up to 30 lb., and later reduced to 21 lb. This gave perfect reduction of the fracture with restoration of the normal length and alignment of the neck of the femur (Fig. 2), and it was maintained continuously for thirty days. The weight was then reduced to 11 lb., which was kept on for a further period of fifteen days, and then removed. During extension the limb was slung in a bent calliper splint for convenience in nursing and to reduce friction, but no attempt was made to immobilize the hip—in fact, massage was started at once on all accessible parts of the limb and movements were encouraged as far as possible without disturbing the extension. At the end of nine weeks the patient was got up in a walking calliper splint. For the last two months she has borne weight upon the joint, and she has now discarded the splint. The radiogram (Fig. 3) shows that the length and alignment of the neck of the femur have been maintained and that there is unmistakable bony union.

I am greatly indebted to my Registrar, Mr. E. W. Riches, F.R.C.S., for his invaluable assistance in carrying out the practical details of this case.

Commentary.

All our experience of fractures in general points to the conclusion that mere apposition and immobilization are not

the vital factors in the repair of bone, but that a physiological process is involved, and it should be the aim of treatment to stimulate and promote physiological union when this is likely to be deficient. The case here cited was a typical intracapsular fracture of the neck of the femur in a middle-aged woman, which would almost certainly have failed to unite under ordinary treatment by weight extension alone. The injection of fresh blood provided the stimulus to repair, which is present in most fractures, even in old people, but which is lacking in intracapsular fractures of the neck of the femur. Perfect reduction of the fracture was obtained by efficient traction without serious disturbance of the patient, no general anaesthetic or direct manipulation of the fracture being required at any stage of the treatment.

If the experience gained in this case is borne out by others, it seems likely that this treatment by injection and traction will become the method of choice in the future, for it is applicable to any patient who can be kept in bed at all, and, provided that skilled nursing is available, the technical difficulties are not great.

RENAL CALCULUS ASSOCIATED WITH A SOLITARY CYST OF LEFT KIDNEY.

BY

J. C. AINSWORTH-DAVIS, M.A., M.B., B.Ch., F.R.C.S.,

SURGICAL REGISTRAR AND SURGICAL ASSISTANT TO THE UROLOGICAL DEPARTMENT, ROYAL WATERLOO HOSPITAL.

With Operation Note by

T. P. DUNHILL, C.M.G., M.D.,

ASSISTANT DIRECTOR OF SURGERY, ST. BARTHOLOMEW'S HOSPITAL.

(With Special Plate.)

THE following case is published for three reasons: (1) To place on record a case of solitary cyst of the kidney (itself a rare condition) associated with a renal calculus, a combination believed to be unique. (2) To describe how a case of renal colic should be relieved, investigated, and treated. (3) To show that, in spite of modern methods of urological diagnosis, the cause of a patient's symptoms may sometimes be only discoverable at the time of operation.

S. T., male, aged 54, married, was seen for the first time on June 8th, 1929, two hours after the beginning of a typical attack of left renal and ureteric colic.

Past History.—Six to four years ago he had attacks of pain in the left side of the lower abdomen which had a sudden onset, a duration of six to seven hours, and an abrupt termination. Four to two years ago there was a period of freedom from attacks. During the last two years there had been several attacks of a similar nature, but not so severe; during one of these a little blood was passed per urethram. A course of waters at Carlsbad made no difference to the symptoms. His last attack occurred about a month previous to the present one, and lasted for four hours. The pain, of a dull aching character, began in the left renal region, with intermittent acute pains shooting to the left testis and tip of the penis. The patient had never noticed any grit in his water. X-ray examination a year ago was said to be normal.

Examination showed the patient to be a healthy well-covered man, but in considerable pain. He micturated four or five times during the day, but not at all in the night; the stream was good and there was no difficulty, urgency, or haematuria. The pain was that of left renal and ureteric colic. The bowels were regular, and there was never any blood or mucus in the stools. Per rectum, the prostate seemed normal; no abnormality was felt. Examination by the abdomen showed neither kidney to be palpable. There was tenderness on deep pressure in the left loin.

Cystoscopy (under local anaesthesia).—The bladder mucous membrane showed mild cystitis with very slight swelling of the left ureteric orifice. A No. 4 Charrière ureteric catheter was passed up to the pelvis of the left kidney. Some resistance was felt at

two points: (1) at the uretero-pelvic junction, and (2) about 3 inches lower than this. Some 15 c.cm. of urine, indicating a slight degree of hydronephrosis, were collected and preserved for examination. Immediately the catheter reached the pelvis of the kidney and the flow of urine was established, the renal colic subsided, and after withdrawal of the cystoscope and catheter the patient said he was absolutely free from all pain or discomfort.

A report on the catheter specimen from the left kidney stated it to be of normal colour, acid, slight haze of albumin present, no sugar, no phosphates, and a small deposit of mucus.

Subsequent Progress and Further Investigations.—On radiography of the urinary tract by Drs. Coldwell and Allchin the right urinary tract was found to be normal. The left urinary tract, with opaque catheter passed to the left kidney, showed: (1) no shadow indicating stone in left kidney or ureter; (2) displacement of kidney shadow upwards by a spherical body some 4 inches in diameter which is probably attached to the lower pole of the kidney and moves with it on respiration (Figs. 1 and 2); (3) this body displaces the lower ureter inwards and forwards, causing marked kinking of the catheter on full inspiration (Fig. 3), its opacity to x rays being rather less than that of the kidney itself.

Left Pyelogram (with 20 per cent. solution of sodium iodide).—Pelvis and calyces normal. No demonstrable communication with any possible cavity in the spherical body. Sodium iodide withdrawn and a further skiagram taken in the hope that if a stone were present some of the fluid would adhere to its surface and thus throw a faint shadow. No shadow was seen.

Renal Function Tests.—10 c.cm. of a 1 per cent. solution of indigo-carmin were injected into the median cephalic vein, an observation cystoscope being in position. This appeared at the right ureteric orifice in two and three-quarter minutes, the efflux being well stained. There was no appearance of the dye at the left ureteric orifice in twelve minutes.

On June 26th the patient had a second attack of left renal colic, accompanied by some intestinal obstruction and followed by the passage of large quantities of flatus. A catheter was passed to the pelvis of the left kidney and the colic was relieved. The

following day, at 9 p.m., he had a third attack of colic. A catheter was passed at the patient's residence, with immediate relief after withdrawal of 15 c.cm. of urine. During this attack it was possible to palpate a tumour in the left upper abdomen.

On June 29th the patient was seen in consultation with Mr. T. P. Dunhill, and the past history and investigations were explained. At this time no tumour could be palpated. Exploratory operation, with differential diagnosis of (a) a solitary cyst springing from the lower pole of the left kidney, and (b) hypernephroma, was advised, and permission obtained to remove the left kidney if necessary. The renal colic was thought to be due to kinking of the ureter by pressure of the tumour.

OPERATION NOTE BY MR. T. P. DUNHILL.

On June 31st the left kidney was explored through a curved incision in the loin, and on palpation the upper half appeared

FIG. 3.

A. S. BLUNDELL BANKART: UNION AND NON-UNION OF FRACTURES.

FIG. 1.—Intracapsular fracture of neck of left femur, before treatment.

FIG. 2.—The same case—showing reduction by skeletal traction.

FIG. 3.—The same case six months later—showing bony union.

J. C. AINSWORTH-DAVIS RENAL CALCULUS WITH SOLITARY CYST OF LEFT KIDNEY.

FIG. 1.—Skiagram at full inspiration. Lower margin of cyst below iliac crest. No calculus visible.

FIG. 2.—Skiagram at full expiration. Lower margin of cyst well above iliac crest. No calculus visible.

FIG. 4.—Skiagram of kidney, cyst, and calculus after removal. The last is well shown.

normal. The lower half was replaced by a cyst. A calculus about three-quarters of an inch long by half an inch wide was felt in the pelvis. The kidney was removed.

Report on Kidney and Cyst after Removal.

Fig. 4 is a skiagram of the specimen. The calculus is clearly shown. No connexion between the pelvis of the kidney and the cyst could be demonstrated. It would appear that the stone and cyst were independent of each other. The calculus was composed of pure uric acid.

Post-operative Progress.—The patient made an uneventful recovery. When seen on October 11th he was feeling well, putting on weight, and had no urinary symptoms. The urine was normal in colour, acid, clear, specific gravity 1018; no albumin, no sugar; urea 2 per cent.; there was a deposit of mucus. The centrifuged deposit showed an occasional pus cell, some epithelial cells, and phosphate crystals. No organisms were seen. Cultures were sterile.

CONCLUSIONS.

1. The passage of a ureteric catheter to the pelvis of the kidney, and withdrawal of its contained urine, will give immediate (but temporary) relief to pain arising from renal colic.
2. Repeated attacks of renal colic in an otherwise healthy person, even with a normal renal skiagram, should lead to a provisional diagnosis of stone, because a calculus of pure uric acid throws no shadow with x rays, as its consistence is equal to that of the kidney itself. The wax-tipped ureteric catheter should be of some assistance in confirming such a diagnosis where a calculus with a rough surface is present. It was not employed in this case because it was erroneously supposed that the cyst was the cause of the colic. Further, the patient should be advised to undergo an exploratory operation before the kidney becomes too disorganized to be worth preserving.
3. As regards the relations of the stone to the cyst, no connexion of any kind could be demonstrated.
4. Doubtful renal swellings should always be explored, owing to the impossibility of exact diagnosis.
5. Renal tumours can reach a considerable size—for instance, that of an orange—without being palpable in a well-covered patient, and further examinations such as radiography, pyelography, etc., should never be omitted when upper urinary symptoms are discovered.
6. Positive evidence should always be obtained of the presence and function of the opposite kidney in case nephrectomy has to be performed at the time of operation.

TWO CASES OF ACUTE SYPHILITIC APPENDICITIS.

BY

GRIFFITH EVANS, M.A., D.M.Oxon., F.R.C.S.,
CARNARVON;

AND

ELWYN ROWLANDS, M.B., Ch.B.

PENYNGROES.

(With Special Plate.)

THE increase in visceral syphilis is one of the features of medicine in the present century, but up to now not many cases of acute syphilitic appendicitis have been reported. In searching for such records we have had the able and generous help of the librarian of the British Medical Association, but have succeeded in finding two only—those reported by Pasqualis (D. A.).¹

In Royster's exhaustive monograph on appendicitis (Appleton, 1927) there is reference to pseudo-appendix associated with secondary syphilis. This condition is classed by Condamine and Voron (ibid.) with the form of intestinal neuralgia which Fournier had called syphilitic typhosis.

The two cases about to be described, however, are true acute inflammations.

CASE I.

A woman, aged 19, felt well until she had a miscarriage in the fifth month on the floor of a farm kitchen. During the following week she developed lower abdominal pain and tenderness with pyrexia.

On admission to hospital she did not look very ill; temperature 100°, pulse 120, respirations 26. The throat was red and covered

with loose mucus, but not painful. The abdomen was distended and tender all over, the maximum signs being in the right iliac fossa. No mass was palpable per vaginam, and only moderate tenderness.

In view of the possibility of infection following the miscarriage, and the condition of the throat, expectant treatment was given.

Her condition remained much the same for seven days, except that localization became more definite in the right iliac fossa. Laparotomy now showed: (1) general redness of the whole intestinal tract; (2) copious sero-sanguineous fluid; (3) patches of gelatinous exudate on the bowel and on the surface of the leaves

of the mesentery—evident precursors of mother-of-pearl plaques; (4) an enlarged and acutely inflamed appendix, which was removed.

Operation was followed by prompt clinical recovery, and the patient left hospital on the twelfth day after operation, the throat being normal. The Wassermann reaction was positive.

The appendix was submitted to Dr. W. H. Grace of Chester, to whom we are indebted for the report printed at the end of this communication. The features are well shown in the accompanying photomicrograph.

CASE II.

A woman, aged 26, complained of the sudden onset of right-sided abdominal pain with pyrexia. She was admitted to hospital the following day with a provisional diagnosis of acute appendicitis.

On admission the temperature was 100°, pulse 92, respirations 20. She was pale, but did not look very ill. The tongue was evenly covered with white mucous exudate. The abdomen was distended but not tense; it was tender all over, but moved with respiration. The maximum tenderness was quite definitely in the right iliac region. Nothing was found per vaginam.

The treatment was expectant; the tongue improved a little with mouthwashes.

The condition remained stationary, and on the fourth day of the illness laparotomy showed: (1) intestines peppered all over with small punctate and star-shaped haemorrhages; (2) a small amount of free serous fluid; (3) a large appendix, acutely inflamed and covered with plastic lymph.

On opening the appendix the mucous membrane was found to be of a uniform pale pink with no evident ulceration. The

thickening was clearly due to infiltration of the subperitoneal and submucous layers.

Recovery was uneventful, and the patient was discharged on the twelfth day. The tongue became clear the day following the first injection. The Wassermann reaction was positive.

The two cases had the following corresponding features.

CASE I.

Wassermann reaction +.
Specific throat.
Denied infection, but was unmarried at the time of the miscarriage.
One of 10 healthy children, and no miscarriage in the mother.
Mother's W.R. ++. Sister's W.R. +. (No opportunity for examining other members.)
No vomiting throughout the illness.
Macroscopically acute appendix with unbroken mucous membrane.

CASE II.

Wassermann reaction +.
Mucous patches on tongue.
Denied infection, but had an illegitimate child seven years previously.
One of 5 healthy children and no miscarriage.
One brother has definite facies of congenital syphilis.
No vomiting.
Macroscopically acute appendix with unbroken mucous membrane.