not be felt, but on the right side they were distinctly palpable. The patient complained of great pain in the left leg, which was partly relieved by elevating the leg and applying leeches.

In the left thigh there was a superficial crepitant sensation resembling surgical emphysema. This was limited sharply above by Poupart's ligament, but, below, the margin was not definite, extending down to the knee in some places. The patient was very restless; the dyspnoea gradually increased, and he died at 4.15 a.m.

The post-mortem report mentions the dark-red colour of the lesion, the large bullae projecting from the surface, and the involvement of the left side of the scrotum. Culture from the leg post-mortem gave several organisms, chiefly *Bact. coli*. *Bact. aerogenes capsulatus* was not present. "Thrombosis of the veins of the leg had occurred; the muscles of the thigh—iliacus and psoas—were involved in the gaseous necrosis. The intercostal muscles were also involved. The whole of the retroperitoneal tissues on the left side of the abdomen were full of a liquid brownish pus. There was a thick adhesion between the descending colon and the retroperitoneal tissues, and in this there was a recent perforation. In the large intestine there were numerous small pockets of mucous membrane bulging into the peritoneal cavity. There was no obstruction of the large intestine."

A diagnosis of "sacculation of the large gut, stercoral ulceration, perforation, and emphysematous gangrene of the leg" was made.

Summary

Two cases of diverticulitis presenting as emphysematous cellulitis of the leg are described, one in a woman and one in a man. Points of similarity between the cases are set out. In the first case the patient developed the clinical manifestation of the underlying disease while in hospital for another reason; she ultimately died of peritonitis following a therapeutic colostomy, in spite of prolonged and intensive general and local treatment. The second patient was admitted in a moribund condition and died of the immediate and very far advanced sepsis.

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REFERENCE

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RECURRENT RENAL LITHIASIS

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The condition of recurrent renal calculi associated with infection has been a urological bugbear for a very long time, and the apparently satisfactory outcome of the following extreme case seems to render it worthy of record.

Case History

The first operation was done by the late Girling Ball in 1936, when the patient was aged 24. An oval stone was removed from the pelvis of the left kidney, and infection with *Bacterium coli* was present at this time.

The subsequent ten operations were performed by me during the next ten years, and are summarized diagrammatically. Never during this time was she free from gross pyuria, and *Streptococcus faecalis*, *Bacillus proteus*, staphylococci, and *Pseudomonas pyocyanea* found company with the *Bact. coli* of the first occasion. The patient suffered much misery from recurrent attacks of renal colic associated with fever together with renal aching nearly all of the time. Naturally every method was used to try to overcome the infection—ketogenic diet, mandelic acid, sulphonamides, penicillin, N.A.B., etc. The stones were always a mixture of phosphates and seemed to be unaffected by reducing calcium intake and drinking large amounts of distilled water. Calcium metabolism was carefully checked and found normal.

After some of the later operations small tubes were left in the infected calices and irrigated continuously for two weeks

with various solutions, G1, G2, associated with sulphonamide solutions and penicillin. On two occasions a ureteric catheter was left in the ureter and the irrigating was done through this with a nephrostomy tube for outflow. All these methods were in vain, the infection in every case reappearing before the patient had left the hospital, and the stones rapidly forming soon after.

With the last two operations streptomycin was used systemically for two days before the operation, and the urine for the

first time for ten years became sterile. Four stones were removed, and radiographs taken during the operation with a small oral film inserted into the depths of the wound visualized no stones. A radiograph on the second post-operative day showed two small calculi still present, so the wound was reopened and these were removed by the device of drawing half a small dental wool roll on a silk thread from the pelvis through the diseased inferior calices. Streptomycin was used for seven days in all—1,000,000 units daily in three-hourly doses—and the diseased calices were also irrigated with streptomycin solution—1,000 units per ml.—for seven days after the operation.

Six months later the urine is clear of infection and the kidney of stone, and the patient is free from symptoms.