THE HISTORY OF A HYPERNEPHROMA.

BY

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ALTHOUGH the vagaries of hypernephromata are well known, the following case is so unusual that it is worth recording.

In August, 1924, a girl, aged 15, was admitted to the Chester Royal Infirmary with a hard, firm, rounded mass occupying the left loin. The urine had a specific gravity of 1020, and contained a trace of albumin, but no blood or pus. She stated that she had had attacks of vomiting and of pain in the left side for some years and that, shortly before admission, she had noticed a swelling in the flank. She was extremely emaciated, with a remarkable growth of hair over all the limbs and abdomen. The skin had a dusky tint, but there was no premature development of the sexual organs; in fact, menstruation did not start until the following year.

Exploratory Operation.

A tentative diagnosis of hypernephroma was made, and the kidney explored through a lumbar incision. It was found fixed and surrounded by a reddish vascular growth. As nephrectomy seemed to be out of the question a small piece was excised for microscopical examination. This was reported to be a typical hypernephroma. She left the hospital with an unhealed sinus and I did not see her again until about two months later. She was then a living skeleton, covered with an abundant growth of hair, and it seemed impossible that she could live much longer. I heard later, however, that she remained in this condition for about nine months, and then, to everybody's surprise, began to put on weight, the tumour and the hairy growth disappearing.

Nephrectomy.

She was readmitted on September 28th, 1927. She was now a well developed girl of average height and weight and had been going about apparently in the best of health until three weeks previously, when the pain in the side reappeared. We found a rounded, tense swelling beneath the old scar. The urine contained pus and gave a vigorous growth of *B. coli*. A pyelogram of the left kidney showed the tumour to consist of a greatly distended pelvis and main calyces. Radiograms of the thorax and long bones were taken and showed no signs suggestive of metastases. An exploratory operation showed the kidney to be densely adherent to the surrounding tissues and to the peritoneum. As she took the anaesthetic badly, a drain was inserted and a large quantity of pus evacuated. Three days later the wound was reopened and subcapsular nephrectomy performed.

The wound has now (November 28th, 1927) practically healed and her general condition has immensely improved. The report on the kidney by Dr. Grace, pathologist to the Infirmary, was as follows:

"Much chronic inflammatory change with patches of acute inflammation and small abscesses here and there; very little renal tissue left; no evidence of tubercle, new growth, or hypernephroma."

Dr. Grace is also responsible for the original diagnosis, and one which was supported by the naked-eye appearance of the tumour and the general condition of the patient.

The dilatation and infection may have been present throughout, but it does not alter the fact that there was a growth found at the first operation, and that we could find no evidence of one three years later. It would seem to be a curious instance of the waxing and waning of malignancy to what we hope is a final disappearance.

Memoranda :

MEDICAL, SURGICAL, OBSTETRICAL.

FORMALIN INJECTIONS IN GANGRENE OF
THE LEG: RECOVERY.

THE following case is unusual in view of the method of treatment and the ultimate recovery of the patient after having a dead limb attached to him for four months.

In September, 1925, an outdoor worker, aged 59, of temperate habits, had a severe attack of enterocolitis lasting eight days, which brought him to the drained and shrunken appearance of a cholera case. On September 26th, the eighth day of the disease, when the temperature had fallen and the bowel evacuations were normal, he experienced a sudden feeling of "pins and needles" in the right leg, followed by acute pain of gradual onset. His temperature was 97°, and the pulse rate 88. The foot was blanched and the thigh slightly blue; no pulsation could be felt in the femoral artery from a point one inch below Poupart's ligament. The specific gravity of the urine was 1040; no albumin or sugar was present.

The diagnosis appeared to be embolism of the femoral artery by the detachment of a thrombus which had probably formed at the bifurcation of the iliac arteries. In two days a demarcation of irregular outline was very pronounced at the junction of the middle and upper thirds of the thigh. He was then seen in consultation with my partner, Dr. H. Townsend-Whitling, and it was decided that the patient was not likely to survive the operation of amputation at the hip-joint, and that, if he did survive, he would probably die from gangrene of the flaps.

The leg was swabbed with spirit daily, powdered, and completely encased in cotton-wool. On October 3rd, feeling that prevention of decay was the only hope, I started periodic injections of formalin, 1/2 to 1 drachm, into the tissues of the leg. The injections were both superficial and deep, and the strength varied from 2 to 40 per cent., according to the distance from the demarcation line. The course was perfectly afebrile till October 17th, when the temperature reached 99°. It fell to normal on the 20th to 22nd, but reached 101° on October 24th and 101.8° the following day. The temperature had returned to normal on November 1st, after which there was only an occasional evening rise of one degree.

From October 20th onward there was profuse discharge of pus from the demarcation line, and some gas formation in the thigh. The occlusion of the artery spread slowly upwards, and by December 2nd the pulsation, which had been felt above Poupart's ligament, had disappeared.

On December 25th a rubber tourniquet was applied just below the demarcation line to hasten separation.

On January 7th, 1926, an incision was made below the tourniquet and the bone isolated. The muscles divided were brown, with the exception of part of the adductor magnus, which was pink and was slightly sensitive. Further formalin injections were made in and round the sciatic nerve, which was sensitive for several inches below the line of demarcation.

On January 18th the sciatic nerve was divided, giving rise to slight and momentary pain. The next day the femur was sawn through about the junction of the middle and lower thirds. The medullary cavity was cleared out for a distance of four inches and packed with bipp. The necrosed tissues, still attached to the stump, were dissected off daily, and on January 27th the patient was able to get out of bed and sit in a chair.

By March 2nd the stump was skinned over with the exception of about one square inch. The muscles had retracted, leaving exposed about four inches of femur, which I left with the idea that it would prove a useful lever for an artificial leg.

The patient was now able to get about the house rapidly on crutches, but had become depressed and had shown suicidal tendencies. He was therefore removed to a local mental hospital, where he remained for a year, returning home normal and cheerful, but with limited backward movement of the stump, in March, 1927. I now fitted him with an artificial leg, made to my design by the local blacksmith and the saddler, and weighing 2 lb. On this he has been able to walk a distance of a quarter of a mile. On November 19th he was shown at a clinical evening of the Rugby Medical Society, when the case was considered to deserve recording.

Three points are of special interest. (1) The injections of formalin could not be given nearer than three inches from the line of separation without causing pain or discomfort. (2) There was an almost total absence of decay from above the knee downwards, the skin being unbroken, illustrating the efficacy of the formalin. The only offensive smell was from the granulation tissue at the line of separation. (3) Though gas formation occurred in the thigh, the toxins absorbed caused a rise of temperature only on nine consecutive days during the eighteen weeks the dead limb was attached to the body.

The fleshy stump is six inches long. The bone, which up to now has been used as a lever when walking, is being eroded by granulations, and will soon separate spontaneously. Forward movement is free. Movement posteriorly stops short of the vertical.

I would welcome suggestions as to the best type of artificial leg, since his present leg will be useless when the bone separates.

Husbands Bosworth, Rugby.

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BLADDER CALCULUS IN THE MALE DUE TO A
FOREIGN BODY.

THIS case is, I think, sufficiently unusual to be worth putting on record.

On May 15th, 1927, I was called to visit a young unmarried man. I found him suffering from acute epididymitis on the left side. I naturally suspected gonorrhoea, but the patient denied any possibility of infection. There was no urethral discharge, but the urine contained threads. A centrifugized deposit exhibited numerous pus cells and a mixed bacterial fauna, none of which appeared to correspond precisely with the gonococcus as regards shape, arrangement, or staining reactions. The patient made a more or less complete recovery following treatment by rest, bland