

A LECTURE

ON

TUMOURS OF THE BLADDER.

Delivered at University College Hospital, November 21st, 1887.

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PART II.

SUPPOSING that your investigation of a case of vesical hæmaturia results in the discovery of papillomatous *débris* in the urine, identified by you as such under the microscope; what is to be done? I cannot advise you to pursue any system of local applications to the interior of the bladder by way of injecting or otherwise. The question of operation is the only one a surgeon can entertain. I assume that there is no sign of the presence of cancerous growth of any kind, because if there is I shall advise you on no account to touch it with the knife—we may perhaps occasionally have to open the bladder in such a condition to afford relief, although I confess it has never fallen to my lot to see a case presenting any indication for such a proceeding, still that the need might arise is quite conceivable.

Thus for practical consideration, I may say that two distinct classes of cases are met with—the larger class consists of those patients in whose urine the *débris* of papillomatous growth are found, and which can be identified as such by the microscope. About these cases there is no doubt as to the presence of the growth, the only question is how are they best dealt with?

The second class consists of those cases in which the history and the symptoms, especially the nature and extent of the bleeding, render the presence of tumour highly probable. Nevertheless, after several examinations, no papillomatous or suspicious cell growth has been discovered. For these, with rare exceptions, digital exploration, though a small opening in the perineum, should be performed. This done, the operator ascertains if a growth be absent or present; and if the latter, whether it be a single polypoid growth, which may be easily removed by the forceps through the existing opening, or whether the extent and physical characters of the tumour indicate that a better chance of removal will be obtained by performing a suprapubic operation. Or the inquiry may lead to the decision that the growth implicates the coats of the bladder chiefly, that it is not developed in the form of prominent masses admitting of removal, and therefore that no further operative procedure is desirable. I may add here that when the existing conditions have been determined by exploration, and the surgeon believes that his best course is to attempt removal above the pubes, there should be no delay, but he should at once proceed with that operation. The perineal incision does not in the least degree interfere with the subsequent line of action; the rectum is to be distended in the usual way, and the bladder will retain the necessary injection, which is the next step of the process, notwithstanding the opening which has just been made.

Should the management of the cases constituting the first-class differ from that just sketched? I refer to the cases in which there is microscopic evidence that tumour is present. Is an exploratory incision necessary or desirable also for them?

In the majority of cases I think it is not. It is quite true that when there is only a small polypus with a narrow neck it can be easily removed by a simple perineal incision; and I am bound to state that my most successful cases have been thus treated, and have been permanently cured in that manner. But they would have been successfully treated also by the suprapubic method, which, moreover, offers an additional advantage in the fact that, especially when the patient is not stout, the operation affords an opportunity of removing other minor growths, if such exist, more easily and effectually than the perineal opening does. When I first began to remove vesical tumours the value of the new suprapubic procedure, in regard of simplicity, safety, and efficiency, had not been established; but an enlarged experience of it, in my own hands, has convinced me that it offers advantages when the tumours are multiple or considerable, not to be obtained by the perineal route. I cannot recommend that it should be performed when you merely entertain a suspicion, however strong, that tumour is present in any given case. As long as the absolute proof arising from fragments passed in the urine is absent the perineal exploration is the only legitimate proceeding, unless it is deemed better to wait and make further research for indubitable evidence.

Next, as regards the performance of these operations, I have nothing to add to the details which I thought it right to enter upon very fully in my last lecture, when dealing with the exploratory operation, relative to the mode of removing any foreign bodies, or detaching any morbid products when found by its means.

Again, when the suprapubic operation is to be undertaken for the treatment of vesical tumour, no different mode of performing it, from that required for the extraction of calculus, has to be adopted. Hence the operation is to be performed in the manner already described, in every particular as far as to the opening of the bladder itself. But at this point of the procedure I now give you some further instructions for completing it.

I request you to imagine then, that there is a patient here before us whose bladder I have just opened above the pubes, and that my right index finger has entered the small opening I have just made with the scalpel. You might observe that the water which was injected into the bladder before commencing has been flowing out in a full stream, but that it is now checked by the finger *in situ*. My left hand is still holding the handle of the hook with which I firmly fixed the vesical coats before making the incision, is now in the act of being removed. Of course my finger is engaged in carefully surveying the form, the dimensions, the consistence of the tumour, and especially the nature of its attachment to the walls of the bladder, whether by a narrow or by a broad base. Then the whole of the inner surface of the cavity, usually smooth and polished, is traversed in the search for other growths only exceptionally present. And when the work to be done, and the space required for action have been thus determined, the opening, at present small, may be enlarged either by distending with the finger, or by cutting to the size required, and also, if necessary, for light to see. It is usual, often convenient, to pass a long loop of stout silk, one on each side of the upper margins of the opening of the bladder, through its coats, that an assistant may by drawing them apart display the cavity, and at all events preserve the opening in its place. The operator then applies a pair of forceps of appropriate form, blunt or sharp according to the nature of the tissues to be removed, using the latter only whenever it is not possible to remove them with the blunt instruments. By careful management all the free growth is removed; and if a thick or hardened base is encountered it must be left; there can be no attempt to separate this from the coats of the bladder, with which indeed it is incorporated.

When the growth has a narrow, more or less pedunculated connection with the vesical walls, it is cut off pretty close to the adjacent surface. At last, when nothing remains to be dealt with, the fluid should be allowed to run out of the rectal bag, for the bleeding is usually rather free during the process of detaching the growth, and removal of pressure on the veins caused by the distended rectal bag, materially checks it. There is no occasion to close the bladder, indeed it is better not to do so. Its muscular tissues soon contract and narrow the opening, which may moreover continue to give exit to a quantity of small tumour *débris* which remains, some of the bruised surface of the base remaining will slowly slough and separate. The wound is then treated precisely as after the suprapubic operation for calculus, the directions for which were given in detail in the lecture on that subject.

I shall now briefly give you my view of the general results of my experience of removing vesical tumour to the present date.

I have operated altogether on thirty-eight patients,¹ male and female. In at least five patients, excluding, of course, the recent cases, say the last twelve, since the lapse of a considerable period of time is necessary to determine the question of permanent results, the cure has been complete, no return has taken place, and the patients, with one exception of a man since killed by accident, are as well at this moment as they ever were, and are perfectly free from any urinary symptoms. The victim of the accident had passed nearly two years after the operation, without return of symptoms. An necropsy was made by Mr. J. L. Crisp, of South Shields, who sent him to me and was interested in the result. He was good enough to send the bladder for my inspection, in order to demonstrate that there was no sign of reappearance, indeed a careful scrutiny was necessary in order to discover the very slight remaining cicatrix. The growth is in the museum at University College.²

A large proportion obtained relief from severe symptoms for different periods varying between two and four years, and then reappearance of the growth has led to a second operation. In two cases, one that of a medical man who fully understood the pathology of his terrible disease, I have operated three times; in both of these at the desire of

¹ My last public report was one of twenty cases, since which I have operated on eighteen other patients.

² This case is given in my work on Tumours, in which it is the last, or No. 20

the patient from experience of relief and reprieve, attained by their preceding experience.

Four patients died within a few days of the operation, partly from exhaustion, two from cystitis and peritonitis, all among the very early cases, probably from too great an anxiety on my part to remove the whole of the growth, and the want of safer and more efficient instruments, which experience has led me now to employ. Two died from blood poisoning, each on the twelfth day after operation, one after the perineal incision, and the other after the removal of a large tumour by the suprapubic route. Several are living with threatening return: the great majority gaining relief from severe symptoms and some extension of life, varying considerably in different instances.

We have to remember that every patient with bleeding vesical tumour inevitably succumbs sooner or later to his fate, unless surgical aid is afforded. Every case therefore of permanent cure is a life absolutely saved by our art, while prolongation of life, whatever it may amount to, is equally so. Hence these results, although necessarily showing many failures to remove the disease, certainly manifest a considerable aggregate of clear gain in the matter of human life, and must be so regarded in relation to the sum total of those who are afflicted.

Under these circumstances it is impossible to predict for any individual case the result of operation, even in an approximate degree. Until incision has been made and actual contact with the finger, sufficing to ascertain the physical characters of the tumour, has been completed, no one can say whether it be possible to remove it completely. If separation is not complete there is not much hope of a permanent cure; nevertheless, I am disposed, after observing the issue of one of my cases which suggested the idea, to think that even when not quite removed there are two processes, almost necessarily following, which tend to favour a successful issue. The first is, sloughing of a thin layer of the surface left, due to the crushing action of the blunt forceps; secondly, the cicatricial action and contracting of the surface, which probably suffices to strangle and destroy any very slight remains of the papillomatous tissue there.

HARVEIAN LECTURES ON LUPUS.

Delivered before the Harveian Society, December, 1887.

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LECTURE II.—THE VARIETIES OF COMMON LUPUS.

The Histology of Lupus Vulgaris.—Of Lupus Erythematosus.—Dr. Than's Records.—Dr. Jamieson's Case.—Lupus not always the same.—Explanation of the Causes of Variability.—The Bacillus.—Reference to the Schedule.—Definition of Lupus.—Distinctions between Vulgaris and Erythematosus.—Meaning of Symmetry and Non-Symmetry.—Struma-Lupus.—Necrogenic Lupus.—Lupus Mutilans.—Lupus of Mucous Membranes.—Eczema-Lupus.

I SAID in my last lecture that it was my wish to submit the question of the real nature of lupus to the test of clinical rather than of purely histological evidence. I have, in truth, no faith that it is possible to solve it by the latter. We must not, however, pass it by without availing ourselves of its aid, so far as it can at present help us. I wish, therefore, to somewhat amplify what I then said on this matter.

"It is now generally believed" (I quote the words of Dr. Sangster, a much better authority than myself) "that the earliest changes of lupus are to be sought for as an independent cell growth in the corium, either affecting it as a whole (as held by Neumann, Auspitz), superficially (as held by Virchow, Billroth), or beneath the vascular layer (as held by Kaposi)."

The differences in opinion of different observers as to the precise part first attacked are to be explained by reference to the different stages of the disease which they had under their inspection. The most vascular parts of the corium, the immediate neighbourhood of the sebaceous and sudoriferous glands, and the peri-vascular spaces of the blood-vessels themselves, are the parts where the cell growth is first seen. It is usually noticed first in the most superficial parts of the corium, in close connection with the Malpighian layer; so that many observers have believed that it originates in a germination from the under surface of this structure. In the end the deep layers of the corium and even the uppermost of the adipose structures become in-

olved; and at this period the glands and hair-sheaths are for the most part destroyed by pressure. Unless ulceration has taken place, the layers of the epidermis and the rete Malpighii, although somewhat altered, remain intact. A very important observation has been made by several, and is confirmed by Dr. Sangster, that the Malpighian layer is apt to grow downwards in processes much resembling those of epithelial carcinoma.

The cells which constitute lupus tissue are at first not easily distinguished from white blood-corpuscles, but at various stages and in different parts they present certain differences, becoming larger and lighter-coloured, with less granular contents. There are also seen oval bodies conspicuous for their shape and faint colour, which resemble the nuclei of the deep Malpighian cells, many of them having a point-like nucleus.

The presence of "giant cells" has been asserted by several observers, Langhaus, Friedländer, etc. But the exact nature of the appearances so named has been disputed by others. Professor Lang supposed them to be only degenerated sweat tubes. Sangster is of opinion that "true giant cells are sometimes met with." As to the real origin of true giant cells there is, however, much discrepancy of opinion still existing amongst histologists.

These descriptions apply to lupus vulgaris only; and let us always bear in mind to well developed examples of it only. The microscopist always selects for his purpose a position where the apple-jelly growth is well displayed, and it is this growth which he describes. His observations upon such cases scarcely touch the question as to whether there are not antecedent conditions which cannot be distinguished from common inflammation, nor that as to whether in other states the peculiar features of lupus growth be not wholly concealed by super-added inflammatory products. Respecting these, I suspect that the microscopist would not unfrequently allege that there was no proof that the disease was lupus at all, and the assessor would have to fall back on the clinical evidence. We may take it as certain that whenever the naked eye can recognise apple-jelly, the microscope can always find a definite and characteristic cell-growth in the corium, whilst respecting the other less marked conditions different verdicts will be given. The inflamed form which lupus almost always presents on the hands and feet, for example, will probably but rarely present for the microscopist appearances which are conclusive, and we have to prove that it is lupus by its laws of extension and persistence, and by the presence of better characterised patches on other parts in the same patient. I am anxious to impress this point because it is of great importance in reference to the admission of various allied diseases into the lupus family. My assertion is that lupus is by no means definitely *sui generis*; that it is only a specialised type of chronic inflammatory action, and that the degree of its specialisation may vary much in different cases, being in some so slight as almost to defy recognition.

If from lupus vulgaris we now turn to the histology of lupus erythematosus, we shall find almost all observers unanimous that there are important differences between the two. Some have even thought these differences so great as to wholly detach the maladies from relationship. Such, I need hardly say, is not my view. If we take the examples of common lupus in which cell growth is most marked and those of erythematosus in which the condition approaches nearest to mere erythema (as when it becomes generalised), then assuredly we shall have no difficulty in demonstrating by the microscope most conspicuous differences. The conditions delineated, for instance, by Dr. Thin in his able paper in the *Medico-Chirurgical Transactions*, show little more than dilatation of the capillaries. For Dr. Thin lupus erythematosus is in the main a disease of blood vessels. There are, however, other forms of the malady which present other appearances, and just as it is, I assert, often by the unassisted eye impossible to say conclusively whether any given case should be assigned to vulgaris or to erythematosus, so it is equally difficult when we examine a microscopic section. I shall prove my assertion as to this difficulty—impossibility, if you will permit the word—in the living patient by producing before you a number of portraits published by different authors on lupus, and I have no fear as to your verdict. In reference to the inspection of sections I will ask those who are skilled to examine the drawing which I produce and to tell me whether it shows the conditions of vulgaris or erythematosus. There is, as you will see, abundant cell growth in the superficial layers of the corium, and quite expect that most will declare the appearances those of common lupus. I have, however, borrowed the woodcut¹ from a paper by Dr. Jamieson, of Edinburgh, and it is taken from a case the whole history of which proves it to have been an example of the erythema form.

¹ I have to express my thanks to Dr. Jamieson for his kindness in lending the woodblock which I here use.