CLINICAL OBSERVATIONS

ON

“INDURATION” IN THE PRIMARY LESION
OF SYPHILIS IN WOMEN.

BY

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THE description of the primary lesion of syphilis in works on that disease has, no doubt, been based mainly on its characters and course, as met with in the male sex. Under ordinary circumstances it comparatively rarely comes under notice in women ; still more rarely is it seen in them in its earliest stages, and it does not present the same facilities for observation throughout its course.

If syphilis present any peculiarities in women distinctive from its effects on the other sex, they may fairly be specially looked for in those lesions developed during the active period of the disease, upon those organs peculiar to the sex, and specially implicated by the disease at that period ; that is to say in the primary lesions situated on

the genital organs, and in those consecutive lesions in the same situation, to which women seem remarkably prone; rather than in the general manifestations of the fully-developed disease and its later effects, as occurring after ordinary contagion, in which it seems to be identical in the sexes.

The establishment of the Government Lock Hospitals for Women under the Contagious Diseases Acts, in operation for about eighteen years, but now recently abolished, furnished excellent opportunities for observing fully those manifestations of syphilis in women alluded to; not only because of the large number of cases, but also because the patients, being compulsorily detained in hospital as long as symptoms lasted, were continuously under observation throughout the course of the disease. Primary sores thus came under notice from the time of their commencement, or very soon after, and remained so till their disappearance. In a considerable number of instances the primary sores made their appearance whilst the patients were under detention in hospital for some other form of venereal disease; ran their whole course, and were followed by typical courses of general syphilis, thus affording thoroughly authenticated cases, complete throughout, in a manner possible only under the system of the Contagious Diseases Acts.

The cases upon which these clinical remarks are based were those admitted into the Royal Albert Hospital, Devonport, during a period of six and a half years, and were about 3300 in number. Every case was kept, and all patients thoroughly examined three times a week as a matter of routine.

Space will not allow dealing here with more than a very limited part of the subject of the primary lesion of syphilis in women, and it is intended to consider that character of primary syphilitic sores which has always been looked upon as of special diagnostic significance, viz. "Induration;" to inquire into the peculiarities of its characters in women, its development, the question of its

absence from true syphilitic primary sores, how far it is an essential character to such sores, and its value as a diagnostic sign.

In dealing with cases met with in the class of women whence these are derived there is difficulty in establishing the authenticity of cases, in being sure that the sore observed is really the primary sore, and the general symptoms the first outbreak of such, and not a recrudescence of symptoms in already syphilised patients; hence, out of the large number of admissions only a relatively small number of primary sores are forthcoming which may be relied on as well authenticated, many probably authentic but open to doubt being omitted. The authenticity of cases here given is based on, first, the known antecedents of the patients, a large proportion having come into hospital several times for gonorrhœa before contracting syphilis, a common event with young girls commencing a life of prostitution, and their total freedom from all signs of syphilis during those admissions. Next, the occurrence of a sore followed by development of typical general symptoms, the latter marking the true nature of the sore, the diagnosis not resting on the characters of the sore. Lastly, the subsequent course of the case being marked by repeated admissions into hospital for recurrences of syphilitic symptoms mainly of the nature of mucous patches and tubercles to which women, and especially this class of women, are so liable, contrasting thus with the known freedom of the patients from syphilis before the occurrence of the sore.

Seventy-one cases have been selected. Of these no less than twenty-six developed the primary lesion whilst under detention in hospital at periods varying from four to forty-one days after admission, affording further proof of their true nature by having passed through incubation periods, and all being followed by typical outbreaks of general symptoms. These seventy-one cases have been tabulated, the characters and courses of the sores being briefly given. The table is appended (Table A).

The characters of induration, as found in the primary sore in women, may now be considered as exemplified in the cases included in this table, and its peculiarities in the sex described. In the male sex induration is described as being always or nearly always present, and in a well-marked form, circumscribed and confined to the base of the sore, sharply defined in its boundary, frequently assuming a remarkably characteristic form and peculiar density and hardness, like a ring of cartilage set in the surrounding soft tissues.

From a consideration of the cases whence these notes are derived it is found that there are many interesting peculiarities of the induration of the primary sores in women which contrast with these points in men. First, as to the degree of the development of the induration or its quantity. It is stated as a general fact that in women it is less marked and less abundant than in men. These observations substantiate the truth of this in a large proportion of cases, but tend to show that it is not the minimum amount only that occurs in women, but that, whilst in a large proportion the degree is slight, in a good many cases a maximum amount of induration is reached; in fact, there is the greatest latitude in this respect, the induration varying from large tumour-like masses or wide-spread patches to cases where it is with the greatest difficulty tangible or visible. Between these extremes every degree is met with. As to the proportion of the cases in which induration is well- or ill-marked it will be found on reference to the table (A) that, roughly estimated, in one third of the cases it was much developed, in another one third it was moderately so, and in the remainder it was so slight as to be appreciable with difficulty or not at all.

As illustrations of the large development of the induration may be cited Case 111, where the sore formed a hemispherical swelling as large as half a Tangerine orange, set upon the outer surface of the labium; and Case 136, in which there were two primary sores, one of which

became raised into a tubercle-like prominent sore the size of a walnut shell, while in contrast may be noticed Case 75, where the sores were merely three slightly raised pale spots on the mucous membrane, and Case 80, where the mucous membrane was merely a little thickened and slightly altered in colour. Certainly to be noted as a peculiarity is the large proportion of cases (here about one third) where the degree of induration is so slight that it can hardly be appreciated; an important point connected with its diagnostic value.

Next as to position and the circumscription of the induration; whilst in men it is described as being distinctly circumscribed and confined to the base of the sore itself, and clearly marked off from the surrounding tissues, this is very far from being the case always in women. As to its diffusion the thickening is very commonly widely spread far beyond the base of the sore; thus about a dozen cases will be found in the table, where the induration spread widely through the tissues, and it is not at all uncommon, as in several of these, to see the sore confined to a portion, say one extremity, of a labium, whilst the whole labium is infiltrated, thickened, and resistant. It is remarkable in connection with this matter that in Case 143, where the primary sore consisted of a circular reddened moist surface on the mucous membrane, neither raised nor palpably thickened, the induration which developed in connection with it did not form in its base, which was never thickened, but spread away from it to the adjacent part of the labium (it being in the posterior commissure), which became thickened and infiltrated.

In extent, too, the induration not unfrequently spreads in a flattened form widely through the circumjacent skin, rendering it hard, thickened, and also discoloured, as in one case (109) where it extended up from the labium into the groin, where there were indurated glands, and in another (28), where a large patch of skin on the buttock became superficially thickened in immediate con-

nection with the sore. In depth and thickness the induration also varies greatly, in some cases forming a tumour-like mass, as in cases already cited, in others forming a thin superficial layer, which has been likened by writers to parchment or even paper, only to be recognised by pinching edgewise between the finger and thumb. Indeed, it may be said that induration shades off in some cases to the vanishing point.

If an attempt be made at comparison between the degree of development of the primary lesion in connection with the amount of its induration and size on the one hand, and the severity of the fully developed disease on the other, it is found that there is apparently no dependence of the latter upon the former; slightly marked sores and those of large size being followed respectively by both severe and mild cases of general syphilis. It is stated on the authority of Bassereau that when the primary lesion shows a tendency towards destructive changes the general disease will be severe. Another point refers to the particular form of the induration, as to whether the typical Hunterian chancre, characterised by its cartilage-like density and its clearly-defined and ring-like outline, is met with in women. It seems evident that in them it is at least very uncommon. Fournier mentions this fact, and it is well sustained by an examination of the cases in the table, and by the general impression which one gets from an acquaintance with the characters of their primary sores. As before stated, a very large proportion, perhaps half, have not the thickening strictly confined to the base of the sore.

The impression is also given that the induration in women is very seldom abruptly bounded off from the surrounding tissues, indeed it is often evidently a progressive infiltration; neither does the hardness ever exceed that given by a firm fibrous tumour in the most developed cases, firm, resistant, and resilient. Very far from anything like this, with their slight or moderately developed induration, are the majority of the sores; the

term "*thickening*," diminishing as before said in some cases to zero, conveys more correctly the true sensation conveyed by them to the touch. The thickening when well developed has a solid resistant feel not quite resembling other growths or swellings in the skin or mucous membrane, and seems to occupy a position between solid inflammatory infiltration and neoplastic tumour, which corresponds also with its pathological position.

The amount and degree of induration has been thought to be dependent in some way on its situation. These cases do not bear out any connection of this kind. Fournier states that induration is least marked in those sores which occur just external to the vaginal orifice, with which statement these observations agree thus far, that whilst sores as little indurated may occur anywhere else, those occupying this position are especially apt to be but slightly indurated. Beyond this there seems to be no connection between position and the degree of induration.

The mode and time of the development of induration may next be considered. For this purpose a group of twenty-seven cases, whose date of onset, having occurred whilst the patients were under observation in hospital, is accurately known within a day, may be referred to. They are appended in Table B.

These sores, arising under the circumstances they did, at once possessed additional interest and were carefully watched for the development of induration as a confirming sign of their true nature. Of twenty-three of these cases included in Table C, in only five was there any sign of anything approaching to thickening at the onset; and it will be noticed how slightly marked it was in these cases, by reference to Table B. Of the remainder, the time at which thickening became appreciable is given in Table C, in eighteen cases, in days intervening from the outbreak of the sore; it will be seen the time varied from seven days to thirty-four days. In one case (Case 6) no thickening appeared in the sore, but seven days after it had healed thickening occurred in its site.

In the other four cases no thickening at all occurred throughout. In four the sores were rather elevated than palpably thickened to the touch. Indeed, in eight cases out of the twenty-three it will be noticed how slightly, if at all, this character was present.

It is evident then that though thickening may be present in the sore from its commencement, yet judging from this small number of cases it is not so in the great majority (here about four to one). Next it appears evident that there is no fixed or even usual time in the course of the sore at which thickening may be expected to appear. Table C shows the very varying times in the age of the sore at which it occurred, up to forty days. If it is fair from so small a number of cases to take an average time of appearance, the nineteen cases would give fifteen days, or about the end of the second week, as an average time. Where the length of interval seems to be so inconstant, however, there is little use in taking the average except for the sake of comparison with the statements of other authors.

Taking the average duration of the primary sores included in the table, which is found to be forty-five days, the sores would then have run just one third of their course, on the average, before thickening appeared.

In fifty-seven other cases where the patients were admitted, bearing already the primary sores, twenty-five showed induration on admission. These cases would as a rule have existed less than a fortnight, that being the interval of the periodic examinations. In eleven of the remainder, the interval after admission before induration or thickening appeared is noted, and varies from three to thirty-two days, showing again how inconstant the time of its appearance is.

I am aware that the general belief is that induration occurs early in the course of the sore; and that it is thought to appear by the end of the first week or certainly before the end of the second. I have not, however, met with any details or statistics attempting to prove this,

except a table quoted from Sigmund as follows : 71 cases on ninth day ; 84 cases on tenth day ; 76 cases on fourteenth day ; 15 cases on seventeenth day ; 12 cases on nineteenth day ; 3 cases on twenty-first day.

This gives the middle and end of the second week as the usual time for the appearance of induration. Considering, however, how little to be relied on are the statements of patients with regard to the time of appearance of the sore, too much weight must not be attached to it.

Some of the older writers, influenced no doubt by the theories they had conceived, were dogmatic in their teaching with regard to the time of the appearance of induration. Thus Ricord is stated to have proved induration in every sore by the fifth day ; and elsewhere he is quoted by Bumpstead as stating that he had never seen a sore become indurated after the third week. With this, however, the latter says he cannot agree.

In considering the discrepancy between what is generally taught concerning the usual time of the occurrence of induration, and the large proportion of cases here given in which it was delayed till later in the course of the sore, it is to be remembered that these have to do with women only, in whom it has been shown that in a large proportion of cases induration is ill marked and slight throughout the duration of the sore ; possibly, therefore, it is slower and weaker in its development. The cases on which opinion has generally been formed have probably been mostly or wholly in men, and dependent entirely on the statements of patients. The cases here given were not dependent on the statements of patients ; and the dates of origin must be correct within a day.

The nature of the syphilitic cell-infiltration of the primary lesion, which is the basis of the clinical character of induration or thickening, is of a chronic or at most of a subacute variety ; yet exceptions are occasionally met with in which the action is of a rapid, acute, and inflammatory kind, even when due to the uncomplicated effect of the syphilitic poison. This is well illustrated in Case

145, where the patient had been in hospital three weeks when the sore appeared, having recovered from the attack of gonorrhœa for which she was admitted. Here the sore was a slight and quiet one for seven days, when suddenly it assumed an angry surface, and infiltration with redness quickly spread throughout both labia. This gradually subsided into chronic and lasting thickening.

With such exceptions of sudden development it would appear that thickening is seldom if ever highly developed in the early course of the sore. We have seen, indeed, that it is in the large majority of cases quite absent then, and that when present it is only slight and soft. It may not develop beyond this grade, but continue in the same degree throughout. It is more common, however, for it to become more marked with the progress of the sore, and in a considerable number of cases to become much more developed in the latter half of the course of the sore and up to the time of the commencement of its healing or even at the time of its healing. It is during this period especially that the highest degree is reached and the sores most of all assume the characters of typical "induration."

This marked accession of induration will be found noted in a good many, seventeen at least, of the cases in table A (Nos. 7, 53, 137, 6, 45, 77, 20, 139, 144, 149, 61, 71, 28, 96, 54, 38, 21).

Induration usually retains or increases its degree, at least to the time of the commencement of healing; it may subside *pari passu* with the healing, but frequently when considerable its disappearance is slow and gradual, and may take many weeks to accomplish.

The clinical characters of the induration must depend upon, and be in accordance with, the pathological changes which are its cause. At first a slight infiltration of young cells would cause no hardness, which can only result from the sclerosing process, which is only gradually accomplished in an abundant mass of exudation cells. The pathological process being as a rule gradual and slowly developmental, the progress of the clinical characters

would also be so, increasing up to the point when involution commences, which usually corresponds with the commencement of healing.

It has been shown that induration is absent in the early period of the primary sore much more frequently than it is present; that its appearance may be delayed for very variable and considerable periods even till quite late in the course of the sore, and lastly, that in a considerable proportion of cases it is so slightly developed that it can be detected only with the greatest difficulty.

It remains to prove that the gradations of amount of induration or thickening which have been shown to exist in women, pass down to cases in which it is impossible to appreciate any thickening exceeding the resistance afforded by the surrounding normal tissues.

The question is so constantly being asked, "Can a non-indurated chancre be followed by syphilis," and answered in a general way on one side or the other, without an appeal to facts, or else left unanswered, that there is much indecision in most people's minds as to what is the truth. When the doctrine was formulated, and no doubt correctly in the main, that there were two distinct classes of sores, only one of which was followed by general syphilis, thickening and induration were held to be characteristic marks of that class, and were never met with in the other. The supporters of the doctrine taught that induration was never present in the latter class, and this has never been called in question. But they also taught that induration is *always* present in the former and is an unfailing sign. Such hard-and-fast rules are seldom so fully borne out by facts in pathological and clinical investigations as not to be liable to exceptions; further experience has more recently tended, whilst confirming the general truth of the rule, to allow more latitude for exceptions. It seems certain that in women, where induration is in the majority of cases a less developed sign than in men, many exceptions are to be met with.

Fournier, who has written especially with regard to

women, and is a firm supporter of the old doctrine, states in his '*Leçons cliniques sur la Syphilis*' that induration is so constant in syphilitic infecting chancres that its absence is an actual curiosity; later on, however, he admits that even to an experienced observer its presence may sometimes be doubtful. He then adduces 100 cases of such sores, and admits that in thirteen he was unable to detect any induration; eight of these he explains away as being in such a position, viz. at the vaginal orifice, as not to be able to be taken between the finger and thumb; otherwise he assumes induration would have been detected. There still remain five cases in the hundred which even to his experience presented no induration. So large a proportion as 5 per cent. hardly justifies us in considering the absence of induration as a curiosity for its rareness; rather such an admission from one seeking to uphold the universality of induration is significant.

Although many observers have stated in a general way that they have seen cases where syphilis has followed non-indurated sores, such statements convey merely a vague impression, and it is only by carefully recorded facts that any fixed conclusion can be arrived at.

The writer of these notes commenced clinical observations on the subject with the belief that marked and characteristic induration was the special distinguishing mark of the infecting chancre; experience, however, soon proved that this was far from being the case.

It is to be kept in mind that the question here raised is not whether that class of sores known as the soft suppurating chancre or chancroid is ever capable of infecting the system, an important question requiring separate investigation; but whether syphilitic infecting chancres ever lack the special character, induration. In other words whether "induration" is an essential character of the infecting chancre.

Amongst these recorded cases there are nine which go to substantiate the fact that syphilitic infecting sores may be totally wanting in the character of induration or

tangible thickening, giving a greater sense of density and resistance above that of the neighbouring unaffected parts. Of the nine, five are chosen for being fully reported, as sufficiently accurate in detail and authenticity to bear investigation; and some remarks are appended to them.

The persistence of the characters of syphilitic chancres and their slowness to change will account for the few notes made as to their condition; though examined thrice weekly, notes would only be called for when any changes were observed in them.

In conclusion, I think we are justified, on the evidence I have submitted, in believing that induration, palpably evident, cannot be regarded as a character essential to the primary lesion of syphilis; the infective poison may exist in a sore without evidencing its presence by that character. Now that the morbid anatomy and pathology are better known, it can be understood how histological changes essential to the development of the disease may take effect at the seat of inoculation without necessarily producing such gross changes as to cause appreciable alteration in the form and substance of the tissues affected.

Further it is evident that induration, at any rate in the case of women, does not possess that paramount importance which has been attached to it by the school already alluded to, who sought to elevate it into a sign peculiar and essential to the very nature of the sore. It cannot now be regarded as a character of vital importance, but must be assigned its proper place as an important, indeed the most important, clinical sign for diagnostic purposes which the primary sore presents. Nor is it by any means the only character for diagnosis which the primary sore possesses. There are others, into which it is not the purpose of this paper to inquire. Nor is induration peculiar to the primary sore only, for abundant examples are forthcoming from the cases on which these notes are founded of consecutive or secondary sores in syphilised individuals, presenting induration exactly similar to that of primary

sores. Nor, again, is induration always or indeed often present throughout the whole course of a sore ; sometimes it is wanting throughout. So ill-marked is it in many cases as to lose much of its value as a diagnostic sign. Even when present, it does not of itself absolutely distinguish the primary character of the sore ; and absent, it does not conclusively prove the absence of the syphilitic poison.

The cases are here appended.

TABLE A.—*Table of 71 Primary Sores.*

75. Three spots on mucous membrane, slightly raised, looking merely a little paler than the rest of the mucous membrane.
80. Mucous membrane of prepuce and one labium minus thickened and slightly altered in colour.
24. A patch of the mucous membrane in posterior commissure looking reddened ; a little raised and thickened.
50. A portion of the mucous membrane on inner surface of labium, thickened but even with general surface ; it became hard a week later.
145. In posterior commissure a patch of mucous membrane, looking merely a little swollen, raised, and reddened, soft ; followed by inflammatory infiltration in labia ; sore took on a pultaceous surface and congested look.
97. A round patch of mucous membrane in posterior commissure, reddened, thickened, with smooth abraded surface.
7. On outside of labium a sore, with smooth, glazed-looking, scarcely secreting surface, a little thickened round its edge ; becoming later very large on a wide and thick base.
53. Sore on labium, even with general surface, with almost dry, scarcely secreting surface on a widely thickened base ; its surface became very large, and its base very thick.
66. Sore on labium, a superficial abrasion on a raised and thickened base.
72. Sore consisted of a superficial abrasion with smooth, red surface, on thickened prepuce ; also a small, round abrasion on inside of labium, red, without any elevation or thickening.
108. Sore on labium minus, round, with nearly dry surface on a slightly raised, flattened base ; whole labium swollen and infiltrated.
141. Sore on front of labium, circular, slightly raised, with smooth, pinkish, moist surface, partially covered with adherent scab ; whole labium infiltrated.
48. Sore deeply seated in hollow between urinary papilla and labium

- minus ; mucous membrane there being thickened and nodulated, and presenting a fissured sore.
18. Sore on labium minus, surface slightly raised, covered with greyish pultaceous material, subsequently becoming dryer, and scarcely secreting. Was never indurated.
104. Sore within posterior commissure, small, with yellow surface ; a little thickening about its margin.
109. Sore on outside of labium, large and raised, with pultaceous material on surface ; soon changed into dry, bright red patch with silvery scales ; infiltration spread very widely.
127. Sore just outside orifice of vagina, a patch of mucous membrane covered with pultaceous material, becoming slightly raised, but never thickened ; also several roundish sores with slightly raised surfaces on labia.
105. On red and swollen prepuce an oval excoriation, with adherent pultaceous material and thickening ; later it became dry, red, and raised a little.
137. On outside of labium a papular elevation, changing to an elevated and slightly thickened circular, smooth, flat surface, moist and glazed looking ; became large on a wide and thickened base ; whole labium became enlarged and of a congested hue.
138. Two little thickened infiltrations, surrounding hair-follicles ; also a superficial excoriation on prepuce, which was swollen and thickened.
111. Sore on outer surface of labium ; a large hemispherical tumour, size of half a Tangerine orange, projecting, firm, and elastic ; its rounded surface smooth, of a yellowish-red colour, scarcely secreting ; labium otherwise not swollen nor thickened.
136. On labium, perinæum, and near anus, three sores in form of raised tubercles, one becoming the size of a walnut shell, with smooth, moist, greyish-pink surfaces.
142. Sores on front of labium, six or seven in number, superficial circular abrasions, level with general surface ; leaving reddish discoloured spots a little raised, but not thickened.
112. Within interlabial folds and posterior commissure, three or four sores, superficial, with yellow surfaces, edges looking a little swollen and raised, but never thickened.
90. On outside of labium a small circular spot with moist abraded surface, never becoming thickened.
146. Around vaginal entrance several superficial sores, with reddish or yellowish surfaces, not raised, nor thickened ; becoming later a little raised, but continuing quite soft.
6. On front of labium three small, superficial, circular abrasions, not altering their characters throughout ; but seven days after healing their sites became thickened.
45. On fold of nates two round, quite superficial sores, which spread

into one, presenting a slightly raised surface; when healing it became elevated and thickened.

77. On labia and fold of nates several small round excoriations, with dry, glazed-looking surfaces; late in their course they became elevated and thickened.
140. On front of labium a roundish, superficial abrasion; later it formed a raised, flattened, circular tubercle, with slightly moist surface.
143. In posterior commissure a round patch of mucous membrane, with red, rather moist surface, neither raised nor thickened; later infiltration in adjacent right labium; none in sore.
165. On labium minus a small, round, reddened spot, becoming slightly raised and thickened; infiltration spread through the labium minus.
20. About vulva several rounded sores, with yellow surfaces, adherent pultaceous material; surfaces became non-secreting, one became raised on a thickened base.
68. In extralabial furrow a large superficial excoriation, covered with greyish, pultaceous material; becoming a little raised, then again flatter and drier.
107. On labium minus two or three superficial excoriations, with adherent pultaceous material, spreading into one large, circular thickened sore; labium swollen and thickened.
22. Just external to orifice of vagina two sores, with adherent greyish pultaceous material, becoming later a little raised, with non-secreting surfaces; later still thickened.
126. On vaginal wall three superficial sores, with yellow surfaces spreading into one with dryish surface; it became raised and thickened on one side of its margin.
139. On urinary papilla a patch of the mucous membrane, neither raised nor thickened, but covered with grey pultaceous material; becoming afterwards raised and thickened, and later still a hard raised patch.
144. In posterior commissure a superficial sore, with greyish-yellow adherent pultaceous material; a little later thickened; left hard thickening on healing.
148. On outer surfaces of labia four circular sores, level with general surface; surfaces smooth, with a little pultaceous material; thickening soon occurred, and spread through labia.
149. On labium minus a small circular abrasion, level with general surface, with greyish surface; spread and eroded somewhat; later became thickened.
113. On cervix uteri two circular sores, with yellow surfaces; one formed a large raised tubercular elevation, leaving a thickened whitish patch on healing.
114. At entrance to vagina an irregular sore, with yellow surface, spreading and eroding irregularly; never raised nor thickened.

89. In posterior commissure a small excavated sore, which later assumed an even, granular surface, but was never raised nor thickened.
61. On labium minus three ulcerated sores; they soon became superficial, but spread; thickening appeared very gradually, becoming in time well marked.
70. On inside of labium two ragged, eroded sores, with yellowish-grey surfaces, no thickening; they filled up, and later on induration developed in them and throughout labium.
99. Just outside entrance to vagina several little irregular, deeply eroded, yellow-surfaced sores, which later spread into one, with red, granular surface, and margin slightly raised, perhaps slightly thickened.
100. At entrance to vagina a rather eroded sore, with yellow surface which gradually increased; later the whole adjacent labium was infiltrated; no separate induration in sore itself.
147. On inner surfaces of labia two rather deeply eroded sores, with yellow surfaces; changing after to slightly raised, red places, smooth, moist, and a little thickened.
28. On fold of nates four small sores, a little ulcerated, with a little red, thickened infiltration around, forming later large sores, level with general surface, with greyish pultaceous surfaces; induration later, with great thickening and redness around.
26. On inside of labium a large ulcerated sore, with unhealthy greyish surface; whole labium infiltrated and thickened throughout.
44. At orifice of duct of Bartolini a large sore, with grey, sloughy-looking surface; thickening in subjacent tissues.
85. At entrance to vagina a small sore, which spread by ulceration, a little thickening about it.
96. On outside of labium a round sore, superficially ulcerated; much inflammatory infiltration in adjacent part of labium; later it became rather prominent, with glazed surface; later still much larger, with much widespread thickening.
3. In extralabial furrow a small sore discharging pus, with redness around; it became larger, with almost dry surface, glazed looking; without any thickening throughout.
46. On inside of labium a superficial sore discharging pus, changing into a reddish patch, looking as if merely denuded of epithelium; it never became thickened.
41. On inside of labium, which was swollen and red, several superficial excoriations; later on some superficial induration in labium, which continued swollen.
58. About vulva several large superficial sores discharging pus; two of them soon became indurated, and left well-marked induration on healing.
65. On the labia, and opposed, are two sores with suppurating surfaces,

- not thickened; later they became thickened and increased in size, their surfaces covered with sloughy pultaceous material.
103. On folds of nates three or four vesicles on reddened patches of skin, leaving little excoriations, which became papular and red; later, one formed a raised patch with shining red surface.
43. On folds of nates three vesicles, leaving little excoriations, which later became raised patches of skin with dry surfaces, forming tubercles, which subsided into thickened, brown, scaly marks.
95. In extralabial furrow a large sore, with granular surface, discharging pus, a good deal of thickening in its large base; later, congested, sloughy looking; later still irregularly nodulated.
54. Labium minus with sub-inflammatory infiltration, which, breaking down, formed a large ragged sore; later, extensive induration spread around it.
55. Swelling and redness of left labia; on the inner aspect a large irregular surface excoriated and discharging pus; much thickening and enlargement continued after the healing.
56. Redness and swelling of labia extending up to groins, with extensive excoriations on former, which slowly healed and left discoloured patches.
86. Labium red and swollen, with a large excoriation covered with grey pultaceous material, which left thickening when healed.
34. On folds of nates two sores looking like simple excoriations of the skin, so continuing; but later, on healing, leaving reddish slightly scaly patches; no thickening throughout.
49. On folds of nates two large superficial excoriations; later, forming large reddened patches of the skin, neither perceptibly raised nor thickened.
38. On perineum a small and superficial sore, without any particular characters; increasing, its surface later became thickened and nodulated; later, raised into a tubercle.
115. On outside of labium a superficial excoriation, soon changing into a raised patch, with nearly dry surface, superficially thickened.
21. On folds of nates two simple-looking excoriations, which, later, became raised and tubercular in form.

TABLE B.—*Table of 27 Primary Sores, showing characters at earliest period.*

This table includes those tabulated in Table C. Those here marked with a * are not included in Table C.

Case.	No. of sores.	Position.	Characters.
24	1	Posterior commissure	A red patch on mucous membrane within commissure slightly raised and thickened.
41	Several	Labium	Several small, superficial excoriations on mucous membrane of labium, which was infiltrated throughout; infiltration sub-inflammatory in its nature.
75	3	Labium	Slightly raised spots on the mucous membrane, looking altered and whiter than the rest.
97	1	Posterior commissure	Circular patch of the mucous membrane raised and thickened, with smooth, red surface. (Patient not seen for past 7 days owing to menstruation.)
145	1	Posterior commissure	Patch of the mucous membrane looking swollen, red, and a little raised, soft, not thickened.
6	1	Labium	Small circular erosion of epithelium on mucous membrane, no thickening or elevation.
45	2	Buttock	Round superficial excoriations of the epidermis on fold of nates; no thickening or elevation.
77	Several	Mucous membrane about vulva and folds of nates	Small round excoriations of epithelium and epidermis, without thickening or elevation.
165	1	Labium minus	A little round spot on mucous membrane which merely looks a little redder than the rest.
142	Several	Labium	Circular superficial abrasions of epidermis on front of labium, neither thickened nor elevated.
*20	1	Cervix uteri	A greyish-surfaced patch, circular, on mucous membrane of cervix, even with surface.
90	1	Labium minus	Round patch of mucous membrane, with moist surface abraded of epithelium, not raised nor thickened.
143	1	Posterior commissure	Round patch of the mucous membrane, presenting smooth surface, red, scarcely moist, level with surface, not thickened nor elevated.

Case.	No. of sores.	Position.	Characters.
23	1	Labium	Superficially ulcerated, not thickened; like a simple chancre; on mucous membrane.
89	1	Posterior commissure	A small excavated sore, not thickened.
113	1	Cervix uteri	A small sore with yellow surface, round, with surrounding inflammation on mucous membrane of cervix.
21	4	Folds of nates, labium minus	Superficial excoriations on nates; no specific characters; considered accidental; superficial circular excoriations on labium minus a few days later, no thickening.
38	1	Perinæum	Small and superficial sore place, without any particular characters.
43	3	Folds of nates	Little excoriations of epidermis on folds of nates, no thickening.
49	2	Folds of nates	Large, widespread excoriations of the epidermis, quite superficial, not thickened, dryish.
140	1	Labium	A superficial abrasion of epidermis on front of labium, without elevation or thickening.
146	Several	Labium	Excoriated surfaces on mucous membrane around vaginal entrance, without any particular characters, no thickening.
*62	1	Perinæum	A sore on perinæum, entirely without specific appearance, not suppurating, nor thickened.
*59	2	Labium	Small superficial sores, without any thickening.
*144	1	Posterior commissure	A superficial sore, with greyish-yellow surface, not thickened.
28	2	Folds of nates	Small ulcerated sores, with dryish-looking surfaces, a little thickening and redness around.
103	3	Folds of nates	Three little vesicles on an inflamed patch of skin, leaving little erosions (turning later to papules).

TABLE C.—*Showing the age of 23 Primary Sores in days when thickening first became apparent.*

These cases are included in Table B.

Case.	No. of days.	
24 ...	From beginning.	
41 ...	From beginning.	
75 ...	From beginning.	... Elevated; scarcely thickened.
97 ...	From beginning.	
145 ...	From beginning.	... Raised and soft; not thickened.
167 ...	7	
146 ...	7	... Elevated only; never thickened.
113 ...	11	
143 ...	14	... Thickening in adjacent tissue; none in sore itself.
21 ...	16	
43 ...	17 (about)	
45 ...	18	
23 ...	19	
103 ...	19	
28 ...	22	
38 ...	26	
77 ...	28	
140 ...	34	... Elevated only; never thickened.
6 ...	40	... Sore had healed six days; thickening in site.
142 ...	None throughout.	
90 ...	None throughout.	
89 ...	None throughout.	
49 ...	None throughout.	

Five Cases of Infecting Primary Sores in which there was no Induration.

CASE 6.—E. Y—, æt. 19. Admitted for the first time.

April 9th, 1879.—Gonorrhœa only; no other sign of disease, local or general.

May 5th.—There is a small circular superficial abrasion on right labium minus.

8th.—There are two fresh sore places; all are circular superficial sores without any induration; no enlarged inguinal glands.

June 7th.—(There has been no note of any change in the sores.) Sores

have now healed over, no induration at all in them; no enlarged inguinal glands. During the past week there have been aching pains about hips.

14th.—The right labium minus, on which the sores were situated, has now become thickened and swollen.

17th.—There are enlarged and indurated glands in right groin. Labium minus still thickened. A syphilitic macular exanthem has appeared on limbs.

July 1st.—The thickening has disappeared from labium.

September 15th.—Left recovered.

Within the next three months fresh exanthem appeared, and mucous patches on the folds of buttocks. During the next four years she was admitted many times, always or nearly always with recurrence of syphilitic symptoms.

The primary sore appeared in this case after she had been in hospital and removed from source of infection twenty-six days, which time the incubation period must have exceeded. There was no induration in the sores, nor in the inguinal glands, until seven days after the former had healed over, when thickening appeared at their site, and three days later the glands were found affected, at which time also the early exanthem appeared. The case continued to show repeated outbreaks of syphilitic signs during a long subsequent period.

In this case the antecedents were not known. The incubation stage was typical. The appearances of the sores were characteristic with the exception of the absence of induration. The case is peculiar in the fact of induration appearing where the sores were situated seven days after they had healed. The inguinal glands, which maintained their freedom till induration had appeared, shortly after became typically affected. The development of the constitutional symptoms with pains in the limbs, and the appearance of a syphilitic macular exanthem, was typical. The further course of the disease observed for four years was also regular.

CASE 49.—A. O.—, æt. 19. Fourth admission. Under previous observation in hospital during the under-mentioned periods :—1st admission, December 24th, 1879, to January 8th, 1880; 2nd admission, March 10th, 1880, to March 18th, 1880; 3rd admission, April 21st, 1880, to April 27th. All these admissions were for slight gonorrhœa only; there were no other signs of disease, local or general.

June 14th, 1880 (fourth admission).—Gonorrhœal discharge with redness of internal parts. No other signs at all of disease except a distinct gland in each groin.

July 22nd.—There are two patches of the skin of the folds of nates, one on each side, looking as if superficially excoriated, of rather large size.

27th.—The patches, which were excoriated, have now dry surfaces, look red, but are neither raised nor thickened.

August 9th.—For some days past she has complained of scalp pains. She has now some brownish, slightly-raised spots of syphilitic eruption generally scattered about the body.

14th.—Excoriations have disappeared and also the eruption. She did not again come under observation.

In this case the patient was under observation several times in hospital during the seven months preceding the appearance of the sores, and was under periodical examination outside during that time. She did not exhibit any sign of syphilis. The incubation period was well marked, and must have exceeded thirty-eight days, as that was the period she remained in hospital before the sores developed. The characters of the sores were typical, with the exception of the absence of induration and thickening. There being two enlarged inguinal glands, probably from irritation of a non-specific kind on admission, preventing the time of their affection by the syphilitic poison being fixed. The outbreak of early symptoms was typical. The subsequent course of the disease did not come under observation.

CASE 3.—A. T—, æt. 18. Fifth admission. She was under observation in hospital during the under-mentioned periods:—1st admission, January 6th to 16th, 1880, for gonorrhœa only; 2nd admission, February 23rd to March 16th, 1880, for gonorrhœa only; 3rd admission, April 14th to May 1st, 1880, for gonorrhœa and a pus-discharging sore; 4th admission, May 28th to June 8th, 1880, for gonorrhœa. During these admissions she presented no signs of syphilis.

June 18th, 1880 (fifth admission).—On account of menses not examined until 24th. There was then a small sore, with suppurating surface and redness around it, in the left labio-crural hollow.

July 1st.—The sore has spread and has now become larger, with a smooth, glazed-looking surface, scarcely secreting at all, now considered syphilitic. There is no induration about it, but there is a distinct gland in corresponding groin.

20th.—Sore has nearly healed over; gland has become large.

31st.—Sore is healed; there has been no thickening throughout.

August 20th.—The site of the sore has broken out afresh; the enlarged gland remains; a copious syphilitic exanthem has appeared over the back.

31st.—Mucous patches have appeared on tonsils.

September 11th.—Signs of disease have all subsided except that the maculæ have not quite disappeared.

Recurrence of macular eruption, patches on tonsils, and papular infiltration on labium followed two months after, and during the next two years there were repeated outbreaks of syphilitic symptoms.

In this case the antecedents had been observed for five months during which she was several times in hospital, free from all signs of syphilis, and under regular medical examination during the intervals. The sore at first presented signs not usually characteristic of syphilis, but later on assumed typical appearances, lacking only induration, which never occurred—the former a very frequent occurrence. There was typical enlargement and induration of an inguinal gland. The outbreak of constitutional symptoms was typical. The subsequent course of the disease was regular.

CASE 142.—B. K—, æt. 18. Admitted for the first time.

Sept. 5th, 1884.—There is purulent discharge from the vagina and Bartolini's duct; no other signs of disease, local or general.

20th.—A very small roundish superficial excoriation on one labium without any thickening.

27th.—There are now six or seven little circular excoriations on the labia, chiefly on the skin surface, level with the general surface; not ulcerated; no thickening in them, no enlarged inguinal glands.

Oct. 2nd.—All the sores are larger; one has a centre where the epidermis is sound, surrounded by a zone of excoriation.

11th.—Sores have all healed over; the places remain a little reddened; they look slightly higher than the general surface, but do not feel thicker to the touch than neighbouring parts; no enlarged glands.

21st.—Copious syphilitic exanthem has appeared.

Nov. 21st.—All signs of syphilis have now subsided.

In this case the incubation period lasted more than fifteen days, the time she remained in hospital before the primary lesions appeared. The primary lesions presented typical characters with the exception of the absence of induration; they were situated on the front surfaces of the labia, where they presented every facility for examination; attention was fully aroused as to their true nature, and the sores were constantly examined with respect to the presence or absence of induration. There was an absence of induration of the inguinal glands, a point which will be referred to later on, and the occasional but apparently rare occurrence of which will be illustrated from these notes. The outbreak of general symptoms occurred in a typical manner.

CASE 34.—M. H—, æt. 17. Admitted for the first time.

April 12th, 1880.—Gonorrhœal discharge. There are no enlarged inguinal glands nor signs of general syphilis; there are two patches of excoriation, one on either fold of the nates.

17th.—Sore places look to be drying up and healing.

22nd.—The places look nearly dry, yet have not quite healed over; they have scarcely any secretion; there is no thickening in them or about them.

May 6th.—The excoriations have now healed over; there is no induration about them, nor are there any indurated inguinal glands.

13th.—The excoriations have left discoloured reddened places on the skin, which is there a little scaly; there has been no induration throughout either on the places or in the inguinal glands.

She now left the hospital and continued under medical examination outside; she was re-admitted.

July 6th (second admission).—There were now enlarged and indurated inguinal glands, some macular syphilitic eruption on the back, and on the vulva some tubercular and papular infiltrations and dry, scaly infiltrated patches of the skin.

August 7th.—All signs have disappeared.

Recurrence of secondary syphilitic symptoms took place eight months later.

The primary sores presented typical characters, in their persistence without any marked change, in the nature of their surfaces, in their course, and in the condition of the skin they left after healing; they were favorably placed for examination. The glands again in this case presented no enlargement or induration until after the sores had healed; secondary symptoms followed in due course, being fully developed seven weeks after the healing of the primary sores.

(For report of the discussion on this paper, see 'Proceedings of the Royal Medical and Chirurgical Society,' New Series, vol. ii, p. 193.)