(a) *Anaemia*.—Blood examination yields definite differential help between cancer and simple ulcer. For if considerable haemorrhage be excluded, the presence of any degree of anaemia greatly favours cancer—or, to be more accurate, it should be said that the absence of anaemia is much against cancer. In pyloric stenosis due to simple fibrosis, as from an old healed ulcer, wasting may be extreme, and yet there may be little or no anaemia; the condition is largely one of starvation, and in starvation the blood suffers relatively little. Whereas oftentimes a patient in whom the degree of wasting is less, but who suffers from gastric cancer, yields a red blood count and haemoglobin percentage considerably below normal. Too much importance can scarcely be attached to this point.

(b) *Fever*.—When fever is present in a chronic case of stomach disease, the nature of the disease is more likely to be malignant than simple ulcer. It is not, however, common—it is not nearly so common as in cancer of the large bowel.

(c) *Cachexia* is a late sign, and therefore one I will not dwell upon.

(d) *The tongue* gives very little, if any, help. Its state is very dependent upon local conditions, as of the teeth, pharynx, etc.

The data obtained as the result of all these considerations is supplemented by observations of the stomach contents removed after giving a test meal. It is important that more than one such observation should be undertaken. In some cases a series of *x-ray* pictures after a bismuth meal will still further assist the diagnosis. As the result of all these methods, and not as the result of any one alone, a diagnosis of cancer of the stomach should be arrived at as early as possible. In concluding, let me draw your attention to these two specimens in our museum; they both illustrate successful operations upon cases of cancer of the stomach. In the first the growth which you see was removed seven years ago; in the second, two and a half years ago. Both patients are to-day alive and quite well. Such results as these, albeit not common, should stimulate us to active and thorough efforts at early diagnosis of this important disease.

AN INSTANCE OF LARGE URETERAL CALCULUS AND SOME OTHER CASES OF CALCULI.*

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I RECORD my five cases in which calculi have been removed by operation. Four were renal or ureteral, and in one a stone was excised from the perineum. In the cases of renal and ureteral stone the *x-ray* photographs proved very helpful.

CASE I.

The first case is that of a girl, aged 16 years, from whom large calculi were removed from the pelvic portion of the right ureter by intraperitoneal operation. The patient was admitted to Addenbrooke Hospital under the care of Dr. Bradbury, by whose kindness I was called in to consider the case. It should be noted that there was very little in this girl's condition to call attention to her real malady. She was admitted with pains in the joints and epigastric pains; there was some swelling of the knee-joints on both sides; she had pain in the right side of her chest, aggravated by coughing, and had not felt well for a month. There was a history of pneumonia and pleurisy two years before, and frequent sore throat. The urine was acid, free from albumen and sugar. She was watched during five weeks until an access of fever and abdominal pain led to further examination of the urine, in which pus and blood were found, and some crystals of oxalic acid. Digital examination by the rectum detected a hard mass on the right of the uterus; under an anaesthetic this mass was felt to be fixed, but not connected with the uterus. The *x-rays* made it almost certain that there were calculi in the ureter; a clear space was to be seen around the stones inside the ring of the true pelvis. As the patient's condition was certainly growing worse it was decided to operate. Her temperature varied from 101.4° on the day of admission to 104.2° on the day of operation.

Operation.—Through a median incision the abdomen was opened, and then with the patient in the Trendelenburg position two large calculi were found in the pelvic portion of the ureter. The stones were fixed and could not be pushed

upwards or downwards. The ureter was clamped above, an incision was made, and the stones removed; about two ounces of purulent urine was swabbed out. The ureter was sewn up with catgut, using a harelip needle. The patient was then placed in the horizontal position and the suturing tested, so that the pressure in the ureters was tried in two positions. The clamp was removed and the abdomen closed in the usual way without the use of drainage.

In this case the calculi were so deep in the pelvis as to make it a question whether it would not be better to pursue the bolder course of operating through the peritoneum rather than by the usual extraperitoneal route. In the latter procedure the consideration of the large size of the wound, the difficulty of suturing the ureters, and the certainty that a drain would have to be used, with long delay in healing, decided me to venture on the operation above described, in spite of the very real risk of leakage of purulent urine into the peritoneal cavity. However, a good recovery was made, the temperature came down at once to normal, and except for washing out the bladder with boric lotion there was no trouble with the nursing. In textbooks the extraperitoneal method is recommended. But it is obvious that methods may be combined of operating through the peritoneal cavity and then making a drain from the pelvic basin to the exterior, directed from within by a limited incision. There is the possibility also of pushing the stone upwards to the pelvis of the kidney or downwards to the bladder. The two narrow points where stones commonly lodge are just below the kidney and, lower down, some two inches above the bladder. In the pelvic end of the ureter stones are fortunately not so often found.

It has chanced to many surgeons, as it has chanced to me, to cut through a healthy ureter which has become involved in a tumour, and on the ureter being carefully stitched no trouble beyond anxiety to the surgeon has resulted. But in dealing with pathological cases in which the ureter is dilated and contains urine loaded with bacilli, the risks must be serious. With regard to the technique of the operation, there is much to be said in favour of an intestinal needle instead of a harelip needle unless the tissues are very thick, but in any case catgut, not silk, should be used lest a crust should subsequently deposit on the silk. The stones removed from Case I were of large size. Together they measured 2½ in. by 1 in. diameter, and their weight when dry was 226 grains and 91 grains = 317 grains.

CASE II.

The next case is that of George S., aged 23, who had calculi in both kidneys. The stone in the right kidney was first removed. In this operation there was nothing unusual and a good recovery was made, but on the left side there was a great collection of pus, and as the stone in the ureter could not be reached from the loin, a large drainage tube was put into the abscess cavity, and when a certain stage of recovery had been reached and the cavity had contracted, an abdominal intraperitoneal operation was planned and the stone pushed into the kidney. This done, the incision in the loin was enlarged along the drain tube, and the stone extracted with a scoop. The patient made a good recovery, and wrote to the hospital on May 23rd to state that he was well and about to start work.

CASE III.

This was a chauffeur, aged 28, who had continued his work until his admission to hospital under the care of Dr. Bradbury. He had pain in the left loin, which had begun only about five weeks previously. He had passed blood on one occasion only; it was after taking urotropin. About a year previously he had an attack of appendicitis, but recovered without operation; thirteen years ago he had had a vesical calculus removed by lithotripsy. On admission there was tenderness over the left renal area; the urine was loaded with pus, but showed no blood or casts, and a skiagram demonstrated calculi in the left kidney. At the operation were removed masses of phosphatic debris too friable to hold together in the scoop, and the whole kidney was distended with purulent urine and in a state of phosphatic pyelonephritis. Thorough douching was used to clear the cavities of crusts as well as possible, and a large drainage tube inserted.

The patient did well, but there was pus in the urine for some weeks, and an *x-ray* photograph taken since the operation still shows the shadows of phosphates. His general condition is excellent.

CASE IV.

This was a countrywoman, who, though stout, looked pale and feeble; she had been ill and in great pain for many months past, and had constantly passed large quantities of pus with the urine. Finally, when absolutely obliged by her malady, she sought relief at the hospital. With all her stoutness it was

* Read before the Cambridge and Huntingdon Branch of the British Medical Association.

possible to make out a swelling and a dull area at the seat of her pain in the left lumbar region, and a skiagram showed a collection of stones. It was evident that an operation was her only chance. Despite her wretched condition it was undertaken. An incision resulted in the removal of a quantity of stones and of a large amount of pus from an enormous loculated abscess. She rallied somewhat and gave hopes of recovery, the pus draining well from the inserted tube, but after a week the struggle proved too much for her enfeebled powers, and she gradually sank and died nine days after the operation.

There was no fair chance for surgery in this case, the patient having delayed too long. The operation was borne fairly well, but there seemed no recovery power, and probably there was very little actual kidney tissue left remaining.

The last case to which I propose to draw attention was one of calculus in the perineum.

CASE V.

The patient, a labouring man aged 33, came under my care in the hospital on April 24th, 1912, with a sinus in the left side of his scrotum, which discharged pus and urine. The left testis was absent, and he had a right scrotal hernia. He had been at work up to the end of 1911, when he had an attack of influenza; and it was only since then that he had noticed discomfort and discharge. A catheter passed into the urethra struck a stone about the position of the triangular ligament; and two days after his admission an incision down to this point was made and the stone removed. It measured $1\frac{3}{4}$ by $1\frac{1}{2}$ in., and must have been forming for a long time. It was very firmly impacted in the perineum under the pubic arch, and projecting into the urethra, and thus blocked it. The septic condition of his scrotum prevented me from examining the bladder lest it should be tainted by the catheter or sound. During his convalescence from the operation the sphincter of the bladder worked perfectly, the patient passing water like a woman, until the wound had granulated and healed up; he recovered without the recurrence of any cystitis.

This, therefore, was an extravasical stone when extracted, but had its origin in the kidney or bladder, whence it had travelled into the urethra, and there ulcerated through the mucous membrane, and gradually grew into the perineum along the lines of least resistance to its present size. The patient did all the work of a labourer on the land until shortly before the operation, but never rode a bicycle.

The x rays proved a very valuable help in the diagnosis of these cases, as also in their operative treatment; and I am grateful to Dr. Scales for his co-operation, especially for the picture of the large pelvic stone in the young female.

TREATMENT OF CONGENITAL DISLOCATION OF THE HIP.

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[WITH SPECIAL PLATE.]

SINCE Lorenz, in 1895, first introduced his operation of "bloodless reduction" of congenital dislocation of the hip, treatment of this affection has become well established in orthopaedic practice, and it is attended, in the majority of cases, with the happiest results.

Many surgeons, however, have not made themselves acquainted with the progress of this branch of surgery during the last eighteen years, and even now one hears the old objection that in congenital dislocation treatment is useless, and that the acetabulum is absent, or at least so small that the head of the femur cannot be placed therein. But orthopaedic surgeons know that an acetabulum of some sort is always present, except in some old untreated cases in which, in the course of years, it becomes obliterated; and the argument that it is too small is a relic of obsolete pathology, for, however rudimentary it may be, it is still sufficient. It is many years since we were taught to believe that bone is a rigid, unalterable structure. We know now that bone, like other tissues, is capable of undergoing plastic changes in obedience to forces acting upon it; an angular deformity in fracture becomes buttressed by new bone on one side and rounded off on the other; the bones of the foot become changed in shape, both in the development and in the cure of deformities; similar

changes occur in the spine, the chest, in fact in any part of the skeleton. It is proved beyond question that in congenital dislocation of the hip, if the head of the femur is placed and retained "in," "on," or "against" the acetabulum, the bone grows out around the head, the acetabulum becomes deeper and the head better developed, so that a joint is formed which is anatomically and functionally sound.

The majority of surgeons who deal with these cases have adhered more or less closely to the technique described by Lorenz; indeed, many still follow his original teaching in every detail. But it must not be supposed that the surgery of congenital hip has stood still for eighteen years. Many modifications have been introduced during that time—some good, and some bad—and, while the general principle of Lorenz's pioneer work remains the same, there is no doubt that just as good results—and in many cases, I am convinced, much better results—can be obtained by a technique which differs in many ways from the original.

I do not propose to describe the details of Lorenz's procedure here, but some criticisms of the method must be made.

I.

As every one knows, the first step in Lorenz's "bloodless" operation is to stretch or tear the soft parts around the joint; the adductor muscles are ruptured by forcible abduction and hacking with the hand; the parts behind and in front are stretched by forced flexion and hyperextension, and those above by traction on the limb. It is taken as an axiom that the hip cannot be properly reduced until all the soft parts are so stretched as to offer no resistance. This is not true; for in the majority of cases the hip can be reduced without any of these violent preliminaries, which are responsible for most of the shock and for nearly all the accidents of the Lorenz operation, and which, in addition, greatly weaken the muscles of the thigh.

The constant pull of the muscles upon the femur is the most important factor in bringing about the development of the joint, and, provided that the head of the bone is in place, the more powerful the muscular retraction the better. The muscles should therefore be damaged as little as possible.

II.

Many surgeons do a preliminary tenotomy, sometimes an extensive division, or even partial excision, of the adductors, in order to facilitate stretching. This, I am convinced, is a great mistake. I have seen a number of cases in which there was a wide gap where the adductors had been divided. Some of these cases had been successfully reduced and had good hip-joints, and yet they walked very badly. The disability in many of these cases is, I believe, due to permanent weakness of the adductor muscles, the gait being comparable in every way to what is often seen in cases of infantile paralysis when the adductors are affected, and the child, to compensate for the weakness, throws himself on to the head of the femur at each step, so that he sways from side to side. Simple tenotomy of the adductor longus is sometimes necessary in old and resistant cases; as a routine it is to be condemned. When a congenital hip is reduced and fully abducted, some muscles are bound to give way, but the damage should be limited to this, and unnecessary interference avoided.

III.

In the earlier attempts to treat congenital hip, the great difficulty was the tendency to redislocation of the head of the femur backwards. To overcome this, Lorenz introduced his "frog" position, in which the thigh is fixed in right-angled abduction and external rotation, the knee being actually behind the plane of the hips, and this position is still used in the majority of cases immediately after the hip has been reduced.

But the fear of reluxation has been exaggerated. In the Lorenz position the head of the femur is thrust forwards and tends to project in front; often it passes in front of the acetabulum, and an anterior transposition is the result. Anterior transpositions are so common after the Lorenz technique that some surgeons have even counted them among their "successful" results! It is