DIVERTICULITIS PRESENTING AS EMPHYSEMATOUS CELLULITIS OF LEG

CLINICAL REPORT ON TWO CASES

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A case of diverticulitis of the large intestine which presented as an emphysematous cellulitis spreading down the leg from the left groin is considered of sufficient general interest to merit recording. This occurred in a patient under observation for another condition. A similar case which occurred in the hospital in 1908 has been recalled by a senior member of the staff and is also recorded.

Case History

Mrs. C., aged 73, was admitted on Nov. 30, 1946, for excision of a rapidly growing tumour of the skin of the lumbar region. This was removed by wide excision down to the lumbar fascia, the exposed area being left to heal by granulation. The tumour was found on section to be a benign neurofibroma. She had never had any gastro-intestinal symptoms. On Jan. 27, 1947, while awaiting skin-grafting, she developed an attack of pyrexia,

thigh. The swollen area was crepitant to palpation and covered with bullae containing blood-stained fluid.

On Feb. 8 the swelling was incised under general anaesthesia, with liberation of large quantities of very foul-smelling, frothing sanious pus from the deeper subcutaneous layers. In the course of wide excision of the affected area a track was found leading over the brim of the pelvis, just lateral to the mid-inguinal point, into the pelvic retroperitoneal tissues. A provisional diagnosis of gas-gangrene was made, and, although no clostridia were seen in a direct smear, appropriate specific treatment was started at once. Culture ultimately showed the infection to be due to *Bac. coli* and *Str. faecalis*. No further pyrexia occurred, and the local condition responded rapidly to intensive local and general treatment.

On Feb. 13 the previously defined track became the site of a faecal fistula which persisted intermittently until death. Discharge of pus from the area was controlled with sulphasuxidine and later with phthalyl-sulphathiazole supplemented with riboflavin and nicotinic acid. By March 1 the patient's general condition had improved sufficiently to permit examination by barium enema, on which the radiologist reported as follows: "Barium passed normally through the rectum into the first part of the sigmoid. There was an irregular filling defect past which the barium would not flow. It outlined an irregular fistulous track running down towards the left groin. The film taken after evacuation is suggestive of the presence of diverticula of the colon." The films are unfortunately not good enough for publication, but a tracing from one antero-posterior view is shown in the accompanying illustration. On March 14 a sigmoidoscope was passed to 20 cm. and showed no abnormality.

Owing to the persistence of the fistula and to recurrent attacks of subacute intestinal obstruction a colostomy was considered necessary, and laparotomy was performed on April 11. A large mass was found in the region of the sigmoid attached to the side wall of the pelvis, with several loops of small intestine adherent to it. The gut proximal to these adhesions was dilated and hypertrophied. In attempting to free them from the mass a small abscess was inadvertently opened. Transverse colostomy was performed through a transrectal incision, the abscess being drained through the midline laparotomy wound. The patient died two days later from general peritonitis.

The post-mortem findings were as follows: "The pelvis was almost entirely occupied by a large mass involving the sigmoid colon. Connected with the lumen of the gut were numerous diverticula, which were infected and haemorrhagic. The gut wall in this region was extremely thick, with mucoid or gelatinous deposit producing great deformity of the lumen. About 6 in. (15 cm.) of gut was thus involved, and there was no evidence of carcinoma."

The 1908 Case

In spite of the lapse of time since its occurrence, this case is recorded because of the rarity of the condition and its close similarity to the recent case. The 1908 case was, referred to by Barrington and Gardham (1932), but was not fully reported.

Mr. S., a hotel-keeper aged 52, was admitted under Mr. Barker in a moribund condition on June 3, 1908. He came in at 1 a.m., with a diagnosis of intestinal obstruction and emphysematous gangrene of the leg. The patient's doctor supplied a history of moderately severe pain on the left side of the abdomen for two days and reported that "a lump could be felt here, but that nothing could be felt by rectum." The pain was first in the hypochondrium but later in the iliac region. The patient had been unwell for five days. He had had diarrhoea and vomiting but no constipation; he had also suffered greatly from eructations for some time.

On admission he was pale and rather cyanosed. Respiration was 42 a minute. The pulse was rapid and could hardly be felt at the wrist, and the heart sounds were scarcely audible. The abdomen was distended, but the patient said that he was always stout; it was not rigid or tender, and was resonant all over except for some slight impairment in the left flank. The left leg was blotchy and cyanosed in colour, cooler than the right, and the sense of touch with the finger was absent all over it. The pulse in the left dorsalis pedis and femoral arteries could

Tracing of antero-posterior radiograph of barium enema, showing rectum full of barium. Abscess and fistula leading from it. X marks the site of obstruction.

the temperature reaching 102° F. (38.9° C.) on Jan. 31. The pyrexia was associated with backache, diarrhoea, vomiting, and some difficulty of micturition. By Feb. 4 the temperature had subsided, and thereafter remained subnormal. On Feb. 6 the patient developed a painful, tender, deep-red swelling in the left groin. This was considered to be an inguinal abscess, and as such was being treated expectantly with local heat until it should fluctuate. This did not, however, happen. The swelling developed into a rapidly spreading cellulitis which soon involved the left labium majus, spread laterally almost to the anterior superior iliac spine, limited above by the inguinal ligament, and for a few inches down the anterior aspect of the

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 "sacculization 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

Barrington, F. J. K., and Gardham, A. J. (1932). *Clin. J.*, **61**, 337.

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.