HISTORY OF CASE

The patient, aged 25, had served for three years in India, and then for fourteen months in the Somaliland Camel Corps. On November 1st, 1931, during his return home on leave, he experienced pains in his foot. He developed periosteal abscesses of his left tibia and of a rib, and his right knee became swollen and painful.

He was examined here on December 1st, when a stereoscopic x-ray photograph suggested a small focus in front of the tibial spine. The knee was immobilized in plaster; the abscess round the eighth left costo-sternal junction was aspirated and pus withdrawn. This was found to contain no tubercle bacilli, but in cultures on plain agar and blood-agar some colonies of a small Gram-negative bacillus appeared. Some days later this was identified by cultural and serological tests as *Br. melitensis*. On December 9th the knee-joint was aspirated, and two ounces of opalescent, straw-coloured, coagulating fluid were withdrawn. This contained cells, of which 88 per cent. were polymorphs; it was culturally sterile.

On December 15th an agglutination test of the patient's blood serum was positive for *Br. melitensis* at a dilution of 1 in 125, and for *Br. abortus* at 1 in 50. A rough absorption test of specific *melitensis* and *abortus* serums with a suspension of the organism showed more complete absorption of the former than the latter. These findings, coupled with the fact that the primary culture grew well without any CO₂, left little room for doubt about the identity of the organism; but in view of the rarity of the case Professor G. S. Wilson, who has made a special study of this group of bacteria, was asked, and kindly consented, to examine the culture. His report includes the following data.

1. Sensitiveness to Dyes

Culture Medium Containing	Growth in 3 Days at 32° C.
No dyes (control)	++
Thionin, 1 in 60,000	+
Thionin, 1 in 30,000	±
Fuchsin, 1 in 50,000	++
Fuchsin, 1 in 25,000	++
Methyl-violet, 1 in 100,000	++
Methyl-violet, 1 in 50,000	+
Pyronin, 1 in 200,000	±
Pyronin, 1 in 100,000	-

2. Agglutination by Special Monospecific Serums

Strain	<i>Abortus</i> Serum	<i>Melitensis</i> Serum
<i>Br. abortus</i>	1 in 640	0
<i>Br. melitensis</i>	0	1 in 80
Patient's strain	0	1 in 80

3. Production of H₂S—No production in four days.

A second specimen of pus from the same source gave a rather more profuse growth of the same organism.

The affected knee showed great improvement on complete immobilization, and the patient's general condition remained good. The signs of inflammation in the joint quieted down, the knee was cool, there was very little fluid, and the patella was freely movable. But on February 2nd the patient developed a fluctuant swelling on the back of his left forearm, which appeared to be a further pyaemic lesion. On February 24th there was very slight fluid in the knee-joint, the rib wound had completely healed up, and the swelling on the forearm had disappeared.

We conclude that both bone and joint lesions were complications of a *Br. melitensis* infection.

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ABDOMINAL NEPHRECTOMY FOR
RUPTURED KIDNEY

WITH NOTES OF THREE CASES

BY

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The abdominal approach to an injured kidney, only briefly touched on by the textbooks on emergency surgery, is so useful as to be worthy of comment, for "run-over" accidents are, if anything, steadily on the increase.

CASE REPORTS

Case 1.—Two years ago I operated on a man of 20, who had been run over. He had several fractured lower left ribs and a ruptured spleen. Opening the abdomen through a mid-line incision, I found much free blood and a grossly torn spleen, which I removed, good access being obtained by extending the wound transversely to the left. After mopping the blood and clots from the left para-colic gutter, I noticed the peritoneum was bulged forwards and discoloured, suggesting a retroperitoneal haematoma. Opening the peritoneum outside the descending colon, I found a completely torn kidney, which I removed without difficulty, after ascertaining that the opposite kidney was intact. Unfortunately, as occasionally happens with gross rib injuries, the man died fourteen days after operation from an extensive pneumonia, with pleural and pericardial effusion.

Case 2.—This occurred last year, when a young man injured his right lower ribs and sustained a compound comminuted fracture of his right ulna as the result of a motor cycle accident. After admission to hospital his pulse steadily rose (see chart). His abdomen was rigid all over, and the pain was especially localized at the right upper quadrant. The patient had haematuria. The provisional diagnosis was ruptured kidney, with a possible additional injury to the liver,

CASE 2

suggested by the rapid onset of the shock and collapse, and acute upper abdominal pain and rigidity. Operating through a split upper right rectus incision I found the abdominal contents normal, but a large right retroperitoneal haematoma was discovered. I opened the peritoneum outside the ascending colon and removed the right kidney, which was completely torn into halves, one, quite detached, lying in the haematoma. The operation was not difficult, being complete in less than twenty minutes, and the patient made an uninterrupted recovery.

Case 3.—At 11 a.m. on March 5th, 1932, a girl of 17½ ruptured her left kidney as a result of a fall down twenty-two stairs. She landed on her feet, giving her back a severe twist, and she immediately felt a sharp pain in her left side. Her doctor gave her morphine. At 2 p.m. she vomited. She was admitted to hospital with abdominal pain and gross haematuria at 3.45 (five hours after the accident). After admission her pulse rate rose slowly. She was given a further 1/6 of a grain of morphine. I saw her several hours later, when she was slightly pale and very restless, moaning with pain. The whole abdomen was rigid and hyperaesthetic, no difference between the flanks being elicited. Examination

was, however, unsatisfactory, on account of her general abdominal tenderness and persistent noisy restlessness. She was given a quarter of a grain of morphine, and I saw her again three-quarters of an hour later. The picture had changed. She was now quiet, but quite awake and alert; the right half of the abdomen was flaccid, but the left half was still tense, and this loin appreciably thicker than the right, while there was a little shifting dullness in the flanks. The diagnosis was thus clear—a ruptured left kidney, with a surrounding haematoma, and possibly an associated ruptured spleen, suggested by the shifting dullness and pain in the left upper quadrant of the abdomen.

With the bridge of the operating table well elevated under her thoracic-lumbar region, I made a transverse incision across the left half of the abdomen, beginning at the tip of the eleventh rib and ending just above the umbilicus. The abdominal contents were normal, but there was a large left lumbar haematoma. It was the work of a moment to confirm the presence of an apparently normal right kidney, and, after inserting a pack to prevent soiling the abdominal contents with blood, I removed a completely divided kidney. Again the operation was technically easy, and completed in just over a quarter of an hour. The elevation of the bridge brings the kidney in close proximity to the surface, and also opens the transverse wound; there was surprisingly little tendency of the intestines to bulge out. By lowering the bridge and raising the foot of the table the closing of this incision was made extremely easy, and the patient's general condition was helped by making the head relatively low. An uninterrupted recovery followed.

DISCUSSION

Thus, nephrectomy can be rapidly performed through an anterior abdominal incision, with the bridge of the operating table raised or a pillow under the loins. There is a choice of four quickly made incisions:

1. The mid-line.
2. The right or left split rectus.
3. The Rutherford Morison transverse.
4. A transverse extension from the mid-line or split rectus.

Personally, I favour the transverse incision; it gives splendid exposure, and is rapidly made and closed. The ease of anterior nephrectomy was further demonstrated to me whilst doing gall-bladder surgery, when I repeatedly noticed the nearness to the surface of the right kidney when the bridge of the operating table was raised under the patient's back. The elevation of the lumbar thoracic part of the body by a pillow or bridge of the operating table is an important point in this method of kidney approach.

INCISIONS FOR ANTERIOR NEPHRECTOMY

- 1 = Mid-line.
- 2 = Split right or left rectus.
- 3 = Transverse extension of 1 or 2.
- 4 = Transverse or Rutherford Morison (can be extended over to opposite side, as per dotted line).

incision always bleeds freely, the twelfth dorsal nerve may be injured, and it takes some time to close the wound securely.

2. The exclusion of a possibly associated intra-abdominal injury—for instance, the liver on the right side and the spleen on the left.

3. The immediate determination or otherwise of the presence of the other kidney: with the lumbar incision,

the peritoneum is sometimes purposely opened for this, and occasionally this is done accidentally.

4. The ease of removal of irreparably injured kidney.
5. The quick and sound closure of the wound.

6. There is no need to place the patient in the classical "kidney position" on the side, a position which is unsatisfactory unless it is just right, needs special table appliances, or bolstering up with sandbags and staff to do the lifting. Some of these items may not be available in an emergency.

7. The anaesthetic is more easily administered with the patient on the back than on the side; a special advantage in urgent surgery where the advantage of the help of a good anaesthetist is not always possible.

Objections to the Method

These are:

1. The danger of sepsis and peritonitis. In young people and in accidental injuries this is certainly slight. Even if sepsis is present, most surgeons at some time have been grateful to the ability of the peritoneum to deal with infection, when they have accidentally opened it during a prostatectomy, with the usual infected bladder, or in cases of nephrectomy with dense surrounding adhesions.

2. Trouble may arise later from the formation of intra-abdominal adhesions. This is a slight risk when set against the facility with which a life-saving operation can be carried out at the time.

3. In any operation in which the peritoneum is opened the shock is increased. This is a definite disadvantage, but against it can perhaps be set the rapidity and ease with which the operation is conducted. In addition, as the dorso-lumbar area of the spine is pressed well forward into the wound by the back rest, it is possible quickly to insert 40 c.cm. of 1 per cent. novocain into the splanchnic plexus.

SUMMARY

(a) Three cases of abdominal nephrectomy for ruptured kidney are described.

(b) The advantages and disadvantages of the abdominal approach to the kidney are discussed.

(c) The diagnostic value of an adequate dose of morphine is illustrated in Case 3.

A CASE OF ACUTE GLANDERS

BY

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The following case may be found worthy of publication by reason of the rarity of this disease and of the fact that it is probably the first case of its kind to be met with amongst the personnel of the Royal Navy.

CASE REPORT

The patient, a Somali aged 26, received from H.M.S. *Hastings*, a sloop operating on the Red Sea patrol, was admitted to the R.N. Hospital, Malta, on February 29th, 1932. He had reported sick on February 28th, complaining of cold, shivering, malaise, loss of appetite, and acute pain in the nose. What appeared to be a small abscess was found in the right nostril. His temperature then was 98.8°, pulse 76. The following day his temperature rose to 100.4°, pulse 76, and the man complained of general aches and pains, and vomited several times. The medical officer of his ship forwarded him to hospital as a case of gastric influenza.

On admission the patient's temperature was 102°, pulse 80. No history of previous illnesses, family history, etc., could be obtained, owing to his inability to speak English. The following account of the clinical condition has been taken from notes made by the medical officer who admitted the case.

The patient was obviously ill, and complained of headache and pain in the right side. There was a raised rash over the body resembling urticaria, with patches about a quarter of an