

a true story of a surgeon who, when he asked his patient how he felt the day after he had performed a nephrectomy, received the answer, "Oh! much better, thank you, than I did when they took away my other kidney five years ago!" The patient, of course, died soon after.

There can be no excuse for guesswork when disease of the kidney is suspected. Mr. Ainsworth-Davies deplored the method sometimes employed of treating with mandelic acid any patient with urinary trouble and postponing cystoscopic examination indefinitely. The combination of symptoms should lead the doctor to a provisional diagnosis, but before any line of treatment is decided upon very careful examination of the patient should be made. As an example of the foolish neglect of urinary symptoms, Mr. Ainsworth-Davies said that a patient may come to the doctor saying that some time ago he passed a little blood in the urine, but, as there was no pain, he did nothing about it and the bleeding stopped. A recurrence of the bleeding has probably sent him to seek expert advice. Unfortunately examination now reveals a growth too far advanced for operative interference, having already given rise to secondary deposits. It is sad to think how often this tragedy might be prevented if timely examination were performed. It must be remembered that the most serious symptom of disease of the urinary tract is bleeding unaccompanied by pain, as it nearly always denotes a growth. The lecturer urged the nurses, if they ever had a patient with hæmaturia, to persuade him to go to a specialist for thorough examination, if possible while bleeding is actually taking place.

DIAGRAMS.

By means of diagrams Mr. Ainsworth-Davies reminded his audience of the structure and anatomical position of the kidneys and other parts of the urinary tract and gave a very full description of their physiological action. When the impulse of the brain governing the action of the bladder is not functioning properly there appear such symptoms as retention of urine and incontinence which are due to disorder of the sphincter urethra muscle.

The normal amount of urine secreted in the 24 hours is two and a half pints. Abnormalities in the amount of urine may be due to any one of four different causes in any part of the urinary tract. These four causes are stone, inflammation, dilatation, and growths. Stones are found in the kidney and bladder and, more rarely, in the ureter. Inflammation takes the form of cystitis if it is in the bladder, or of pyelitis, pyelo-nephritis, or pyonephrosis if it is in the kidney. The inflammation may spread beyond the kidney and give rise to peri-nephric abscess. Dilatation is caused by some obstruction of the tract. Should the obstruction be in the ureter, the kidney is the part affected. If the urine which is dammed back in the kidney is sterile, the condition is known as hydro-nephrosis, but if it is infected pyo-nephrosis results. In the bladder dilatation and incomplete evacuation are usually due to cystocele in the female, to enlarged prostate in the male. Growths, malignant and otherwise, occur most frequently in the bladder and kidneys and are comparatively rare in the ureters and urethra.

SYMPTOMS OF DISEASE.

The symptoms of disease of the urinary tract are frequency of micturition, hæmaturia, and pain on micturition. Frequency may be physiological and due to fright or anxiety. It may be caused by alteration in the consistency of the urine; for example, should this be very acid or contain a large quantity of crystals, the membrane of the bladder is irritated. Apart from the nature of the urine, all other causes of frequency are directly referable to the bladder, and they are inflammation, stones and growths. A growth, if it is "innocent," does not, as a rule, cause frequency, because it springs from the mucous

membrane of the bladder and does not involve the nerves in any way. Inflammation in the form of cystitis gives rise to frequent and painful micturition. Stones irritate the bladder membrane and cause much pain. Other causes of frequency are pressure from a gravid uterus, or from an ovarian cyst. It may also be caused by a reflex action from some irritation in the rectum, such as worms, hæmorrhoids, or anal fissure. Hæmaturia is a very important symptom, especially when it is unaccompanied by pain. The most frequent cause of painful hæmaturia is stone, but when there is no pain the hæmaturia is nearly always due to a growth. The relation of the bleeding to the stream of the urine is important; if it occurs at the commencement of micturition the cause is in the urethra, but if it appears at the end, the cause must be looked for in the bladder. Should the blood be uniformly mixed with the urine, giving a smoky appearance, it may be coming from the kidney or the bladder. It is very important that a patient with hæmaturia should have cystoscopic examination at the earliest possible date. The only exception to this rule is in cases of cystitis, when the inflammation must be allowed to subside first. The patient's temperature is a fairly good guide to the location of the inflammation; if it is in the region of F.100° probably only the bladder is affected, but if it be nearer to F.104° the kidney is also involved. The treatment for cystitis is to put the patient to bed and administer large quantities of fluid and alkalis. The mandelic acid treatment is often adopted when the acute stage is passed. The value of this treatment lies in the sudden change it produces in the urine from an alkaline to an acid reaction. It is thought that the acid character of the urine thus produced is inimical to bacterial growth. If an infection is confined to the urethra it is usually of venereal origin. On no account must cystoscopic examination be made while there is active cystitis.

CYSTOSCOPIC EXAMINATION.

In order that this examination may be performed the patient must be placed in the lithotomy position and should be made as comfortable as possible. The operation of passing the cystoscope should be both gentle and unhurried. The urine is first drawn off through the cystoscope, and the bladder is then washed out with a weak solution of boracic acid or a similar solution. When the bladder is filled with clear fluid it is possible to see whatever is inside it. The cystoscope magnifies six times, and therefore reveals clearly the presence of a stone, growth or chronic inflammation. The orifices of the ureters are easily discerned, as is also a triangular area of darker mucous membrane lying between the ureters and the urethral opening which is known as the trigone. This part of the bladder is especially subject to growths. If the examination of the bladder reveals no abnormality there, and the patient has hæmaturia, it is specially important to have him examined, for sometimes the cystoscope may reveal a drop of blood coming from one of the ureters—a sure indication of which kidney is affected. If simple examination by the cystoscope reveals nothing, a ureteric catheter may be passed through the cystoscope and bladder up into the ureter and pelvis of the kidney. Bi-lateral ureteric catheterization enables the urine from each kidney to be examined separately. Moreover, it is possible to introduce by means of these catheters a solution of sodium iodide into the pelvis of the kidneys, so that they may be X-rayed. Often the presence of a stone is revealed in the pyelogram, or it may be that, if part of the pelvis of the kidney is obliterated, a growth is the cause.

INTRAVENOUS PYELOGRAPHY.

The new method of intravenous pyelography has largely superseded the method of ascending pyelography. A preparation such as Uroselectan B. will give quite a suffi-

[previous page](#)

[next page](#)