CASE REPORT

Extraperitoneal abscess originating from an ischorectal abscess

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Accepted 5 March 2017

SUMMARY

We describe a case which had ongoing sepsis, despite adequate incision and drainage performed for an ischorectal abscess. The patient was then noted to have an ascending infection reaching the extraperitoneal space of the abdominal cavity. The case reported required multiple episodes of drainage along with lower midline incision for deep-situated abscess. Postoperatively, the abdominal wound was treated with vacuum-assisted closure dressing and antibiotics. The patient was doing well and was discharged with an appointment at the surgical outpatient department. The report signifies the importance of investigating patients who have systemic inflammatory response syndrome despite treating local abscess.

BACKGROUND

Anal abscess is a common surgical condition encountered in our clinical practice. There are five types of anorectal abscesses which includes perianal, ischioanal, intersphincteric, supralelevator and submucosal. Ischioanal abscess accounts for 30%.¹ It can be adequately managed with antibiotics along with incision and drainage. However, there are rare instances where the abscess could spread upwards to more complex anatomical compartments and potential spaces within the peritoneum leading to sepsis with a possible fatal outcome. This case is presented to stress on the importance of high index of suspicion needed to diagnose complex abscesses with particular emphasis to use CT imaging for early diagnosis.

CASE PRESENTATION

A man aged 47 years with no known medical history presented to the emergency department reporting of constipation, fresh per rectal bleeding and anal pain which was intensified with defecation for the past 2 weeks. The patient presented to the emergency department twice within the past 2 weeks and was treated conservatively, with oral antibiotics. Anoscopy was not performed at initial presentation to the emergency department.

On presentation, he was vitally stable (BP 134/85 mm Hg, HR 88 bpm, RR 20, temperature 37) and systemically well. On examination, his abdomen was soft and lax with no peritoneal signs. On digital rectal examination, there was swelling and tenderness at 3 o'clock position over the gluteal region. There was no blood or discharge.

The patient's white cell count was 16 000 with 81% neutrophilia.

The patient underwent incision and drainage of the perianal abscess on the right side. During the initial surgery, the abscess was found to be localised to the 3 o'clock position on the right side, and thus, no drainage was performed on the left side. The next morning, the patient was reporting of left-sided gluteal pain associated with high-grade fever. The patient was taken again to the operating theatre where incision and drainage was performed over the left side and was diagnosed to have horseshoe abscess. More likely than not, the reason behind this occurrence was a missed horseshoe abscess in the first procedure. Despite the two procedures, the patient went into sepsis and was reporting now of abdominal pain. On examination, he had lower abdominal tenderness extending to the umbilical region with guarding.

Secondary to worsening sepsis, urgent CT scan with contrast was performed. CT scan showed two perianal fistula tracts arising at 10 o'clock and 2 o'clock positions. The first one extended superiorly and caused a small perirectal abscess collection measuring 2.7×2.5 cm. The second one extended more cranially up to level of umbilicus inferior, posterior to the rectus abdominus muscle. Both tracts contained air with a small amount of fluid. Multiple enlarged lymph nodes were noted at bilateral iliac, left obturator and mesocolon (figures 1 and 2).

The patient was taken to the operating theatre for the third time for lower midline incision. Intraoperative findings showed large suprapubic collection which was confined to the extraperitoneal space. The infection spread along the rectus sheath, tracking anteriorly to the bladder and behind the rectus muscle on the right side. The wound was left open and managed with vacuum-assisted closure therapy and antibiotics.

DIFFERENTIAL DIAGNOSIS

- Necrotising soft tissue infection
- Inflammatory bowel disease

OUTCOME AND FOLLOW-UP

Postoperative recovery was smooth and the patient attended the General Surgery OPD regularly and the wound was clean and dry with no sign of infection.

DISCUSSION

Peritoneal abscess originating from the anorectal region may lead to a diagnostic and therapeutic challenge in view of its rarity. This may lead to delay in diagnosis with poor outcome. In this case,

To cite: Hamza E, Saeed MF, Salem A, et al. *BMJ Case Rep* Published online: [please include Day Month Year] doi:10.1136/bcr-2016-218229

Figure 1 Sagittal view showing extension of fistula up to the anterior abdominal wall. 321×420 mm (300×300 DPI).

Figure 2 Axial view showing extension of the perirectal infection. 321×404 mm (300×300 DPI).

a midline laparotomy was performed which revealed extraperitoneal air.

It is important to note that impending sepsis secondary to peritoneal abscess may be obvious only at a later stage. A retrospective review of 50 extraperitoneal abscess cases published by Crepps *et al*² showed that extraperitoneal infections may be occult and may not be suspected for days after hospital admission. Overall, the case presented here is highly uncommon, but not very rare.

Patients may initially present with vague symptoms such as fatigue, nausea and fever.³ Rectal abscess are usually confined below the puborectalis muscle; however, if left untreated, it can spread to the supralelevator space.⁴ This potential spread of infection may lead to necrotising fasciitis and potential fatal consequences.^{5 6}

In our case, high index of suspicion of an abdominal abscess was present and was confirmed with imaging using a CT scan.

Thus, an anterior lower midline incision enabled us to sufficiently drain the abscess. This approach has also been used by Okuda *et al*³ in the management of a retroperitoneal abscess. Another similar case of ischioanal abscess presenting with extensive abdominal wall abscess has been reported by Darlington and Anitha⁷ in 2016. Their patient was treated with multiple stab incisions and recovered well. It is important to have a precise anatomic demarcation of the infection spread to plan for the optimal surgical approach.²

Extraperitoneal abscess may not present with features of peritonism; hence, high suspicion of widespread infection should be included as a differential diagnosis in a patient with ongoing sepsis. Early recognition and aggressive management can save the patient from impending complications. Therefore, we strongly advocate using imaging modalities prior to intervention in cases with unusual constellation of symptoms accompanying an abscess.

Learning points

- ▶ Persistent ongoing sepsis should alert physicians to conduct further investigations emphasising on CT scan.
- ▶ Early intervention to rule out necrotising fasciitis.
- ▶ CT is particularly useful to evaluate retrofascial musculature.
- ▶ High index of suspicion must be present to diagnose the problem and intervene early.
- ▶ Vacuum-assisted closure dressing has an excellent role in healing open infected abdominal wound.

Contributors EH is responsible for conception and design, acquisition of data or analysis and interpretation of data. MFS is responsible for drafting the article or revising it critically for important intellectual content. AS is responsible for final approval of the version published. IM is responsible for final approval of the version published.

Competing interests None declared.

Patient consent Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

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