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Double Chancre À Distance.

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DOUBLE CHANCRE A DISTANCE. An Inquiry into Syphilitic Auto-Inoculation. By A. H. OHMANN-DUMESNIL, Professor of Dermatology and Syphilology in the St. Louis College of Physicians and Surgeons.

The question of auto-inoculation in syphilis was, at one time, a fruitful theme for discussion and led the way to numerous experiments of the greatest importance, when viewed in the light of the results that were achieved. After a lull of several years the question has been revived in latter years, but in a different form. It is one of the highest importance from the fact that, should it be established that auto-inoculation is possible, during a certain limited period, it would conclusively prove that the disease was still localized, and the very fact that this localization existed would render reasonable attempts to jugulate syphilis by means of early excision of the chancre and of the indurated ganglia anatomically connected with it. The following cases are interesting as bearing in some respects upon the question of auto-inoculation, and as affording example of a clinical variety not frequently met with.

CASE I—Mr. B., about twenty-two years of age, contracted a chancre and presented himself to Dr. A. C. Bernays for treatment. I saw the patient at this time. He could not fix the probable time of infection. Upon examination he presented a well marked chancre of the prepuce on the right side. The induration was well defined and the inguinal ganglia of the corresponding side were also indurated. In the centre of the lower lip he presented a sore having the size of a silver half-dime, well defined, of roundish shape and implicating a portion of the mucous membrane and vermillion border. On both sides of the inferior maxillary the lymphatic glands were enlarged and indurated. More especially was the condition marked upon the left side. The induration of the labial sore was very distinct. Patient was subject to fissures of the lower lip. He was not aware of handling his preputial sore and transmitting the virus to his lip. In fact, he rather thought he did not. In about two months after a marked secondary eruption appeared and his hair fell out. Both chancres healed spontaneously and simultaneously, the induration disappearing in the sores and lymphatic glands at the same time.

Case II.—Mr. C., presented himself to me for treatment, December 22, 1886. He presented two chancres. One was situated upon the mucous surface of the left side of the prepuce and extended to the border. It was somewhat larger than a silver dime, the induration being plainly apparent to the feel. The lymphatic glands were enlarged and indurated. The other chancre was situated in the centre of the upper lip and was a little smaller than a silver dime. The induration was very marked, so much so, that it partially everted the lip. The lymphatic ganglia beneath the inferior maxilla were indurated, not so markedly so upon the left as upon the right. Those on the right, however, were plainly enlarged. Upon inquiry the fact developed that the upper lip was almost always fissured, at its central portion, in winter and had been in that condition for some time before the appearance of the sore. On February 22, 1887, two months after the patient first presented himself, a fine papular eruption made its appearance. Upon the face, back and legs pustules were scattered here and there. Mercurial treatment caused these to disappear in a couple of weeks, but it was not until March 12, that the induration of the glands and the chancres disappeared completely. This *restitutio ad integrum* was simultaneous in both localities. Inquiry elicited the probabilities of the simultaneous appearance of both sores. At least as far as the patient knew, they came on at the same time, but he was naturally more solicitous concerning the sore upon his prepuce regarding the other as merely an ordinary sore due to irritation of the fissure.

Multiple chancres are not rare by any means. They are quite frequently seen, if we are to believe the statistics of those who see many cases of syphilis. Of course, the relative precentage is not great in comparison with the grand total but an observer who has not seen this condition has not had many cases under his care. The same may be said of extra-genital chancres and more especially of chancre of the lip. The condition, however, which I have detailed does not seem to be one that is frequent; in fact, it is a more unusual one, viz: to have a chancre of the prepuce and of the lip occur simultaneously. While genital and buccal mucous patches often occur synchronously, the primary lesion of syphilis does not seem to affect parts so distant from each other, nor those particular

portions which I have mentioned. On this very point F. N. Otis,[1] speaking of extra genital primary lesions, says, "Usually they (chancres) are rare in proportion to their distance from the genitalia." How much rarer must this condition be when the case is one of multiple chancres, at such a distance from each other.

An interesting question which is now suggested is this: In the cases reported above, were the chancres of the same age and due to the same inoculation in point of time? or, was there auto-inoculation? A consideration of this would lead to a critical examination of the question of auto-inoculation, and the success which has attended attemps to establish the truth of its probability. I do not intend to discuss these questions exhaustively, but merely analyze a few points, and indicate some possible sources of error. In my opinion, in the two cases which I have briefly outlined the chancres of the lip and of the prepuce, in each case, were of the same age and inoculated simultaneously. My reasons for this are founded upon the fact that the induration of the sores and of the ganglia occurred at about the same time so far as this was observed. In the next place, the induration disappeared exactly at the same time, both in the lymphatic glands and in the chancres. In other words, while the appearance of the induration could not be exactly determined, the synchronous disappearance was observed; and this in two cases. Had either of the chancres been due to an inoculation from the other, we would expect its induration to appear and disappear as much later than that of the primary infecting focus as the period intervening between the appearance of the one and that of the other.

Now let us examine the evidence adduced to support the possibility of auto-inoculation and then we will consider the probabilities.

P. A. Morrow says,[2] "The initial lesion is unique; multiple chancres are, however, by no means rare; they may be grouped in the same region, or be disseminated over different portions of the body.

"Multiple chancres are almost always due to the simultaneous inoculation of a number of rents or abrasions; they are not produced by successive inoculation, as in the case of chancroid.

1. Practical Clinical Lessons on Syphilis and the Genito-Urinary Diseases. 1886.
2. Venereal Memoranda. 1885.

" The *non-auto-inoculability of the chancre* is a rule to which there are few exceptions, and these only possible when inoculation is performed at an early period after the appearance of the chancre ; the result is usually an abortive pustule."

E. L. Keyes[3] has about the same opinion in this matter. He states that " when the chancre is quite young, and the organism presumably not saturated with syphilis, some of the poison taken from the patient's own chancre may be successfully auto-inoculated, producing a second characteristic chancre upon him (Puche, Wallace, Sperino, Bidenkap, Lee and others.)"

In Bumstead and Taylor[4] the main issue is avoided to some extent, as witness the following: " If multiple at all, it is almost always true that they (chancres) are so as the immediate effect of contagion, and because several rents or abrasions were inoculated together in the sexual act. If solitary at first, they continue to be so ; since successive chancres rarely spring up in the neighborhood, as in the case of chancroid, owing to the fact that the virus ceases to act upon the system, as soon as it is once infected."

Of course, the question is, when does the system become infected ; or, in other words, what is the limit to the period when auto-inoculation is possible or is it possible at all ?

The possibility of auto-inoculation from the primary sclerosis is doubted by a number of good observers. Fournier in giving the differential diagnosis of simple and syphilitic chancre, states that in the latter the pus is not auto-inoculable.

H. Leloir[5] says that " the infecting chancre is not inoculable on the carrier of it, and this last proposition may be laid down as an invariable rule (*une règle absolue*) this characteristic of the non-inoculability of the infecting chancre is of the highest importance and may be considered as pathognomonic." He adds a note in which he states that, in some exceptional cases, auto-inoculation *seems* to have succeeded.

H. G. Piffard[6] says that the " Chancre is not, as a rule, inoculable on a person bearing it, or upon another who is already syphilitic."

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3. The Venereal Diseases including Stricture of the Male Urethra. 1880.
4. The Pathology and Treatment of Venereal Diseases. 1883.
5. Lecons sur la Syphilis, 1886.
6. Materia Medica and Therapeutics of the Skin. 1881.

Berkeley Hill[7] in speaking of the primary sclerosis of syphilis says that " the papule is habitually solitary. When there are more than one, the papules are all of the one age," implying that all were inoculated at the same time.

Alfred Cooper[8] in considering the same questions states that " if several hard chancres are found upon the same person, the probability is that they have become simultaneously developed; for a sore of this character is not inoculable, as such, upon the subject of it."

Jonathan Hutchinson[9] does not seem to be very favorably impressed by the doctrine of auto-inoculation. In referring to multiple chancres he says that " the number of these indurated spots, or chancres, will depend upon the number of different places which were inoculated at the *same time*, just as is the case with vaccination vesicles. It is not very often that more than one is seen, and if there be two, three, or more, they *are always at the same stage of progress at the same time. No new ones are ever produced subsequent to the full development of the first.**

If, for the sake of experiment, it were attempted by direct inoculation to produce others, the attempt would fail; just as we should fail to re-vaccinate an infant, on the eighth day, from his arm spots." While we see that the possibility of auto-inoculation is mentioned, the author makes some pretty positive statements to the contrary.

I will make another quotation from P. A. Morrow,[10] in which he states that " the non-auto-inoculability of the secretion of the chancre is the rule to which there are few exceptions and these only possible when inoculation is performed at an early period after the appearance of the chancre. The four or five cases reported in which positive results have been obtained from auto-inoculation of the chancre are of doubtful authority; the most invariable result is an abortive pustule. A distinction is always to be recognized between the specific serous secretion of the chancre and the inflammatory products of this same lesion when irritated into copious suppuration."

With this I will close citing authors although a number of

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7. Syphilis and Local Contagious Disorders. 1869.
8. Syphilis and Pseudo-Syphilis. 1884.
9. Syphilis, 1887.
*. It is possible that certain rare exceptions to this statement may occur. H.
10. Atlas of Venereal and Skin Diseases, 1888,

others holding similar opinions could be quoted. Admitting the auto-inoculability of the chancre for the sake of argument, the question which presents itself is this: At what time does the susceptibility cease, or, in other words, when is syphilis constitutional? The rapid recital of a few cases may throw some light upon the subject. After this I want to make a critical analysis of a few of the reported successful cases of auto-inoculation.

In the first place I wish to call attention to a very interesting and brief *résumé* on the subject by Dr. E. L. Keyes.[11] In one case (his own) excision of the chancre was performed before the lesion was twenty-four hours old and before any induration had manifested itself. It proved unavailing so far as preventing the general symptoms from appearing was concerned. In commenting upon this the author says: "This case I consider worthy of record because it fulfills the most exacting conditions for testing the question still under consideration in the profession as to whether syphillis is or is not already a constitutional disease when the chancre appears." In Berkeley Hill's case cited in the same paper, a man tore his frenum during intercourse and in less than twelve hours later had the wound cauterized with fuming nitric acid. A month later a general syphilis manifested itself. Leloir[12] relates an analogous case. A medical student had a suspicious intercourse and watched his penis constantly for any sign of the chancre. One night at twelve o'clock nothing was apparently visible. Next morning he noticed a macule. This was largely excised at two o'clock in the afternoon of the same day, and the uselessness of the measure was shown by the appearance of general syphilitic manifestations later on.

Barthélemy[13] reports a case of undoubted indurated chancre accompanied by ganglionic involvements in which the induration of the sore persisted for three months and of the glans for four months. No treatment, whatever was given and eighteen months later no general manifestations had shown themselves. The author asks the question: Had I excised the sore would I not have ascribed the mitigation (?) of the disease to that operation? He might have asked himself: was the case one of syphilis?

11. *N. Y. Medical Journal*, April 25, 1885.
12. *Progres Medical*, August 15, 1885.
13. Annales de Dermatologie et de Syphiligraphie, No. 4, 1885.

Zeissl[14] has observed that the excision of the induration does not prevent the appearance of the secondary symptoms; and Delpech has noted, as well as others, that after excision the induration is reproduced at the site of the operation and secondary symptoms follow.

Spillman[15] protests energetically against the abortive surgical measures employed in reference to syphilis. To emphasize his opinion he reports two cases as follows:

He excised the chancre and glands anatomically connected with it in a case. No cutaneous lesions appeared, nor any implication of the mucous membranes. Internal treatment was not taken and confirmed tabes dorsalis was established.

The second case a young woman was supposably infected by her lover. Suspecting that this might occur he caused her to be very carefully watched for any sign of a chancre. This lesion was excised as soon as it made its appearance; yet, despite the precaution, roseola of the trunk and abdomen appeared as well as buccal and vulvar lesions.

In one case I excised the chancre as soon as it became visible. General symptoms supervened, in a mitigated form it is true.

In some of the cases just given extirpation of the initial sclerosis was practiced as soon as it was possible to do so, and yet the results were negative. We must conclude from a clinical point of view that in those cases the disease was constitutional at the time the chancre was excised. The sores were only suspected as the principal signs of differentiation were absent, and it could be very well argued that, had one been excised and not been followed by the general symptoms, the sore was not an initial sclerosis in spite of confrontation and the probabilities of the case.

We will now take up some of the reported cases of successful auto-inoculation and examine them critically. First, we will take the cases reported by Pontoppidan[16]:

1°. Patient with ulcer in the sulcus coronæ, having slight induration. Inoculated in three places on the abdomen. On the eleventh day slight infiltration of base observed.

2°. Infection dating back three weeks. For past fifteen days excoriation on prepuce and ulcer in sulcus coronæ. Later,

14. Ibid.
15. Revue Médicale de l'Est, January 1, 1892.
16. Annales de Dermatologie et de Syphiligraphie, No. 4, 1885.

sclerosis about urethral orifice. Three inoculations on abdomen appeared as papules on the twenty-second day.

3°. Infection a month old. Sclerosis in sulens coronæ. Inoculation showed papules on the thirteenth day.

4°. Infection four weeks back. Inoculation showed elevated reddened places on the twelfth day. On the tenth pa ules, and on the twenty-sixth a syphilitic eruption.

5°. Infection dating back twelve days. Inoculation visible on the fourth day, reddened on the eleventh, and papular on the eighteenth.

Haslund[17] reports five cases of multiple chancres due to auto-inoculation, a brief notice of which is as follows:

1°. Ulcer of prepuce, near frenum, superficial. Six days later indurated as also inguinal gland. In two days after it was excised. Ten days later, a small ulcerated point, due to the tearing out of a suture, indurated; and, a few days later there was found a small ulceration at the meatus urethræ which became distincly indurated. Four weeks later a macular syphiloderm appeared.

2°. Small excoriation of frenum. No induration. Cauterized with chromic acid and dressed with chloride of lime. Five days later wounds became indurated. In two more days, two superficial erosions, one on internal surface of orifice of prepuce, the other in the sulcus coronæ. In three days one sore indurated and a new ulcer in the middle of the balano-preputial sulcus. Ten days later there were eleven indurated ulcers. About a month later abundant macular syphilide. A number of the ulcers healed, leaving a well-developed induration.

3°. An indurated ulcer on the left side, in the sulcus coronæ. Left inguinal ganglia indurated. Two days later an indurated ulcer on the inner surface of prepuce. A month later a macular syphilide appeared.

4°. An indurated ulcer in the sulcus coronæ a little to the left of the median line. Three days previous one had appeared on the right side on the preputial portion of the sulcus coronæ. Ganglia indurated on right side. In about forty-two days a papular eruption appeared.

5°. Right labium majus affected with two indurated ulcers; two smaller ones, also indurated at posterior commissure and

17. Annales de Dermatologie et de Syphiligraphie, No. 6, 1887.

on perineum to the left of the raphé. Glands in both groins involved very typical on the right side. Five days later an indurated ulcer on internal aspect of left labium minus. Twenty days later a macular syphilide appeared.

A critical examination of these cases would lead us to look upon them as special pleas. Mracek,[18] in reviewing Pontoppidan's cases, states that, as proofs of the auto-inoculability of the chancre, they have but little weight. In Case 1, of Pontoppidan's experiments we have an inoculation made with pus and *slight infiltration* observed in the inoculations. In Case 2, also purulent inoculation and papules appeared on the thirty-seventh day after appearance of ulcer. In Case 3, we have insufficient data, papules appearing. In Case 4, we have elevated reddened places as the result of inoculation, papules appearing on the nineteenth day, and *one week later* a syphilitic eruption. In Case 5, the inoculation was *visible* on the fourth day and papular on the eighteenth. We do not find a description of an initial sclerosis in any of these inoculations and the author simply presumes that because lesions appeared at the site of inoculation that they must be chancres. In Haslund's cases we find that the ganglionic involvement is always on the same side as the original chancre (Cases 1, 2, 4, and 5); and that when the other side is involved general symptoms appear and other portions of the lymphatic system are also involved (Cases 1, 3, 4). In these cases the auto-inoculations are also supposed to be the result of the action of the pus.

Taking the *tout ensemble*, it will occur to any fair-minded person that these examples are not satisfactory, nor are the experiments crucial. In reported successful cases we also note that an infiltrated sore is most generally the result of the inoculation. Even if an apparent induration takes place there is no corresponding induration of the lymphatic ganglia anatomically connected with the artificially produced lesion, unless it be at the time that general involvement of the lymphatic glands takes place.

We must not forget that inoculations, more especially when pus is employed, are irritating and the resulting lesion is what has been denominated the " irritative sclerosis " of syphilis.

Taking all these points into consideration it seems to me

18. Vierteljahresschrift fuer Dermatologie und Syphilis, No. 4, 1885.

that : 1°. The probability of auto-inoculation in early syphilis has not been proven. 2°. While there may be strong presumptive evidence in favor of it, it is only at best a possibility. 3°. The most crucial experiments prove that excision of the chancre at the earliest possible moment is futile and falls short of its purpose. 4°. In multiple chancres *à distance* the lesions are due to the same inoculation, as a rule. 5°. In multiple chancres of different ages it is probable that the younger lesions are merely irritative scleroses. 6°. Experiments so far apparently prove that syphilis is constitutional at the time the initial sclerosis makes its appearance.

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