CHAPTER XXVI

DISTURBANCES OF MICTURITION; DISEASES OF THE BLADDER AND URETHRA

In the majority of cases of diseases of the bladder and urethra, the patients employ the expression "urinary trouble," which is as vague as "headache" or the popular "stomach-ache." A great number of diseases are included in these terms, and the symptoms of urinary trouble are quite as manifold. It is frequently not feasible, especially during office hours, to expose the patient immediately in order to make a local examination. Even if this does not apply, the time during which the patient is undressing may be profitably employed by putting suitable questions. This examination should consider the following points: The urinary trouble may be due to the fact that the patient can not hold the urine (incontinentia urinæ; enuresis), or is unable to pass it (retentio urinæ; ischuria), or can pass the urine only in conjunction with various abnormal symptoms (dysuria). It is evident that diseases of entirely different nature may give rise to these main symptoms.

Incontinence may be the result of paresis of the vesical sphincter, of vesical fistula, of a stone projecting into the neck of the bladder, of connective-tissue degeneration of the sphincter vesicæ, etc. *Retentio urinæ* may be due to vesical paralysis, cramp of the sphincter vesicæ, stricture of the urethra, foreign body in the urethra,

urethral compression from without by a tumour or spicule of bone, displaced uterus, etc. If called to an unconscious patient, who has fallen from a scaffold and is suffering from retention, we reason differently than when a patient comes to our office with the demand that his disease should be kept secret from his friends.

The symptoms of *Dysuria* vary greatly. A careful catechism is required in order to gain exact information. A certain amount of order and method will be obtained if the following points are considered in putting the questions:

1. Is the condition of recent origin or has it existed some time?

2. Has the patient had fever or not? These two questions narrow the countless possibilities to smaller groups.

3. Has the patient passed more than the normal amount of urine within a specified time? The daily quantity of urine voided varies greatly, even among healthy people. The question is, therefore, directed to ascertain whether the patient has noticed that since a given period he empties his bladder more frequently or that his bladder shows a decreased capacity.

4. What painful sensations are felt during urination? Does vesical tenesmus exist? Is pain felt in the urethra during micturition? Is the pain more marked toward the end of the act?

5. What is the character of the stream? Has it projectile force, is the flow weak, or does the urine dribble away? Particularly find out whether the stream is winding or forked, and how long a time each urination occupies.

6. Especially important: Do the symptoms vary during a single urination, so that the stream is thin for a few moments, then thick, suddenly interrupted, only to flow again with more or less obstruction? In short, whether, during one single urination, the symptoms of all the various grades of stricture occur?

7. What is the appearance of the urine—i. e., colour, clearness, consistency, odour—and, in particular, does it contain blood?

8. Are the functions of neighbouring organs not disturbed? Do constipation and, in women, menstrual disturbances coexist?

If these points have been determined, in some cases the diagnosis can be made merely from the combination of symptoms obtained.

For instance, a patient informs us that he has during the last year occasionally passed bloody urine. During a single urination he at one moment passes water without trouble, the stream then becomes thin, then stops entirely. If he should add that change of position sometimes removes the obstruction, we could hardly draw any conclusion but that a foreign body in the bladder, a vesical calculus, caused obstruction by assuming a position over the internal urethral orifice. By changing its site it would bring about various degrees of obstruction during the course of a single act of micturition. Naturally, a pedunculated growth in the bladder could cause the same symptoms, but such growths are extremely rare. Sounding of the bladder, chemical and microscopical examination of the urine, must then be employed to arrive at a positive conclusion.

In another case, the patient tells us that every fifteen, or even every five, minutes he has an overwhelming desire to pass water—so strong that he has to jump out of bed. He passes a few teaspoonfuls, or only a few drops, of urine, and accomplishes this at the cost of much fear, a drenching sweat, and by aid of peculiar manipulations and positions. The trouble then can be due only to *Cystitis* or *Concentric hypertrophy of the bladder* following a stricture. In order to distinguish between these two diseases, it is only necessary to find out whether the condition began suddenly or was of slow and gradual development. Chronic hypertrophy is the result of a long-standing tight stricture. The patient dwells upon single epochs of his trouble, so that the gradual increase of his symptoms can be explained in no other way than by a cause which has a slow but constant action. Cystitis sets in suddenly, the accompanying symptoms are of greater or lesser intensity—fever, occasionally vomiting, and in some cases typhoid prostration mark its onset; in the latter class of cases the patient does not come to our office. In milder cases the patient, after the first severity of the onset has passed, never fails to harp on the sudden beginning of vesical tenesmus and chills, on the wretched night he passed, although quite well on the day before. It may, however, happen that a chronic cystitis of long standing develops a sudden acute exacerbation. This gives the picture of a tedious illness with manifold symptoms, and finally the onset of uncontrollable tenesmus, just as in concentric hypertrophy of the bladder. But in cystitis the urine is hot and irritating, cloudy, alkaline, and sometimes bloody.

To multiply these instances, let us consider a woman

toward the end of her teens. Dysmenorrhœa and sterility lead us to suspect anteflexion; backache, metrorrhagia, constipation, all point to retroflexion.

All in all, we may say that the diagnosis is narrowed down to a few conditions which resemble each other, provided the patient's surroundings, age and sex, and the duration of the disease are taken into account. Percussion of the hypogastrium, external palpation of the urethra, rectal examination of prostate and bladder in the male, vaginal examination in the female, must be resorted to. Chemical and microscopical examination of the urine and catheterization help to confirm the tentative diagnosis yielded by the history.

These general introductory remarks will now be followed by a more detailed account of the various diseases arranged in groups.

The first group comprises INJURIES to the urethra and bladder.

Subcutaneous injuries of the urethra are due either to *crushing* or *tearing* violence. A tear may be suspected if, in addition to the symptoms of trauma—ecchymosis and pain along the course of the urethra—blood flows from the meatus. Bruising without rupture may be diagnosed by the absence of bleeding from the urethra, although the other symptoms of trauma are present, and urination causes a feeling of pain and obstruction at the injured spot.

A subcutaneous *rupture of the bladder* is the result of severe trauma to the distended viscus. The patient vainly tries to satisfy his constant desire to urinate; the physician is unable to draw off a sufficient amount of urine; at the most, a small quantity of

bloody fluid is obtained. If the extravasation is extraperitoneal, the symptoms of urinary infiltration develop; if the bladder with its peritoneal coat has been torn, peritonitis sets in.

Cases of dysuria or retention met with after fractures of the pelvis frequently remain unexplained. They occur without injury to the bladder or compression of the urethra, which might account for the symptoms.

Constant flow of urine through an *open* wound, either out of the rectum or from a skin wound, can be explained only by assuming an injury to the bladder; leakage of urine confined to the time of micturition is characteristic of an injured urethra. Probing the wound or examining it with the finger while a metal catheter is introduced into the urethra confirms these facts. This is especially necessary if the injured individual has previously suffered from incontinence. In this case, a urethral wound might cause *constant* dribbling.

We must not fail to warn the beginner that he should never forget to catheterize patients suffering from injuries to the head or spine, or from concussion of the brain. It is pardonable if the beginner's attention is at first directed to the severe local injury, which may cause him much anxiety; but it is unpardonable if he forgets to empty the bladder, or at least to inquire about the patient's urination.

A second group may be formed by contrasting conditions accompanied by ACUTE ONSET of *strangury, with or without retention.*

If the patient has fever, and the main symptom is strangury with the discharge of a few drops of cloudy or bloody urine, acute cystitis, prostatitis, or abscess of the bladder wall must be thought of. All these conditions arise acutely, and may be accompanied by the

most severe constitutional symptoms, such as typhoid state, prostration, vomiting, hiccough, stupor, and coma.

Prostatitis causes difficulty in defecation. The cutting pain radiates from the prostate to the symphysis and toward the loin, and is also felt along the thigh. Rectal examination—even the most careful introduction of the finger may cause intense pain—shows the prostate to be enlarged, excessively sensitive to pressure, hard, or already fluctuating. Sometimes, after withdrawing the finger, blood and pus flow from the urethra.

In *abscess* of the bladder wall a painful swelling is felt in the region of the bladder. It is dull on percussion, vaguely fluctuating, and persists after the bladder is emptied. If these symptoms are wanting, acute *cystitis* is diagnosed by exclusion.

Other causes of strangury and retention may be recognised at once. A severe gonorrhœal *urethritis* is diagnosed by the discharge. A traumatic *cavernitis* is characterized by the history of trauma, the visible swelling, the deformity of the penis. Old men should be examined for prostatic hypertrophy. Pelvic tumours which cause retention by pressure on the urethra are felt when a rectal examination is made. True retention is produced by tumours only when the distorted and displaced urethra becomes congested after some local injury.

Another group is formed by CHRONIC cases of dysuria. *Strictures of the urethra* are the chief members of this group.

In some cases the description of the symptoms obtained is not sufficiently characteristic to enable us to

arrive at a diagnosis; in other cases the complaint is unmistakable. For instance, the patient relates that he had an attack of gonorrhœa some time ago—it may have been many years before. After one or more years he noticed that each act of micturition occupied a longer period of time, and that, in addition to the slower emptying of the bladder, he was often troubled by tenesmus. Finally, the stream could be started only after considerable time spent in straining. The stream was visibly altered and the urine no longer clear, a cloudy drop appearing at the meatus. Ejaculation caused pain at the base of the bladder, and the force with which the semen was ejected had greatly diminished.

This complex gives the complete picture of a slowly increasing urethral *stricture*. The obstruction to the flow of urine and to the ejaculation of semen indicates a diminution of the lumen; the cloudy drop, containing threads, shows that a catarrh has developed behind the point of stricture, and the cloudy urine is due to the chronic cystitis which accompanies the condition.

Local examination is, of course, indicated. The urethra is palpated with the thumb and index-finger as far as the membranous portion. Frequently the stricture can be felt and its length and consistence approximately estimated. By introducing a metal sound, these characteristics are more readily determined. It is advisable to use a stone-searcher of as large a calibre as the urethra will tolerate. In this manner a stricture can not be overlooked, and the spot at which the obstruction *begins*, or, in case more than one is present, the beginning of the first stricture, can be ascertained. We then introduce a smaller instrument, until we