An unusual presentation and complication of acute appendicitis

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Summary
A case history is presented to illustrate an uncommon complication of acute appendicitis which itself was overshadowed by an acute arterial embolus.

Case history
A 75-year-old woman presented with a 10-day history of increasing continuous dull pain in the right groin and inner aspect of the right thigh, which latterly had prevented her from walking. Eight years previously, she had been admitted with congestive cardiac failure complicated by appendicitis, presenting as an appendix mass. She was considered unfit for surgical treatment.

On examination, the right leg was held flexed and externally rotated, with marked tenderness in the right groin and inner aspect of the right thigh. There was a fluctuant, gurgling swelling in the right femoral triangle. Whilst in the X-ray department she developed a sudden onset of pain in the right lower leg associated with numbness.

Examination revealed that she was fibrillating and the right leg was cold and mottled below the knee. Right common and superficial femoral pulses were felt but there were no palpable impulses below this. The pre-operative diagnosis was acute arterial embolism and an incarcerated right femoral hernia.

She was taken to theatre and prepared for an exploration of the common femoral artery. On incising the deep fascia over the common femoral artery, approximately 500 ml of foul-smelling pus issued forth, and this extended up beneath the inguinal ligament, and down as far as the insertion of the sartorius on the medial aspect of the knee. The whole area up to the inguinal ligament and down to the knee was opened up and necrotic fat and parts of sartorius and rectus femoris excised. The wound was left open and packed with Eusol and paraffin gauze.

An arteriotomy was performed on the common femoral artery and an embolus removed from the vicinity of the popliteal artery with a Foley catheter. The colour of the leg returned immediately. The arteriotomy was closed with continuous 6/0 prolene.

The patient was re-prepared and through a right lower paramedian incision examination of the peritoneal cavity revealed no abnormality. The caecum was mobilized and a retroperitoneal appendix, bathed in pus, communicating with the thigh wound beneath the inguinal ligament was found. The appendix was dealt with in the standard fashion. The wound was closed with a drain to the retroperitoneal space. Postoperatively, she was managed on a water bed, as she was obese and immobile, and at no time during 13 weeks did she develop any signs of decubitus ulcers. Her thigh dressings

Fig. 1. Note the lower end of the paramedian wound, the long medial thigh wound on the right, and the areas of Thiersch grafts from the left thigh, and pinch grafts taken from the right thigh.
were changed frequently, and within 10 days her abdominal wound had healed uneventfully. After 4 weeks, Thiersch grafts were applied to the granulating wound in her thigh. This was repeated on three occasions. Her right leg remained warm and pink.

During her long postoperative period she developed a tender, painful, swollen right calf which was initially considered to be a right deep vein thrombosis. However, her right foot slowly assumed an increasing equinus deformity with shortening of the tendo achilles. This was then considered to be an ischaemic contracture. This has been treated with physiotherapy, and she now walks well with a frame and a raised heel to her shoe.

At 13 weeks her thigh wound was completely healed.

Discussion

The protean manifestations of acute appendicitis are well known. This case illustrates an unusual presentation of acute appendicitis with pus tracking along the course of the psoas and iliacus into the thigh and along Hunter’s canal to the medial side of the knee. The acute arterial embolus was an added complication, necessitating an arteriotomy in a grossly contaminated field. No complication arose from this.

Perforation of the appendix into the retroperitoneal space is unusual. Neuhof and Arnheim (1944) reported twelve cases, Bird et al. (1948) two cases, Pierleoni and Johnson (1955) two cases and McCorkle and Stevenson (1938) one case.

Reginald Fitz, who first gave the name ‘appendicitis’ to the inflammation of the appendix, noted briefly that ‘the course of the psoas and iliacus may be followed into the thigh’. Once in the retroperitoneal space, the pus tracks along the path of least resistance along tissue planes into the thigh.

References