritability. Hence arise sloughing, serpiginous ulceration, etc.	so; and the pus is not inoculable. The indolent enlargement of the lymphatic glands is not confined to one group, but spreads to more distant chains, and occurs, not accidentally, but certainly, at a short period after the formation of the chancre.
5. Syphilitic and non-syphilitic persons alike are susceptible of this contagion as often as it is applied; consequently these sores can be inoculated on their bearer.	5. Persons having once been inoculated with the syphilitic virus are free from further infection; consequently this sore cannot be inoculated on its bearer.

Sloughing of chancres usually destroys the contagious principle of soft chancres, but has no effect in preventing the constitutional effects of infecting chancres.

The varieties of simple chancres depend not on the state of the source of the poison, but on accidental peculiarities of the individuals attacked. Exhausted states of the constitution are among the disposing causes of sloughing.

Soft chancres, if repeatedly irritated by caustics, etc., may become so dense as to be undistinguishable from indurated chancres, and their non-syphilitic nature must be determined by the absence of indolent enlargement of the lymphatic glands, etc.

In hard chancres the induration commences before ulceration; it is a consequence of the constitutional infection.

Syphilis resembles small-pox and some other conta-

gious diseases by giving to the same individual immunity from second attacks.

Induration-matter is not an inflammatory product, but a new formation, set in action by the irritation of a specific poison. This new product is little capable of organisation, but soon undergoes granular degeneration. Thus it breaks down, and an ulcer is formed by the destruction of the newly formed tissue.

All cases of syphilis except hereditary syphilis commence with a chancre.

Causes of Confusion of the Two Sores. There are, he observes, two circumstances which have caused confusion between the simple and the infecting sores. The first is, that the diagnostic marks often fail in distinctness. Induration is often absent in women, and now and then in men. Soft chancres may become dense through continued irritation; while the state of the glands has not been carefully watched until of late years. The second is, the two chancres are often present together on the same spot, or not far apart; and the symptoms are then a mixture of the two orders.

To show how confusion may arise, he gives the following hypothesis, which formularises what he has seen in his practice.

A. has a mistress, B. She is syphilitic, and is the subject of mucous tubercles, but does not infect A., who has had syphilis. B. admits other lovers; of whom C., who is virgin from syphilis, is infected by her, and has an indurated chancre. D., another lover, has soft chancres, with which he inoculates B.; who in her turn inoculates A. Thus B. is the source of both contagions; and B. has inoculated the secretions of different chancres and syphilitic affections on various persons.

Result of Experiments. Series A. Inoculation of the bearer with the secretion of soft chancres.

1. Sloughing chancre in three individuals; negative results in all. No syphilis.

2. Multiple simple chancres in fifteen individuals; all positive results. No syphilis.

3. Ulcerating buboes in five individuals; positive results. No syphilis.

Series B. Inoculation with syphilitic secretion on syphilitic individuals.

1. Indurated chancre of the lip in four individuals; negative results.

2. Indurated chancre of the genitals in nine individuals; negative results.

3. Indolent bubo in three individuals; negative results.

4. Various syphilitic affections, condylomata, ecthyma, etc., in fifteen individuals; all negative results.

Series C. Inoculation of syphilitic secretion on persons in whom no syphilitic symptom was perceptible at the time of inoculation.

1. *Inoculation of Four Persons apparently free from Syphilis, but who had previously suffered from it.* Caroline L., in May 1857, was under treatment in the hospital for eruptions, condylomata, sore throat, and enlarged glands, and was discharged, cured without mercury, September 1857.

On Nov. 10th, 1859, the patient was readmitted, with recent gonorrhœa, having remained free from syphilis since her discharge two years previously. On the day of admission, she was inoculated on the thigh with the pus of an indurated chancre in four places. The result was negative.

In 1860 she came again under observation; but was,

and had been, quite free from syphilis of any description.

Sophie A., constitutionally syphilitic from Nov. 1858 to July 1859, was discharged cured. Nov. 1859, she was readmitted with a soft chancre, and was inoculated on the thigh with pus from a hard chancre. Negative result.

In January 1860, she again came under observation, and had remained free from syphilis.

The following two cases are exactly similar, except that one was inoculated from a condyloma instead of from an indurated chancre.

2. *Inoculation on Two Individuals, virgin from Syphilis: Opportunity of noting the Incubation Period.* Marie G., aged 23, had been repeatedly under treatment in the hospital for gonorrhœa and warts, but never for syphilis.

Being, on May 26th, 1859, admitted for a blennorrhœa of the vagina, she was most carefully examined, but no trace of syphilis could be discovered.

On May 28th, three inoculations were performed on the right thigh with the pus of an indurated chancre. The next day no reaction shewed itself at the seat of inoculation, which by the 6th June was *no longer visible.* Her treatment during this time consisted of an astringent injection.

On June 25th, the points of inoculation were again perceptible. Next three small "knots" or papules arose, which, on July 1st, were covered by a scab. Underneath the scab a minute ulcer could be detected. At this date the lymphatic glands were not yet swollen. From thence to July 5th, two papules grew rapidly, the third withered. By this date the glands were indolently swollen. The two papules had both attained the size of

a sixpence. On July 12th, they had coalesced into one ulcer with a raised and very hard base, ulcerated on its surface, and presenting a characteristic indurated chancre. The lymphatic glands were swollen, very hard, and slightly tender.

By July 20th, the chancre was as large as a florin, and of gristly hardness. Its border was on a level with the floor of the ulcer, but secreted no pus, being covered by a diphtheritic membrane.

Healing commenced Aug. 21st, and by the 29th was completed without treatment. A hard cicatrix remained. By this time a roseolous eruption had appeared on the skin, and some mucous tubercles on the labia majora. Then a non-mercurial course of treatment was employed, and the patient was discharged cured on the 1st October, the cicatrix and lymphatic glands being still hard.

Bertha B., aged 18, had suffered several times from gonorrhœa, etc., but never from syphilis. On May 18th, 1859, she was admitted with vaginal discharge, but no sign of syphilis present. On May 20th, she was inoculated on the right thigh with the pus of broad condylomata. The irritation of the puncture quickly disappeared, and remained imperceptible until June 17th, when three hard red papules began to form themselves on the site of the inoculation. On the 21st June, these three papules were ulcerated, but covered by a scab. They increased slowly, until they united and formed an ulcer larger than half-a-crown, with a gristly, well defined base; and in other respects the sores were similar to that of the preceding case. By the 25th June, the lymphatic glands were plainly swollen and hard. In other respects this case resembled the preceding ones.

These two interesting cases very well illustrate the

incubation period (twenty-eight days in one, and twenty-nine days in the other case) and course of the subsequent primary and secondary symptoms. The induration commenced in the glands ten days after the chancre began to form in one case, and eight in the other. The ulcers did not heal in the first case till it had run a course of sixty-four days; and about an equal period elapsed before the secondary symptoms were well marked.

In both these cases the indurated chancre had little resemblance to a soft chancre, with its sharply cut margins, and wormeaten floor, saturated with greyish pus.

This author, by the similarity of his views to those of Ricord, brought strong support to the Dualist party.

The incubation period of the hard chancre is strongly insisted on by most syphilitic writers; Ricord being the chief denier of its existence at present left unconverted.

III.—ROLLET OF LYONS.

M. Rollet is one of the earliest propounders of the theory of double contagion of venereal ulcers. This theory explains the apparently anomalous results and consequences of venereal infection, by referring their origin to two distinct contagious principles; the one, producing soft chancres, is a contagious pus, causing, by its irritating quality, ulcers where it is absorbed; the other is a true virus, which, like that of small-pox and of other diseases, affects the system generally, to the infection of which all the local symptoms are subordinate. To this virus alone are all the phenomena of constitutional syphilis referrible. In a pamphlet of seventy-eight pages, entitled *De la Pluralité des Maladies Vénériennes*, he has published his conviction of the distinct nature of the two ulcers in the year 1860; and from this the following extracts are made.

He first runs through the order of their appearance in history. Gonorrhœa is the oldest, being described by Moses, and by the Greeks, Arabs, and Romans.

The contagious ulcer of the genital organs, and its consequence, the inoculable bubo of the groin, appeared later. It is described as being widely spread and well known by the surgeons of the thirteenth and fourteenth centuries.

The syphilitic chancre was first observed at the end of the fifteenth century, when its appearance caused a terrible panic among the nations it invaded.

Hence, the doctrine of the plurality of venereal diseases is old; and its present introduction to notice is simply a revival of a belief which was firmly held when syphilis was a new disease. Syphilis was well described until the two diseases were confounded together by Nicolas Massa in 1532; since which time others have followed his misleading, till M. Bassereau, in his treatise on *Diseases of the Skin Symptomatic of Syphilis* (Paris, 1852), rediscovered the distinct natures of venereal sores.

The points these diseases have in common are simply these. They are contagious; affect most frequently the genital organs; are usually transmitted by sexual intercourse. They often coexist in, and are often derived from the same sore. But all these latter characters are consequent on the first; namely, that they are contagious.

The sexual organs are the parts which fall into closest communication of all the parts of the body during the commonest mode of contact between individuals; viz., coitus. Rollet thinks it remarkable, not that these diseases have the sexual organs as a common seat, but that all contagious diseases do not select the genitals as the favourite locality. He believes that, if the *acarus scabiei* could exist in the vagina, it would be found there more often than anywhere else. Having discussed this question at some length, he passes on to arrange the points of difference of the two ulcers in five series.

First Series. Inoculation on the Patient Himself. (Auto-inoculability.) The contagious ulcer is almost indefinitely inoculable on its bearer. This experiment has been tried some thousands of times on the same individual, with never-failing success. For example, M. Lind-

mann inoculated himself 2200 times with soft chancrous pus without once failing. (See Ricord's *Leçons sur le Chancre*, page 335.) It is inoculable on syphilised and on unsyphilised persons alike. No disease but one completely local—as favus, for instance—can behave thus.

The indurated chancre can at no period be inoculated on its bearer. Experiments confirming this have been made again and again in all countries of Europe. Moreover, this ulcer is inoculable on no other person who is labouring under any form of constitutional syphilis.

The number of simple chancres is more often plural than single, through its power of repetition on the same individual; so that it repeats itself around the site of the original ulcer.

The almost complete absence of well authenticated cases of simple chancre caused by accidental contagion on the head and face and nipple, however it be explicable, is a peculiarity of this variety.

The infecting chancre is most usually single (perhaps all exceptions to this rule are "mixed chancres," which are explained later). It is most frequent on the genitals, nearly as frequent in the mouth, but has been observed on every part of the body's surface.

Second Series. Incubation and Mode of Development. The simple chancre has no incubation period. In twenty-four hours it is visible as a minute pustule; in four or five days it is a characteristic ecthymatous pustule, breaking down after that into a growing ulcer. The infecting chancre has a long period of inaction after inoculation. In fifteen cases of artificial inoculation of syphilitic sores on persons virgin from syphilis, made by different observers, the shortest period was nine days

and the longest forty-two; the mean being twenty-five days. Of these fifteen, three were inoculated from primary chancres, and twelve from secondary affections.

The simple sore commences as a pustule. When it has become an ulcer, it is pretty deep in form; it has borders which appears punched out perpendicularly, sometimes undermined; the floor is wormeaten, covered with greyish pus. The base is nearly always supple; when it is hard, its hardness is non-elastic and due to inflammatory engorgement.

The infecting sore commences as a papule, which rapidly ulcerates; its ulcerated surface is coppery red or ham coloured; its borders are not sharply cut out; its sides slope down to the floor, which is smooth; the pus secreted on it is scanty, and often coagulates into a croupous layer or even into a crust.

The induration commences early, and steadily developes itself, presenting when developed a hard elastic base, feeling to the touch most frequently like a piece of parchment, or India-rubber, or gristle. This induration is frequently absent in women and even in men about once in twenty cases.

The transformation *in situ* of a primary lesion into a secondary one is more frequent in women than in men. A thin pellicle forms over the denuded surface of the ulcer, which thereby attains a papular appearance. This change, occurring so frequently in women, Rollet considers in some way to supply the want of induration of their sores.

Simple chancres are much more subject to sloughing, etc., than the infecting sore, owing to the superior irritating qualities of the former.

Third Series. Differences of the Consequences of the Two Sores. This, as remarked by Dr. Friedreich, his German critic, is what M. Rollet is busied with proving to be a result of the different nature of the two sores; *ergo*, he rests his argument on a *q.e.d.* The sole consequence of the simple sore is an acute bubo, arising from absorption of the virus of the sore. One of the nearest glands of the next chain swells, grows very tender, and sharply painful; suppuration soon follows, of which the pus is plentiful, greyish, and inoculable, like that of the chancre. The opened abscess soon resembles the chancre in its sharply cut edges, ragged surface, and inoculable pus. This absorption does not always take place; and then there is only swelling and tenderness of the glands of the groin, as with any other cause of local irritation. Here end the consequences of the simple chancre.

The infecting chancre causes enlargement of the groups of lymphatic glands generally; those nearest the sore being first affected and inevitably affected. The groups more distant from the sore are usually also enlarged. This enlargement is indolent, hard, and long continuing; suppuration occurs now and then in this variety; but purely from irritation, and the pus is not inoculable. To this enlargement succeed secondary symptoms, at a more or less distant period. In the before mentioned fifteen cases, it appeared in the minimum period of twelve days, and in the maximum of 128 days, with a mean of fifty-two days.

Fourth Series. Differences in their Sources of Origin. The syphilitic chancre arises from inoculation, either of the pus of a primary lesion, of the fluids of some secondary lesions, or of the blood of a person suffering some form

of secondary syphilis. Each of these sources produces a chancre in the person infected. The semen can also convey it to the ovum; and, in this instance, the presence of a chancre is not necessary. In every other case, a chancre is the commencement of syphilis. The simple chancre results through contagion with the pus of the simple chancre.

These two laws have been proved by various observers, in addition to Rollet, Ricord, and Fournier, who have investigated a large number of cases where the persons infecting and the persons infected have been compared, and these comparisous have always established the similarity and identity between the source and the propagated sore. Some of these cases of similarity were proved before the dualist doctrine was revived. For instance, when children have infected their nurses, the sores have been long known to be hard chancres succeeded by syphilis. In twenty-four inoculations of syphilitic exudations, the consequence has always been syphilis.

Fifth Series. Effects of Treatment. The simple sore can be eradicated at any period of its existence by cauterisation, which converts it into an ordinary suppurating wound, healing quickly, and no longer inoculable.

The infecting sore, though sometimes cauterisable with good effect, cannot be destroyed so as to prevent constitutional results, with certainty, at any time, and without doubt, after the first few days, cauterisations are useless. Mercury is useless in preventing the progress of the simple sore; but it is universally acknowledged to be advantageous in the infecting sore.

In comparing the frequency of syphilis with other venereal diseases, Rollet makes use of statistics to be quoted presently.

Coincidence of the Two Diseases on the same Individual. The two diseases are often present together, because they are propagated in the same way; and they have their most frequent seat in common. This is only a characteristic of contagious diseases generally. For instance, in inoculating vaccine matter, measles and small-pox are sometimes inadvertently inoculated, being present along with the vaccine disease in the source of infection.

The venereal diseases may exist, not only at once, but in the same localities; so that the lesions they occasion have characteristics common to both sores. The syphilitic poison may be inoculated; but, at the same time, gonorrhœa and soft chancres may be present, which completely mask the syphilitic sore until its secondary symptoms show themselves elsewhere.

From the following statistics, Rollet thinks he can estimate the usual proportion of the cases of mixed diseases to the cases of isolated disease. Of 2000 cases of venereal affections, gonorrhœa bore 41 per cent., simple chancres 33 per cent., infecting chancres 26 per cent. Of these 2000 cases, 90 per cent. were uncomplicated with each other; and 10 per cent. had either two or all three of these simultaneously present.

Mingled Cases. 1. A syphilitic patient without syphilitic eruption on his genital organs has a gonorrhœa, which runs its usual course; if the pus alone be inserted in the mucous membrane of another, that second person has gonorrhœa only; if blood be taken with it, and the second be virgin from syphilis, he is infected with syphilis as well. The patient may have syphilitic affections of the genitals; in which case the syphilis and gonorrhœa may be transmitted simultaneously, and run

their course independently of one another. If this syphilitic sore be an urethral chancre, the case would be very puzzling, as there would, perhaps, be no detectable sign of syphilis separate from the gonorrhœa. The point of this argument is, that blood of syphilised persons is inoculable, but their pus is not.

2. Simple chancres may coexist with infecting ones.

Mixed Chancres. A constitutionally syphilised individual contracts a simple chancre, which runs its usual course, except it may have greater tendency to phagedæna. This chancre he may communicate to a non-syphilised individual as a simple chancre, and nothing more, if the contagious matter contain only pus and no blood. Should blood be mingled with the pus, this communicated sore will, in all probability, prove an infecting syphilitic sore. This chancre, in virtue of its mixed character, that of the simple and that of the infecting chancre, is inoculable on its bearer. (Rollet relates no case in support of this hypothesis; though it will be recollected Sigmund has produced ulcers with this twofold quality.)

3. A person may bear both simple and infecting sores at the same time on different parts; but if they be pretty close together they may inoculate another individual at the same point, and so produce a sore having the characters of both. Or, again, a sore originally infecting may be inoculated with pus from a soft chancre; and then its characters would be mixed. The inoculation may take place in the reverse order. These combinations are rare, as the sores are usually separate.

M. Rollet concludes, from the results of artificial inoculation, that the "mixed chancre" holds a proportion of five per cent. to the infecting sore.

The mixed chancre, Rollet thinks, must be the one de-

scribed as the *ulcus elevatum* by older writers; its description so completely resembles that of the sore produced when the two contagious principles are mixed.

From a few considerations on the coexistence of vaccine with syphilis, the following are extracted:—

If a syphilitic individual be vaccinated, whether he be new-born or adult, is immaterial. The irritation of the vaccine stimulates the action of the syphilitic poison; and syphilitic eruption appears earlier than it would otherwise have done. If, from this subject, vaccine pus without blood be taken, no syphilis will be communicated. This has been verified by different observers, whose experiments are narrated at length by M. Viennois, in a treatise on the Inoculation of Syphilis with Vaccination. (*Archives Générales de Médecine*, June, July, and Sept. 1860; and *Gazette des Hôpitaux*, March, April, and May 1862.) If blood of the syphilised person be taken with the pus of the vaccine, it is certain that syphilis will be infected. This question is treated at more length in the before-mentioned treatise.

The contagious principles of the venereal sores are two in number—the syphilitic poison and the contagious ulcer poison. The syphilitic virus is contained in the pus of the primary sore, the blood generally, and the serous fluid of secondary lesions. The spermatic fluid in a certain degree also contains it, as that fluid can communicate the disease to the ovum.

The contagious principle of the simple chancre is not sustained in any of the corporeal fluids except the pus of the chancre and the bubo arising out of it.

This completes M. Rollet's *exposé* of his doctrines. It will be seen that he is a dualist in the most exact sense of the word; namely, that venereal ulcers arise

from inoculation of two originally different contagious principles, which have and ever have had no relation with each other. There are other writers who incline to the view that the contagious principle of the simple ulcer was once a modification of the syphilitic virus, though now its effects are completely distinct from those produced by the syphilitic poison. These are, in this restricted sense, dualists also.

IV.—DIDAY OF LYONS.

M. Diday published, in the *Gazette Hebdomadaire* for June 21st, 1861, a summary of his views on syphilis, entitled *Histoire Naturelle et Thérapeutique de la Syphilis.* He says that, between March 1855 and June 1861, he has had under his care two hundred cases of constitutional syphilis, both primary and secondary in its affections, of which he has detailed notes of one hundred and thirty. He takes this mass of observations as his basis on which to found his conclusions.

The course of syphilis was sometimes severe, but generally light, in these cases.

Origin. Acquired and not inherited syphilis always commences by more or less ulceration, which ulceration has two varieties—1, the indurated chancre; 2, the chancriform erosion. This latter is identical with the "parchment chancre" of Ricord, and has been described under different names by other authors. The disease may be communicated by either of these, or by secondary eruptions. When by the latter, the chancriform erosion is the primary sore resulting from such infection. The chancriform erosion propagates most syphilis, because it is more indolent than the indurated chancre, and better permits friction against its surface; it also is more contagious than the secondary lesion, whence it fails less frequently to communicate the infection.

Severity. This depends on—1. The source. When the contagion comes from a primary indurated chancre,

the syphilis is generally severe; severe also, if the infection be hereditary, less so when the inoculating lesion is chancriform, and least so when inoculated from a secondary affection. The more recent the chancre which gives contagion, the more likely is the disease to be severe. The tertiary affections are no longer contagious. 2. The state of health of the patient, the degree of his observance of the rules of hygiene, etc., have also their influence. The immunity of a syphilised person is regulated—1, by the source whence he was infected; 2, by the distance of time since he was inoculated. For example, a man recently inoculated by an indurated chancre is quite safe; but a person for whom several years have elapsed is possibly re-inoculable.

Indications of the Degree of Severity of the Disease. The disease will be obstinate and invade the tissues deeply—1. If it resist specific treatment; 2. If there exist an indurated chancre in both subjects—on the transmitter, and on the one on whom the contagion has alighted; 3. If the incubation period be short; 4. If the earliest eruption be pustular or scaly, or repeatedly returning at short intervals, or have a confluent tendency; 5. If the constitution be subject to any other diathesis, as tubercles, Bright's disease, etc., or if there be much chlorosis, accompanied (or caused?) by great ganglionic enlargement.

The disease will probably be light and disappear quickly—1. If the source of contagion be a secondary sore or chancriform erosion; 2. If the primary sore shew itself as a chancriform erosion; 3. If the period between the primary and secondary eruption be long; 4. If the earliest secondary eruption be roseolous or papular; 5.

If the intervals between the appearance of each series of symptoms be long.

Treatment. The general effect of mercury is to retard the appearance of secondary symptoms when not present, and to hasten their departure, and with that to shorten the period of action of the poison; hence it accelerates the cure, but it does not absolutely prevent relapses.

Diday has recorded fifty-seven cases where mercury was given regularly and thoroughly for long periods. The result was various; some cases had a mild course, others a severe one.

Mercury is an exciting cause of phagedæna, stomatitis, and other complications of mercurial poisoning.

Those cases which are treated without mercury recover in the great majority, and these recoveries have lasted many of them several years. Severe cases are essentially relieved by mercury, and the following are the cases for its administration. Mercury should be given when the chancre is of woody hardness, when there is iritis, aphonia, or much glandular induration, with early chlorosis. It is seldom necessary, if the primary lesion is chancriform, or if the other signs of a light case be present. Iron, quinine, etc., are generally sufficient. Mercury, when given, must be thoroughly applied, and often coupled with iodide of potassium.

V.—RICORD OF PARIS.

HAVING detailed the opinions of several continental *doctrinaires* in syphilis, I may be permitted to conclude the series with a short relation of Ricord's views on the subject, as related in his *Leçons sur le Chancre* (2nd edition, Paris, 1860), and reiterated in his lecture delivered in the Hôtel-Dieu on a case of syphilis supposed to have been contracted through vaccination. This lecture was reported in the *Gazette des Hôpitaux* for January 28th and 30th, 1862, and is the latest occasion on which he has professed his opinions.

Many years ago, in his early writings on syphilis, Ricord separated gonorrhœa from other venereal diseases, but upheld in his celebrated *Letters* the doctrine of Hunter that all venereal ulcers were provoked by a common poison. In the eighteenth letter, he wrote: "So far, have we every reason to suppose there is but *one* syphilitic virus. It appears to me reasonable to consider that chancres, which under certain conditions to be produced at will begin in the same way, are also generated by a single cause; and that their later developments owe their characters to the individual peculiarities of the persons affected." Again, in his nineteenth letter, he said: "If my meaning was comprehended in my last letter, you will have perceived that I acknowledge the syphilitic poison to be single, although experiment has not yet placed it beyond doubt. Nor do I seek to explain the varying severity of this poison by

attributing to it different degrees of virulence—an explanation put forward by some observers; but rather by a modification of its effects induced by the peculiarity of constitution of the person affected. Also, in spite of Bell's observations and of those of others, no one is justified in concluding that a severe case of syphilis generates a contagious principle which will cause severe forms of the disease where it is inoculated, because our observation teaches us that the opposite is frequently the case."

Until the year 1856, Ricord continued to profess opinions in harmony with those enunciated in his early letters, and in accordance with those of Hunter; notwithstanding that Bassereau in 1852 published his treatise on syphilis, in which he declared his conviction that venereal ulcers were of two kinds, propagated by two distinct contagious principles. At length, in his clinical lectures of the year 1856, Ricord struck his colours as a unicist, and declared he should henceforth fight in the dualist squadron—a promise which he has redeemed most thoroughly, but still refuses to countenance the leading syphilitic writers in many of their pretensions: for instance, the power of contagion possessed by secondary forms of syphilis generally, or by the blood of syphilised persons; though he has lately shewn symptoms of a disposition to accept the former of these dogmata. In his *Leçons sur le Chancre*, published in 1857, and republished with copious notes and additional observations by M. Fournier in 1860, he commences with a quotation to the effect that the foolish man is he who never changes, or who prefers obstinate adherence to his opinions to truth itself. Ricord then gives his solemn declaration of his acceptance of the doctrine of

the existence of two contagious principles causing venereal ulcers, as different in their origin, mode of action, and consequences, as are the poisons which produce small-pox and dissecting wounds; the first infecting the system, and accompanied during its period of activity by a series of symptoms dependent on general constitutional affection; the second being simply a poison confined in its course and consequences to local irritation.

Ricord describes the different sores in a series of propositions so framed as to contrast the characters peculiar to each, as follow:

The Simple or Non-infecting Chancre. 1. The tissues in which it developes itself retain their normal softness and pliability. It is essentially a chancre with a soft base. The inflammatory complications which now and then accompany it may give its base a more or less perceptible hardness, but this hardness differs to the touch from that of an indurated ulcer; in short, it feels like a boil. Ricord endeavours to distinguish the two kinds of induration more clearly; but he acknowledges that the two varieties of hardness are sometimes so similar that it is impossible to separate them.

2. This sore is, as a rule, multiple, either from the outset or shortly afterwards, through inoculation of its acrid pus on contiguous surfaces; in which case the secondary sores are in all respects repetitions of the first. Fournier enumerates two hundred and fifty-four cases of simple chancre, of which forty-eight had but a single chancre, thirty-two had two ulcers, one hundred and sixteen had from three to six ulcers, forty-one had from six to ten ulcers, seventeen had from ten to twenty ulcers.

3. The surface of this chancre is hollowed out as if

by a punch. It has margins which are perpendicular or somewhat undermined. Its floor is uneven, worm-eaten in appearance, nodular, and greyish in colour. It suppurates freely, and is seated on somewhat congested tissue.

4. Its pus is contagious in the highest degree, and is so during the greater part of its course, frequently even until cicatrisation is almost completed. It is readily inoculable on its bearer. Ricord holds this characteristic to be the only really pathognomonic sign of its presence.

5. It is a chancre of long continuance (the average duration being a few weeks); it heals with difficulty, and easily assumes a phagedænic progress.

The Infecting or true Syphilitic Chancre. 1. Its progress is insidious; its base is indurated in a special and pathognomonic manner.

Induration. The time of its appearance, Ricord expressly states, *never precedes* that of the ulceration, thus contradicting Babington and von Bärensprung, who hold that induration precedes ulceration. Ricord attempts to account for this discrepancy by supposing other observers to have overlooked the ulcer, which may have been very small, or disposed of in various ways, none of which are at all satisfactory. This induration subtends and extends beyond the base more or less; it generally dips deeply into the subjacent tissue, and has consequently been likened to half a pea or marble deposited in the cutis vera; it is usually unaccompanied by pain or tenderness. This form may be taken as the classical one; but there are three other varieties—*a.* The parchment-like, when it exists in an extremely thin layer just beneath the ulcer; *b.* The ir-

regular, from being seated on tissues of different density (as at the juncture of the skin and mucous membrane); *c*. The annular, when the indurated matter is deposited in a ring-like form.

The induration commences to form at the end of the first week after inoculation, and becomes evident in the second week, being never perceptible before the third day, and rarely delayed beyond the second week. Ricord has never observed it later than the third week. By this it will be manifest that Ricord ignores any incubation stage.

The situations where induration is best marked are the groove behind the corona of the glans penis, the skin of the penis, and the labia; in short, the localities best supplied with lymphatic vessels. In these regions, the induration is also most persistent. On the other hand, induration is often wanting on the vagina, carunculæ myrtiformes, anus, etc.; and, more rarely, on the orifice of the urethra. Here it is only the parchment form that is met with; and the induration is often late in its appearance, and short in its stay. With these localities excepted, Ricord believes that induration forms as well in women as in men.

The ordinary time for the induration to last is eighty days, but it frequently lasts some years; and Puche had a case where it lasted nine years.

2. The infecting chancre is usually *solitary*, rarely multiple. Of 356 infecting chancres, 241 were single, and 15 multiple.

3. The ulcer of the infecting chancre is generally less sharply cut out than that of the simple chancre. It appears as if formed by a scoop, and is cup-shaped; that is to say, the margins slope gradually down to the floor.

The margins are not undermined, though often raised. The floor is most commonly smooth, glazed occasionally, even iridescent, but of greyish brown colour. This ulcer secretes but little pus, which is thin and serous, often sanious.

4. The pus of the infecting chancre soon loses its virulent specific power, especially for the bearer of the sore, whose body is in a few days at most, if not earlier, insusceptible of inoculation with the pus. When more than one chancre is found in one person, they are of the same age—very rarely indeed, if ever, inoculated one from another successively.

5. The infecting chancre has little tendency to enlarge; it soon reaches its acme, and passes on to cicatrisation. Consequently, these sores frequently heal before they have been observed by a patient who is not very scrupulously clean. Phagedæna is very rare with this chancre.

Relative Frequency of the two Sores. The simple chancre is by far the most frequent variety. According to the statistics of the Hôpital du Midi, it occurs in the proportion of three or four simple sores to one infecting chancre. Fournier quotes from Virchow's work on *Constitutional Syphilis* the observation of British army surgeons, who, after having employed simple treatment for primary venereal affections, remarked that constitutional symptoms occurred about once in every four cases.

This superiority in frequency of the simple over the infecting chancre is due partly to the facts that there is no immunity from it, while repetitions of indurated chancres on the same individual are excessively rare; and that it retains its inoculable power for a longer period. Fournier relates H. Lindmann's experience.

"I have", says this gentleman, "made a series of inoculations on myself with the pus of simple chancres, and still continue them. I kept an accurate account as far as 2,200, since then I have omitted to count them; but possibly I have performed 500 more. Not one of these inoculations failed to produce a simple chancre."

Seat of Chancres. Ricord and Puche, both lately surgeons of l'Hôpital du Midi, have never observed a single case of simple chancre on the head or face. Other French writers on syphilis have seen this variety in those situations, but not more than in a few instances. The simple sore, when situated on these parts, always heals rapidly. Fournier, in a note, relates the experiments of Puche and Bassereau, in which a series of inoculations of simple chancrous pus, performed on the face and various parts of the head, never failed to produce a soft chancre, constitutional symptoms in no instance succeeding. He has collected also the histories of 150 cases of chancre on the head, all of which were indurated and syphilitic.

Transmissibility of Simple Chancre to Animals. The evidence on this point is chiefly negative. Ricord admits its possibility, but asserts it to be very difficult.

The infecting chancre may affect any part of the body; the head, of course, being a rare site, as are any but the genital organs and the nipples.

Buboes of the Simple Chancre. The simple sore is not necessarily accompanied by a bubo. In 207 cases of simple chancre noted by Fournier, 65 only were complicated with bubo. This bubo is acute in its nature, and of two kinds—that of irritation, and that of absorption. Both varieties have no definite time for making their appearance. The first is a simple inflammation and congestion of the gland, ending with or without suppura-

tion; if suppuration supervene, an abscess results, which behaves similarly to an abscess elsewhere. The bubo from absorption is caused by some of the contagious fluid being carried along to the nearest lymphatic gland, and is introduced into its interior, where it produces suppuration and formation of an inoculable pus, which, when it touches the tissues between the gland and the surface of the body, converts the abscess resulting from its irritation into a simple chancre, with characters similar to those of the original sore, except, of course, that it is much larger.

The Bubo of the Infecting Chancre is a painless indolent enlargement of the lymphatic glands, those nearest the sore being most increased in size. Several are always attacked, not merely one or two, as in the bubo of the simple sore. The induration is similar in its anatomical character to that around the chancre. With these glands suppuration is rare, being not the consequence of the disease itself, but of accidental irritation.

This bubo makes its appearance within a certain period during the first or second week after contagion, accompanying or closely following the induration of the sore. It is of long persistence, lasting weeks or even months after the primary chancre is healed. The induration of the glands is never absent, is of gristly hardness, and the groups in both groins are usually affected.

Origin and Transmission of Chancres. 1. The simple chancre comes from a simple chancre, and can propagate only similar sores, if it have been transferred from a non-syphilised individual. By that, Ricord means a person who has not already been infected with syphilis from an infecting sore; as, should its secretion have been

produced on a syphilitic person, it may be contaminated with syphilitic fluids, and hence be wrongly supposed to have caused syphilis in its new victim if he show signs of that disease.

2. An infecting chancre always propagates itself on non-syphilised individuals as an infecting chancre.

3. A contagion from an indurated chancre gives rise in a syphilitic person to a soft-based chancre. This soft-based chancre is in appearance similar to a simple chancre. This, however, is but rarely seen, through the difficulty of propagating syphilitic pus on a syphilised person.

4. It is a matter of observation that a non-indurated chancre on syphilised individuals causes sometimes simple or sometimes infecting chancres when inoculated on non-syphilised persons. For this Ricord offers no explanation.

5. A phagedænic chancre may proceed from a chancre having no phagedænic character. Phagedœna is only a complication, and its presence indicates no peculiarity of its source of contagion, but depends on particular conditions of the individual.

6. The simple chancre is, while at its height, unfailingly inoculable to its bearer.

7. The infecting chancre at its height has lost its power of inoculation on its bearer; or, at least, with the rarest exceptions.

Prognosis. The two varieties of ulcers are, in respect of the prognosis, perfectly distinct. The indurated chancre is, if local troubles are alone considered, the more benign of the two; it causes little irritation, seldom becomes phagedenic, is usually solitary, and soon reaches the healing stages. Very different are its

characters when the constitutional effects are included. Its induration is but the earliest phenomenon of a general diathesis, the outset of syphilis. As soon as induration is present, the disease is acquired. It is a consequence, and not a forerunner of the constitutional taint. In the simple chancre the ulceration forms the whole disease; the constitution is uninfected; when the ulcer is healed the disease is gone.

The number of indurated chancres has no influence over the severity of the constitutional symptoms. One small ulcer is as efficient as several large ones. Hence, the prognosis of an indurated chancre is that of syphilis.

Condition of the Blood. The poison is carried into the system, probably, by the blood; but this is one of those questions in which observation is yet wanting. The blood, though it undergoes itself the influence of the poison, has no contagious quality, and cannot serve as a vehicle of the disease by inoculation in another subject. (This assertion, it may be remarked, is at direct variance with the opinions and results of experiments of various other syphilitic writers: Sigmund, Rollet, von Bärensprung, for example.)

From analysis by Ricord and Grassi of the blood of syphilised persons, we learn that the corpuscles are diminished and the fibrine increased in syphilised persons; in the blood of persons affected by simple chancres, no appreciable change occurs. The administration of iodide of potassium quickly restores the blood corpuscles to their normal proportion.

Mucous Tubercles. The simple and infecting chancre can alike pass into a stage of irregular increase and form growing prominent spongy vegetations, which,

when partially cicatrised, resemble the growths called condylomata, or "plaques muqueuses."

These vegetations may easily, remarks Fournier, cause great errors of diagnosis when they result from simple chancres. They, when thus originated, preserve their auto-inoculability, or inoculability on the bearer, and being mistaken for plaques muqueuses, or mucous tubercles consisting of altered syphilitic ulcerations, lead to the belief that this constitutional affection is inoculable on the bearer. Also, on the other hand, the simple chancre is thus supposed to sometimes precede secondary symptoms; namely, this spurious plaque muqueuse is mistaken for the genuine mucous tubercle.

Further, the infecting chancre, as Ricord explains, can undergo changes *in situ*, being really transformed into a mucous tubercle without previously cicatrising; and because the general diathesis prefers all points of irritation for the production of its manifestations, and an unhealed chancre, erosion, wounds, etc., afford favourable site. If this change is to take place, the primitive characteristics gradually disappear, and are succeeded by secondary ones, in such wise that a well characterised chancre in course of time becomes a well formed mucous tubercle. The induration also may have either completely disappeared, or may remain well marked.

These anomalous changes of the simple and infecting chancres into mucous tubercles, resembling, in their external characters, the mucous tubercle of the secondary series of syphilitic eruptions, have led some authors to describe mucous tubercles as primary affections, and to suppose that syphilis may originate in a mucous tubercle.

Constitutional Syphilis. Usually, three groups of

symptoms, marking three epochs of the disease, succeed each other.

1. The primitive chancre and its bubo.

2. Secondary affections ordinarily appear from five to six weeks after inoculation; never later than six months, or earlier than fourteen days. If the progress of the disease have been influenced by treatment, the interval between the first and second periods is prolonged. These consist of the usual appearances, loss of hair, neuralgic pains, superfiical affections of the skin and mucous membrane, etc.

3. Tertiary affections, which are rarely perceptible before six months, and may be delayed many years. They affect the deeper tissues and organs, and consist of tubercles of the skin, sarcocele gummy tumours of the cellular tissue, muscles, and viscera.

Affections of the Fibrous and Bony Tissues, etc. This course of symptoms is not followed absolutely; some of the later symptoms mingle with the earlier ones, or the latter reappear among the later ones in many cases.

In addition to the blood, Ricord holds that the spermatic fluid, the milk, or any other physiological secretion, is unable to convey it without admixture of a pathological secretion of a primary sore, because inoculations of these fluids have failed on their bearers. He bases his judgment on these observations:—

1. In all cases, and their number is by no means a small one, in which individuals free from syphilis have been inoculated, under the conditions necessary for the performance of a scientific experiment, with secretions of secondary or tertiary affections, the results have been negative; insomuch as an ulceration similar to a primary affection has never been obtained; neither has

any form of disease similar to that which has furnished the pus for inoculation succeeded.

2. Nevertheless, in order to exclude some experiments which have produced doubtful results, he frames his law as follows. The inoculation of secondary or tertiary syphilitic products on syphilitic individuals is always sterile. A law, which is doubtless true, but which has no reference to the contagious power of the secondary secretions, because, as Ricord himself presently proves, a patient who has been infected with syphilis cannot be affected a second time. The disease in this respect resembles small pox, etc. Also, in a note, and more lately in a lecture delivered in January 1862, Ricord allows that inoculations of the secretions of secondary sores have succeeded in producing syphilis in persons otherwise virgin from syphilis; but he maintains that the mucous tubercle is the only secondary eruption capable of secreting a contagious fluid; and that the blood is not infectious under any circumstances.

In conclusion, it may be assumed that Ricord is convinced that the virus producing the indurated sore does, when inoculated, always produce constitutional symptoms; and that when these are wanting the syphilitic virus has not been applied; but some other irritating contagious principle. Again, that the contagious principle is furnished most abundantly in the primary form of the disease; that the secondary forms are very defective in contagious power, the mucous tubercle being probably the only one of these forms possessing such a property. Also, that the blood, and with it the other physiological fluids, is incapable, when unmixed with a syphilitic secretion, of transmitting the disease. This opinion is contradicted by the observations of Diday,

Rollet, von Bärensprung, etc, and by the experiments of Rollet, von Bärensprung, Gibert, and others.

Ricord is quite at variance with other observers regarding the fact of a period of incubation for the poison existing before any action takes place about the seat of inoculation. That Ricord is wrong in this respect, the two cases of von Bärensprung's already described show tolerably satisfactorily; and they are borne out by those of other experimenters.

The question of an incubation period for the virus is passed over in silence in the last lecture; so we may conclude his views in this respect are unchanged.

The induration, according to Ricord, does not precede ulceration. This is again contrary to the observation of Rollet and others. Still the evidence on either side is not sufficient to allow of a positive conclusion being drawn. That a breach of surface is invariably necessary for absorption, Ricord thinks; but he is not so positive on this point as Sigmund and von Bärensprung. The infecting chancre Ricord holds to be inoculable on its bearer during a certain, probably very short, period of its existence; this quality, if real, is very difficult to reconcile with the long incubation the poison has already made in the system, so it is to be hoped that this characteristic will soon be determined to be falsely attributed to the infecting chancre. The mixed chancre may have been experimented with, and by its auto-inoculability have led Ricord into error.

The chancre with a soft base capable of transmitting syphilis which is formed on a syphilised person is another stumbling-block; but its rarity, and the probability that when it transmits syphilis it is contaminated with the bearer's secretions, would permit us to suppose that after all the chancre formed was only a simple chancre.

VI.—CLERC OF PARIS.

M. Clerc, surgeon to the St. Lazare Venereal Infirmary at Paris, and a former pupil of Ricord, has enunciated some speculations as to the origin of the contagious principle of the soft chancre. He is inclined to separate the infecting from the soft chancre as completely as Ricord or Rollet; but he thinks the contagious principle of soft chancres was originally the same as that causing syphilis, but that it has lost its power of producing a constitutional influence from being propagated on persons already syphilised, and who, therefore, no longer afforded a suitable ground for the reproduction of the syphilitic poison, consequently the irritative quality of the virus alone remains.

The simple chancre has, in his opinion, the characters assigned to it by Ricord, so that it is unnecessary to recapitulate them.

To the infecting chancre he does not give quite the same character as Ricord. Induration, he says, is more frequently absent than present in women, but generally present in men. The induration sometimes precedes, sometimes succeeds, ulceration; but these processes have no direct relation to each other. There is a stage of incubation of probably three weeks duration before the local symptoms declare themselves; its exact length is still undetermined. A characteristitic diphtheritic exudation covers this ulcer, quite unlike the pus of the non-infecting chancre. Infecting chancres are, at no

period of their existence, inoculable on their bearer; and for this reason, that the system is affected during the incubation period. M. Clerc has never inoculated persons virgin from syphilis with the poison of infecting chancres; but he has made experiments with infectious diseases having similar characters, such as vaccine, glanders, and sheep-rot. He has vaccinated children by means of a single puncture into the skin, and one hour after the inoculation destroyed the wound and surrounding tissue with solid nitrate of silver; but the children at the usual time had the symptoms of vaccinia, and a second vaccination failed in producing any effect. At the Veterinary School of Alfort, horses have been similarly inoculated with glanders, and the wound cut out one minute later, but the glanderous poison had already been absorbed; also, sheep were treated in like manner with the poison of the rot disease, with the same result. Considering the extreme rapidity with which these poisons are absorbed into the system, Clerc thinks that there is no period in which the syphilitic virus can be eradicated from the infecting ulcer.

The infectious nature of fluids exuding from secondary sores is fully believed in by M. Clerc. The secretions probably owe their infectious power to admixture with the blood of the patient suffering from them, which blood is itself capable of conveying the contagion. The vaccine pus does not contain the syphilitic poison when produced on syphilitic children, unless there be mixed with it some blood; then it will confer syphilis when inoculated on others. The pus of simple chancres acts similarly when similarly treated; and then it produces the mixed chancre of Rollet, which form Clerc thinks is nevertheless clinically rare. There are as yet no data

for determining the length of the time during which the fluids of a syphilitic person are contagious. M. Clerc is engaged on a treatise on syphilis, in which he will publish his observations and opinions of the nature of this disease; in the meantime, he has read a few papers before the medical societies of Paris on the subject, from which, and from his oral communications to me, I have collected these particulars.

These descriptions of the opinions of some foreign labourers in this department of pathology have made it evident that the old views of syphilis are no longer supported by the majority of those most familiar with venereal disease; and though a considerable amount of truth has been sifted from error, there yet remains a vast deal to be done and undone before this most perplexing and intricate question is finally solved.

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