Lectures

ON THE

DIAGNOSIS AND TREATMENT OF DISEASES OF WOMEN.

DELIVERED AT ST. MARY'S HOSPITAL MEDICAL SCHOOL.

BY

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DISORDERS OF MICTURITION.

GENTLEMEN,—I now propose to enter on the consideration of a class of symptoms of very great interest in a diagnostic point of view: those referable to the function of micturition, its disorders and derangements. These disorders are frequently the occasion of great suffering to the patient; they owe their origin to a great variety of causes, the discrimination of which is not always easy; and hence the necessity for a close study of their diagnosis.

Practically, it will be convenient to divide the derangements of the function of micturition into two classes: 1. Those in which the patient is able more or less completely to evacuate the contents of the bladder; and 2. Those in which, the patient being unassisted, micturition is impossible.

1. MICTURITION IS POSSIBLE.

But it may be difficult, or painful, or frequent, or involuntary.

Frequency is a symptom which, although it generally accompanies difficult or painful micturition, may be usefully considered by itself. Involuntary micturition is naturally divided from the other varieties. Micturition may then be abnormal, because it is *a.* difficult, *b.* painful, *c.* frequent, and *d.* involuntary.

It must be admitted that this basis of division is artificial and open to criticism; but it will serve the purpose of enabling us to consider the subject practically. We do not often meet with cases in which micturition is simply difficult; or with cases in which the only thing complained of is pain attending micturition—the pain and the difficulty, indeed, frequently go together. Cases will, nevertheless, arrange themselves naturally under the one or the other head, according to the prominence of one or the other symptom.

a. Micturition is possible, but difficult (dysuria). It is frequently not easy to ascertain from the patient whether micturition is actually difficult or not, from the circumstance that pain is so readily confounded with difficulty, and *vice versa*. The distinction is, however, an important one, and should always be carried out as far as possible.

Difficulty in micturition proceeds from one of two causes: either the bladder is incapable of expelling its contents; or, the bladder being equal to the task, the exit of urine from the bladder is prevented by some abnormal condition of the urethra.

The bladder is inefficient when its muscular fibres are paralysed; or, which amounts to the same thing, when they do not act. *Paralysis of the walls of the bladder*, in this sense of the term, is not a common

affection; it is witnessed in the last stage of low fever, in puerperal fever *e.g.*, and it is the result of long continued distension of the viscus, whereby the muscular fibres have their contractility destroyed or lessened.

The cause of the difficult micturition in cases of this kind would be tolerably apparent, except when the paralysis extended to the sphincter also, when the constant dribbling away of urine would render the distended condition of the bladder less obvious. Cases of a more chronic nature sometimes present themselves; the bladder is largely distended, simulating abdominal tumour, and yet, the escape of urine being tolerably regular, attention is not called to the condition of the bladder itself. Lamentable mistakes have occurred under such circumstances from the want of a correct diagnosis. In cases of paraplegia, paralysis of the walls of the bladder is more often present towards the close of the affection, the paralysis at first extending, in a marked degree, only to the sphincter. Cases of paralysis of the bladder are characterised by the offensive condition of the urinary secretion, due chiefly to partial constant retention of the same within the bladder.

In cases of *organic disease of the bladder, cancer e.g.*, there is frequently difficult micturition accompanied with bloody urine; micturition is also both frequent and painful.

In another more rare disease of the bladder, viz., *polypus*, the urine may be prevented from escaping into the urethra, owing to the mechanical interference of the growth in question. The bladder being healthy, the difficulty in micturition arises from some morbid or unusual condition of the outlet of the bladder.

Organic stricture of the female urethra occurs very rarely, compared with what is observed in the other sex. In males, difficult micturition is generally dependent on stricture of the canal itself; in women, very rarely. When present, it is generally traceable to the effects of mechanical injury, as from the pressure of the foetal head, contusions from instruments during labour, etc.; and, occasionally, to syphilitic ulceration within the urethra (Kiwisch). The affection is, in reality, so rare, that beyond this little that is not simply conjectural can be stated. In cases where the difficult micturition is due to this cause, the difficulty is more or less persistent, though liable to exacerbations; the bladder is evacuated slowly, the stream is small, pain is at times present, and the difficulty, as a rule, slowly increases as time advances. The history of the case might be of some assistance in the diagnosis; but an examination would be necessary to verify the conclusions formed.

Vascular tumour of the urethra, or polypus of the urethra, may be the cause of difficult micturition; but micturition is, as a rule, more painful than difficult in the former of these affections. In the case of polypus of the urethra, there is difficulty and straining in micturition, and there may be occasional passing of blood.

In a large number of cases of difficult micturition, the outlet is itself in a normal condition; but the canal is either subjected to pressure, or so dislocated from its normal situation, that the urine passes through it with extreme difficulty. Connected as the neck of this bladder is with the uterus, dislocations of the latter involve a certain amount

of displacement of the former. *Retroflexion or retroversion of the uterus*, and especially of the gravid uterus, produces difficult micturition in a marked degree. The bladder is emptied with great difficulty in such cases; the urethra is elongated, stretched, and pressed upon posteriorly by the uterine tumour. In early pregnancy, difficult micturition, persisting for some time and increasing, would lead us to suspect retroflexion or retroversion to be present. Enlargement of the uterus, from the presence of *fibrous or other tumours*, may also produce difficult micturition; indeed, this symptom is very commonly observed in the early stage of this affection. "A difficulty in making water," says Sir Charles M. Clarke, "is a much earlier symptom attending the disease than a difficulty of passing the fæces." (P. 254.) In such cases, the difficulty is not so considerable as in retroflexion of the uterus, and the symptom is, so to speak, more chronic than acute.

In cases of fibrous tumour of the uterus, a curious phenomenon is sometimes observed, not, probably, peculiar to these tumours; namely, the manner in which ability to evacuate the bladder is affected by the position of the body. Thus, a lady who has had a large fibrous tumour of the uterus for the last seven years, has, of late, had occasional difficulty in micturition, which she has always been able to overcome by lying flat on the face. The uterine tumour is moveable, and when the patient throws the body forwards, the pressure of the same is removed from the vesical outlet.

During the *descent of the fetal head* through the pelvis in labour, there is difficult micturition, the canal of the urethra being partially or completely occluded by pressure.

In *prolapse of the bladder* (cystocele) the same symptom is observed.

Tumours of the ovaries, as long as they remain in the pelvis, frequently occasion great difficulty in micturition; when, in process of growth, they rise above the pelvic brim, the pressure on the urethra is removed, and, so far as the symptom now alluded to is concerned, the patient improves.

In short, difficult micturition may be caused by any tumour in the pelvis capable of exerting pressure on the canal by which the contents of the bladder are evacuated. It is characteristic of most of those cases in which the difficulty of micturition depends on pressure by tumours, etc., within the pelvis, that the difficulty is more or less chronic, and will be found on inquiry to have lasted for some time, unless in cases where the pelvic tumour is of very rapid growth. An instance of the latter exceptional kind we have in cases of uterine hæmatocele, where blood rapidly effused into the pelvic cavity forms a considerable tumour, and, in consequence, gives rise to difficult micturition.

Lastly, *spasm of the sphincter of the bladder* may occasion difficult micturition. The difficulty is frequently so great in these cases as to produce actual retention. This class of cases is an exceedingly important one, and will be again alluded to.

b. Micturition is painful; that is to say, pain during or in consequence of micturition is the prominent symptom. There may be difficulty; but the pain attending it is the circumstance chiefly attracting attention. What is considered by the patient to be "difficulty" is often, on a more particular inquiry, found to be really "pain."

Micturition may be painful by reason of *abnormal conditions of the urine itself, of the bladder, of the urethra, of the vaginal mucous membrane*, or in consequence of *dislocations* produced by affections of other adjacent organs.

Urine. The morbid conditions of the urine alluded to, are undue acidity or alkalinity, presence of gravel, mixture of the urine with blood, in cases of Bright's disease, or from any other cause. If the urine be of an irritating quality, it may give rise—1, to excoriation of the vaginal outlet; and 2, to painful micturition in consequence of the excoriation.

Bladder. Cystitis, chronic or acute, is accompanied with pain during micturition, the latter often excessively frequent. In these cases, there is pain, more or less constantly, as well as during the passage of the urine from the bladder. Cystitis itself may arise from the presence of a stone in the bladder, from retention, partial or complete, of the paralytic or obstructive form. In cases of calculus, there is pain on motion and at variable times; the pain during micturition is not considerable, as a rule, but there is generally pain just at the end of the process. The painful micturition in cystitis depends either on the condition of the urine, which is often very irritating, or on the associated inflammation of the urethra.

In *malignant disease of the bladder*, the pain following micturition is a marked symptom, and is associated with pain at other times also, with frequency of micturition, with turbidity of the urine, occasional presence of blood, etc. The disease in question is rare; the affection with which it would be most liable to be confounded is organic disease of the kidneys. To settle the point, an examination of the bladder would be necessary.

Urethra. Painful micturition is, in the majority of cases, dependent on morbid conditions of the urethra. In urethritis, whether of specific character or not, there is pain of a burning character (scalding, as it has been appropriately termed), which is more or less constant; but during the passage of the urine it is very intense. Micturition is not only painful, but very frequent. The sudden nature of such an attack is, as a rule, characteristic of the presence of an inflammatory condition of the urethra. The symptoms present in inflammation of the urethra of a specific nature, *i.e.*, produced by the gonorrhoeal virus, are not always or constantly characteristic. There is generally great pain in micturition; this pain is of a burning character, and associated often with a spasmodic contracted state of the sphincter, to which the pain experienced is partly attributable. The presence of an urethral discharge, and the moral evidence attainable, would assist us in coming to a conclusion. In cases of gonorrhoeal inflammation of the urethra, the stage of acutely painful micturition does not extend usually beyond two or three days; it attends the outset of the inflammation, but is less marked subsequently. We also find inflammation of the urethra as the result of mechanical injury, as from masturbation, too frequent or violent sexual intercourse; or it may be the result of vesical irritation, as in cystitis or calculus.

Vascular tumour of the meatus is associated with more or less pain in micturition; and the pain present in such cases is, as a rule, very severe; the distress and inconvenience produced being so con-

siderable, that the patient dreads the process of evacuating the bladder. Painful micturition, extending over a considerable time, in a middle-aged woman, should lead us to suspect the presence of this affection. Examination of the meatus would then be necessary.

Another class of cases of painful micturition are those in which the bladder and urethra are unaffected, but, the *ostium vaginae* being in an inflamed condition, the passage of urine is productive of pain from the contact of the latter with the inflamed surface. Certain forms of leucorrhœa are associated with painful micturition, in consequence of the existence of this inflammatory condition of the outlet of the vagina. When the upper and inner part of the thighs are excoriated by contact with irritating discharges of a cancerous or other nature, the patient will lead us to infer that there is painful micturition; the pain arising in the latter case also from contact of the urine with a raw inflamed surface. The immediate neighbourhood of the outlet of the urinary meatus may be inflamed as the result of masturbation, as was the case in a young lady recently under my observation. The painful micturition was here the symptom most prominently attracting attention.

Alterations in the position of the uterus, thereby drawing the urethra out of its place, alterations of the bladder itself, or tumours of adjacent organs, may produce difficulty in micturition, as already pointed out. The difficulty is generally accompanied with more or less pain; but the pain is not, as a rule, the prominent symptom, though it may be so in a few exceptional cases. With a little care in cross-examination, it may generally be made out whether the pain or the difficulty came first in order of sequence, and this point is of importance in reference to the diagnosis.

FEMALE CONVICTS. Dr. Guy, in his report, gives an account of one of these convicts, who was only subdued by a long course of firm treatment. She had the strength of a man and the agility of a monkey. Sooner or later she burst all the strait jackets in use on the women's side of the prison, repeatedly tore down with her teeth the strong canvass of the padded cell, and even broke down the ceiling. There is a class of women met with in the convict prisons so hardened that the chaplain of Brixton says they are almost "a wonder"; and he can only exclaim, "Though thou shouldst bray a fool in a mortar, yet will not his foolishness depart from him."

SIR J. McGRIGOR. Before the siege of Badajoz the medical officers were never noticed in the dispatches. However much they risked their lives, their services were known only to their comrades. After the siege, finding Lord Wellington in excellent spirits, he said—"I trust, my Lord, you are satisfied that the medical officers during last night did their duty, as well as the military officers, and that you will receive my testimony that they discharged their arduous and laborious duties most zealously, and often under circumstances of personal danger, of which they were regardless." He replied that "he himself had witnessed it." I then added, nothing could more gratify those officers—nothing could be a greater incentive to their exertions on future occasions, than his noticing them in his public dispatches. He asked, "Is that usual?" My reply was, "It would be of the most essential service." Although the dispatch was finished, "something about the doctors" was added. (*Med. Record.*)

Clinical Lectures

DELIVERED AT

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BY

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LECTURE I. (*Concluded.*)—REGURGITANT AORTIC DISEASE.

Aortic Regurgitant Pulse: its Mechanism. The Three Circumstances conspiring to downward Displacement of Heart's Dulness. Cardiac Sputum. Diagnostic Value of Age in the Ætiology of Organic Heart-Disease. Treatment.

IN prosecuting our inquiry into our patient's symptoms beyond what superficially manifests itself, the first thing that would strike us would be his pulse. Now, this pulse is utterly peculiar; it is diagnostic of aortic regurgitation; in no other state whatever could it occur; it points to that one thing alone; and any one of you might on the strength of it, and without making any examination of the heart, safely diagnose the valvular lesion. When I first listened to this patient's chest, the only sound that I heard was at the base, with the first sound (systolic aortic), and I therefore pronounced the disease to be aortic obstruction; but, the moment I saw the pulse, I knew there must be aortic regurgitation, and, on listening again, plainly heard, at the same situation, a bruit with the second sound (diastolic aortic); and we have heard it ever since, much more plainly than the systolic; and how it was it escaped me at first, I am at a loss to explain. I need not tell you that the peculiar character of the pulse to which I refer is a conspicuous leaping jerk, not only perceptible to the touch, but visible to the eye; carotids, temporals, brachials, radials, tibials—in fact, all the arteries wherever superficial, and where not ordinarily visible, are plainly seen leaping forth at each beat of the heart; and the pulse may be counted in all of them, as well by the eye as by the touch. The arterial system seems alive; and, whenever the arteries are tortuous, a peculiar sudden writhe is visible, like a centipede when touched. This pulse has been called a "jerking" pulse; I think a "leaping" pulse would perhaps be a better name. It was called by Dr. Todd a "locomotive" pulse—an injudicious name, I think; for locomotive is just what it is not: it is motive, but not locomotive.

The way in which it is produced by the lesion which it implies is sufficiently clear. When the aortic valves are sound, the complete and instantaneous closure of the aortic orifice maintains the tension of the arterial system which the additional volume of blood sent into it by the systole has just carried to its maximum. The systole makes the arterial system tense, the valves keep it tense, and therefore the next systole finds it tense; but where, from insufficiency of the aortic valves, the blood largely refluxes into the ventricle, the tension of the arteries is suddenly lost, their tendency to contract on their contents is unresisted, and they instantly collapse. The state of the arterial system at systole