

CHAPTER V.

INDURATION OF THE GANGLIA AND OF THE LYMPHATICS.

As already mentioned, the induration of the base of a chancre has been supposed to be most developed in regions most copiously supplied with lymphatic vessels, and was consequently regarded by Ricord and others as consisting essentially in a specific lymphitis. But even if this supposition be incorrect, it is certainly true that we find a condition of the lymphatic vessels and ganglia in anatomical connection with a chancre closely resembling the induration of its base, and of even greater diagnostic value than the latter. We may, therefore, regard this affection as an offshoot or prolongation of the induration of the base of the initial lesion of syphilis previously described.

Of the two—induration of the ganglia and induration of the lymphatic vessels—the former is by far the more frequent, just as we find adenitis, rather than lymphitis, the more constant attendant upon a chancre.

INDURATION OF THE GANGLIA. (SYPHILITIC BUBO.)

I have already stated the reason which led us to exclude this affection from under the head of "buboes," but if it still be called a "bubo," the adjective "syphilitic" belongs to it exclusively, and is so applied by recent French writers.

CONSTANCY.—*Does induration of the ganglia necessarily attend a chancre?*

Rollet, in his own clinical experience, states that its absence is a "rare exception."

Ricord regards the induration of the ganglia as "*fatale*," "*obligée*;" "it follows a chancre as a shadow follows a body;" "never a chancre without induration of the ganglia, may be boldly asserted as a pathological law."

Fournier says: "With very rare exceptions, it is a *constant* symptom of primary syphilitic infection." The testimony of most other modern observers is the same.

For my own part I have never met with a chancre which was not attended by induration of the neighboring lymphatic ganglia, although this induration has been doubtful for a time, in a few instances, especially in strumous subjects, or has been masked by the occurrence of acute inflammation. I regard it as by far the more valuable symptom of a chancre than induration of the base of the ulcer itself, since it is less likely to be counterfeited by extraneous influences, and is even more constant and persistent.

Yet it would appear that this, like every other isolated symptom of syphilitic infection, may in very rare instances be wanting. In the twenty-six cases of artificial inoculation of the syphilitic virus upon persons previously free from syphilis, collected by Rollet, induration of the ganglia is mentioned in only twenty, but we are left in doubt whether this was due to its absence or to the imperfection of the observation.

Bassereau carefully examined the condition of the ganglia in three hundred and eighty cases of chancre, the diagnosis of which was confirmed by the evolution of secondary symptoms, and found induration in three hundred and fifty-five. But here, again, the question may arise whether, in the twenty-five exceptional cases, induration had not previously existed but had disappeared at the time of the examination.

Fournier reports 265 cases of chancre, of which the ganglia were involved in 260, but in 3 cases only was the absence of induration from the outset certain.

The instances in which this attendant upon a chancre is likely to be wanting or of doubtful recognition may be classified as follows:

I. Strumous subjects. I have met with a number of patients of strumous habit who stoutly asserted that the enlargement of the inguinal ganglia had existed long before the sore upon the penis, and their evident scrofulous diathesis has added weight to their statements, and rendered the diagnosis for a time doubtful.

II. In corpulent persons the mass of adipose tissue may render it difficult to recognize the condition of the ganglia by means of external palpation. Ricord, it appears, would go one step further and regard corpulent subjects as less prone than others to exhibit this lesion in its full development. He says: "The ganglionic system is usually in the inverse ratio, in respect to its development, to that of the adipose system. In very fat persons the ganglia are small; in connection with a true chancre they are often only slightly enlarged; sometimes, though rarely, they are not perceptible." (Oral communication to M. Fournier.)

III. Again, Ricord and Fournier both assert that if a chancre be attacked by phagedæna, the ganglia will remain unaffected. "Phagedæna would appear to be one of the conditions which prevent syphilis from affecting the ganglia." In my own experience, phagedæna has attacked a chancre in most cases, after induration of the ganglia had already appeared, so that I am unable to confirm this statement.

IV. According to Fournier, "in very rare instances," induration of the ganglia is wanting "in connection with a chancre in the form of a superficial erosion, or an exulcerated papule, presenting a scarcely perceptible or doubtful induration." For my own part, in such instances I have always referred to the ganglia to confirm my diagnosis, and have never known them to fail me.

V. Finally, we have those cases, studied especially by Diday, and indorsed to this extent by Ricord, in which the rare inoculation of the syphilitic virus upon persons previously infected produces only a

local sore, without reaction upon the ganglia or the system at large. I have nothing to offer on this point, because I have never met with such cases well established.

The absence of induration of the base of a chancre and of its neighboring ganglia may, in rare instances, be admitted, without materially detracting from the value set upon their diagnostic and prognostic indications; for why should absolute constancy be expected in syphilitic symptoms any more than in those of other diseases? and in the whole range of pathology it would be difficult to find two which are more uniformly present than these.

SEAT.—As already stated, the ganglia affected are those in direct anatomical connection with the initial lesion or chancre. Since a chancre is most frequently situated upon the genital organs, induration of the ganglia is commonly found in the groins. Chancres of the interior of the urethra in both sexes, of the perinæum, of the anus, of the cervix uteri, of the buttocks, of the lower portion of the abdomen, and of any point of the lower extremities, will likewise manifest their presence by induration of the *inguinal* ganglia. According to Ricord, when the chancre is situated at the anus, it is the external portion of the inguinal group near the anterior superior spine of the ilium, that is involved.

With chancres upon the fingers the situation of the indurated ganglia varies. In one case of a chancre upon the forefinger I found a well-marked indurated ganglion in the web between the forefinger and thumb. More frequently, in these cases, the ganglion on the internal side of the elbow, or those in the axilla are involved. Again, ganglia between the points mentioned—the hand and elbow, or the elbow and axilla—may become indurated. Thus, in a case under my care, the chancre was upon the thumb, and the ganglionic induration showed itself at the elbow (epi-trochlear gland), and also in a gland situated about half-way between the elbow and axilla on the inner side of the arm. Chancres of the breast also affect the axillary ganglia.

Chancres upon the lips, both upper and lower, upon the tongue, and upon the chin, cause induration of the submaxillary ganglia; those upon the eyelids, induration of a ganglion situated directly in front of the ear. Fournier mentions a case of a chancre occupying the palatine arch, in which a large ganglion was present in the thickness of the cheek; also another case in which infection was “very certainly” the result of catheterization of the Eustachian tube, and in which there were two voluminous ganglia in the parotid region, one directly below the ear and the other somewhat beneath it under the ramus of the jaw.

Thus the situation of ganglionic induration points to the approximate seat of a chancre, even after the latter has disappeared, and may be of essential service in unravelling the history of obscure venereal cases. For instance, in the spring and summer of 1863, a young

man had two attacks of what was apparently simple gonorrhœa. In the autumn he applied to me with syphilitic iritis, alopecia, acne capitis, and post-cervical engorgement, and there could be no doubt that he had had a chancre somewhere near the genitals, although he was quite unconscious of the fact, since each groin presented the characteristic indurated pleiad. One of his attacks of gonorrhœa was probably complicated with a urethral chancre.

Again, a young physician called upon me with well-marked syphilitic papulæ, which he attributed to contagion incurred in attendance upon a midwifery case “five weeks before,” and he showed me a scar upon the forefinger which he said was the seat of the chancre, at the same time denying any other exposure. It was so improbable that his eruption had been developed thus rapidly, that I examined his groins, and the induration of the ganglia nailed the lie, which he subsequently confessed.

The following table, borrowed from Fournier, gives at a glance the situation of the indurated ganglia, according to the varying seat of the chancre:

| SEAT OF THE CHANCRE. | CORRESPONDING BUBO IN THE— |
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| Chancres of the genital organs, <i>i. e.</i> , of the penis, scrotum, the labia majora and minora, the fourchette, the meatus urinarius, the urethra, the entrance of the vagina, etc. | Inguinal ganglia. |
| Peri-genital chancres (those of the perinæum, the genito-crural folds, the mons veneris, the thighs, the buttocks, etc.). | Inguinal ganglia. |
| Chancres of the anus and the margin of the anus. | Inguinal ganglia. |
| Chancres of the lips and of the chin. | The submaxillary ganglia. |
| Chancres of the tongue. | The sub-hyoidian ganglia. |
| Chancres of the eyelids. | The preauricular ganglia. |
| Chancres of the fingers. | The epi-trochlear and the axillary ganglia. |
| Chancres of the arm. | The axillary ganglion. |
| Chancres of the breast. | The axillary ganglia and sometimes the sub-pectoral ganglia. |
| Chancres of the uterine neck. | Theoretically the pelvic ganglia. Generally nothing is found in the groins. Exceptionally an inguinal bubo. |

TIME OF APPEARANCE.—According to Rollet, in cases of artificial syphilitic inoculation, induration of the ganglia appears on an average eleven days after the commencement of the chancre. In practice, however, we find it earlier, and usually at the same time as the induration of the base of the sore. In exceptional instances, its development is delayed, but, according to Ricord, never beyond a fortnight. In some doubtful cases of venereal ulcers I have been obliged to defer my diagnosis for a week or ten days until induration of the ganglia became well marked and removed all doubt. Fournier refers to a case, which he says has been *unique* in his ex-

perience, of the induration not showing itself until the twenty-seventh day after the appearance of the chancre.

SYMPTOMS.—Induration of the inguinal ganglia may affect one or both sides; in the former case it is usually the side upon which the chancre itself is situated, although occasionally this rule is reversed, as with buboes attendant upon a chancroid.

Wherever, as in the groin, a number of ganglia form a group, most of them, at least, are usually involved, but to an unequal extent. A "pleiad," as it has been called by Ricord, of small olive-shaped or globular tumors, is felt, cartilaginous in hardness, freely movable upon each other and the surrounding tissues, and without attachment to the overlying integument. One is commonly developed more than the rest, and attains about the size of an almond; the others, as large as a bean or cherry, surround it like satellites.

There are no symptoms of acute inflammation. The change has taken place insidiously and often without the patient knowing it. The skin is not altered either in color or temperature. Firm pressure sometimes reveals slight tenderness, but rarely excites severe pain; and motion is usually not impeded. Indolence is one of the chief characteristics of a "syphilitic bubo."

Less frequently, only a single tumor is felt in the groin, varying in size and shape in different cases: sometimes it may be compared to a good-sized plum, while at other times it is elongated, about the thickness of the finger, and corresponds in direction to the inguinal fold. In several instances, as the tumor subsided, I have found it resolve itself into several, showing that it was composed of a number of coherent ganglia, and this fact has been demonstrated by Bassereau in post-mortem examination.

When a chancre is situated at a distance from any group of ganglia, as upon the fingers or face, only one or two of these bodies are usually involved.

COURSE AND TERMINATION.—Induration of the ganglia usually reaches its full development in the course of a week or fortnight. If mercury be given for the primary sore, it may somewhat diminish for a time, but commonly undergoes a recandescence upon the evolution of secondary symptoms, resembling in this respect the induration of the chancre. It is usually more persistent than the latter, but its ultimate duration varies in different cases, from several weeks to five or six months, or even longer. Ricord states that he has found unequivocal traces of it several years after infection in exceptional cases.

Resolution without suppuration is almost the constant termination of syphilitic induration of the ganglia, but to deny that suppuration never takes place, as some authors have done, is to assert that induration protects the ganglia from every cause of acute inflammation, which is evidently absurd. Since the indurated ganglia are not in a healthy condition, the only wonder is that they do not more

frequently inflame and suppurate, but the rarity of this termination is now well demonstrated.

Bassereau found only sixteen cases of suppurating buboes in 383 cases of syphilis.

In the large number of true chancres treated by Ricord at the Hôpital du Midi, and in its outdoor department, in the year 1856, there were only three which were accompanied by suppurating buboes.

Rollet has found 17 cases of suppuration in 320, at the Antiquaille Hospital; Fournier only 2 in 265. In speaking of the rarity of suppuration in this form of adenopathy, it is of course understood that no chancroid coexists in the neighborhood or has been implanted upon the site of the chancre itself, constituting the so-called "mixed chancre," and capable of exerting its own peculiar influence upon the glands.

The causes which may favor the occurrence of suppuration in indurated ganglia are the same as those mentioned when speaking of buboes, but the most frequent is a strumous diathesis or general debility. In the following case several influences probably had a part:

B. belonged to a strumous family. His sister, aged 17, had been afflicted with an aggravated form of chronic eczema since early infancy. His brother, after hardship and exposure upon a wreck, was confined to his bed for six months with suppuration of the inguinal glands. B., who had always enjoyed good health, contracted a chancre in June, 1859, followed by glandular induration. Syphilitic erythema appeared in September, when the glands, which until then had been indolent, became inflamed, suppurated, and remained open six weeks. The general symptoms proved to be very obstinate, and he was still under treatment in July, 1860, when, after violent exercise at leap-frog, another abscess formed in the same groin.

It will be noticed in this case, that the inguinal glands remained in a quiescent state for nearly three months after the healing of the chancre, and their suppuration at the end of this time can only be ascribed to the strumous diathesis of the patient, and also, in a measure, to the febrile excitement preceding the syphilitic eruption.

The value of suppuration of the glands in a suspected case of syphilis as an element of diagnosis is a question of considerable practical importance. A patient with general symptoms of a doubtful character seeks advice of a surgeon, who learns that several years ago he had a venereal sore, but can obtain no accurate description of its symptoms. On further inquiry he also ascertains that there was tumefaction of the glands in the groin, and the patient rarely fails to remember whether they suppurated or not—a fact which may also be determined in most cases by the presence or absence of a cicatrix. What light will this investigation throw upon the nature of the sore? If the description above given be correct, *the fact that suppuration took place will favor but will not absolutely prove the supposi-*

tion that the sore was a chaneroid. It is a common but not invariable rule that general syphilis does not follow an open bubo.

In the rare instances in which suppuration takes place the pus is never auto-inoculable like that of the virulent bubo; whether it contains the syphilitic virus, and that its inoculation upon a person free from syphilis would produce a chancre, is a question which has never been solved by experiment.

DIAGNOSIS.—Induration of the ganglia is most liable to be confounded with strumous engorgement; the history of the case and the concomitant symptoms must decide the diagnosis.

Only great stupidity could lead the attending physician to regard cancerous degeneration of the inguinal glands with an ulcerated cancerous tumor of the glans penis as syphilitic, although this has actually occurred in a case to which I was called in consultation.

Induration of the ganglia is so distinct from the simple inflammatory and virulent bubo that I need not dwell upon their points of difference.

INDURATION OF THE LYMPHATICS.

As both the simple and virulent bubo have their occasional attendants in simple and virulent lymphangitis, so has glandular induration its accompanying induration of the lymphatics, a more constant companion, though not invariably present, than either of the former.

Specific engorgement of the lymphatics is dependent upon changes in the walls of these vessels identical with those which occasion induration of the base of the chancre and of the ganglia, and is characterized by the same three important symptoms, viz., induration, absence of inflammation, and persistency.

The indurated vessel feels like a hard cord running from the neighborhood of the chancre towards the pubes along the upper surface of the penis in the course of the dorsal vein and artery, or, in a few instances, it occupies the side of this organ. It is generally single, but sometimes multiple; of the size of a crow- or goose-quill; in some cases of uniform diameter, when it communicates to the fingers a sensation like that of the vas deferens, while in others it is swollen at regular intervals like a necklace, or is, as botanists would say moniliform. The distal extremity arises in the induration surrounding the chancre, and the cord can generally be traced for two or three inches towards the pubes, sometimes to the base of this prominence, but rarely as far as the indurated ganglia in the groin.

Induration of the lymphatics is most frequently observed upon the penis, but is not limited to this region. Bassereau relates a case of chancre upon the cheek, in which a hard cord could be traced from the indurated base of the sore to an indurated ganglion beneath the angle of the jaw.

Induration of the lymphatics appears about the same time and in the same manner as that of the base of the chancre, and the two generally correspond in degree of development. As already stated,

the former is less constant than the latter, but if sought for may be found in a large proportion of cases.

Induration of the lymphatics usually undergoes resolution about the same time as that of the base of the sore; but in a few rare instances it becomes inflamed and terminates in suppuration, when fistulous openings may form along the course of the vessel. Bassereau met with three cases in which the induration of the chancre took on inflammatory action and was transformed into a phlegmonous tumor, the cavity of which was found to communicate with the interior of an hypertrophied lymphatic, through which a probe could be passed up to the pubes. In one instance he was able to make a post-mortem examination, the patient having died of an intercurrent acute disease. The dorsal vein and artery were found to be intact, and the fistulous canal evidently consisted of an hypertrophied lymphatic with hard and thickened walls, which could be traced from the induration of the chancre to the right inguinal ganglia.

Induration of the lymphatics may readily be distinguished with care from the dorsal vein and artery. It is more liable to be confounded with simple or virulent lymphangitis. The diagnostic symptoms have already been given when describing the latter.

This symptom of a chancre has the same prognostic signification as the induration of the base of the sore and the inguinal ganglia, and denotes that the constitution is already infected and that general syphilis will soon make its appearance.

TREATMENT OF INDURATION OF THE GANGLIA AND LYMPHATICS.

Uncomplicated cases of indurated ganglia require absolutely no local treatment whatever. When, therefore, an otherwise healthy patient with a chancre and induration of the neighboring ganglia anxiously inquires whether he is likely to be laid up with a suppurating bubo, he may be assured that there is no danger unless he commit some great imprudence. Under the mercurial treatment required by the constitutional infection which has already taken place, the indurated ganglia gradually diminish in size and lose the slight degree of tenderness which they possessed. In the exceptional cases of suppuration the treatment is the same as for inflammatory buboes, though generally less active.

The same remarks apply to the treatment of induration of the lymphatics.