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Case Report

A rare case of acute presentation of a chronic massive extraperitoneal abscess: a case report

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ABSTRACT

Extra-peritoneal abscesses are uncommon entities encountered during general surgical practice. They occur in a plane present between the peritoneum and the deep fascia anteriorly, posteriorly or in the pelvis. These abscesses commonly occur as a result of supra-levator and pre-peritoneal extension of an ischiorectal abscess. Treatment includes antibiotics and drainage. Here we have described a case of an abscess in the anterior extra-peritoneal plane extending from perirectal and pararectal space, drained surgically through a midline incision.

Keywords: Extraperitoneal abscess, Pararectal, Perirectal space, Retro-rectus plane

INTRODUCTION

Preperitoneal or the anterior extraperitoneal space are uncommon sites for an abscess to develop. These result from any number of reasons, such as infection, inflammation, trauma or even malignancy.[1,2] The most common aetiology of such rare presentations is a cephalad extension of an anorectal abscess. Further compounding the situation is the fact that extraperitoneal tissues do not react acutely to bacterial contamination as seen in the peritoneal cavity.[3] Due to the uncommon presentation, these entities require a high degree of clinical suspicion to diagnose and often involves requires the use of contrast-enhanced computed tomography. We have reported a case of an extraperitoneal spread of a perirectal abscess presenting with the absence of any perianal signs or relevant history.

CASE REPORT

A 56-year-old gentleman presented to the emergency room with complaints of abdominal pain in the lower quadrant of a 3-day duration. He had no complaints of vomiting, abdominal distension or fever and had been passing flatus. He had no such similar complaints in the past. On examination, the patient appeared comfortable but was tachycardic with a pulse rate of 110/min. On palpation, his abdomen was soft with localised guarding over the hypogastrium- suggestive of a mass. On percussion, dullness was noted over the mass and the rest of the abdomen was soft and resonant. Per rectal examination revealed collapsed mucosa with faecal staining. Owing to the increased pulse rate and abdominal findings, an X-ray abdomen was done which showed clumping of small bowel loops in the pelvis. A complete blood count revealed an increased white cell count of 25,000/mm^3. Contrast enhance computed tomogram (CT) of the abdomen showed an abscess in the anterior abdominal wall in the retro-rectus space extending from the peri- and pararectal space (Figure 1 and 2). He then subsequently underwent emergency surgery to drain the abscess. Under general anaesthesia, a midline laparotomy incision was made and deepened. Pus encountered in the plane immediately below the rectus and above the peritoneum. 500 ml of

frank pus was drained and a thorough saline wash was given. The abscess cavity was noted to have extension till the para- and perirectal space. No breach in rectal mucosa was felt. On exploring the cavity further, a peritoneal breach was noted in the left lower quadrant (Figure 3). The midline incision was extended superiorly beyond the limit of the abscess and deepened to enter the peritoneum. A piece of omentum was noted to have been sealing the perforation in the peritoneum with the surrounding congested peritoneum however, there was no pus in the peritoneal cavity.

The omental slip was released and the peritoneum was closed. After giving a thorough wash, a tube drain intra-abdominally and a suction drain in the extra-peritoneal space were placed. Daily wash was administered in the latter drain till effluent was clear. *Escherichia coli* was isolated from the pus culture and the initial antibiotic of piperacillin-tazobactam was de-escalated to ceftriaxone.

The post-operative period was uneventful. On probing further, the patient revealed a history of slip and fall from a motorcycle one year ago and sustained injury to the perianal region which was managed conservatively not warranting imaging or any intervention then. The drainage tubes placed were removed on postoperative day four and the patient was started on an oral diet. The patient was discharged on day seven postoperative period. He underwent a colonoscopy one month later which reported a normal study.

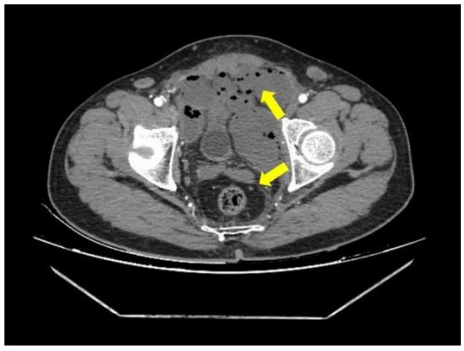

Figure 1: Perirectal abscess extending to the anterior abdominal wall.

Figure 2: Extension of the abscess to the retro-rectus plane inferior to the umbilicus.

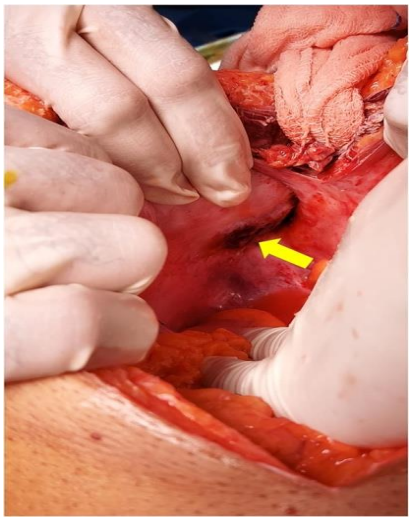

Figure 3: Site of peritoneal breach.

DISCUSSION

Anorectal abscesses are one of the most commonly encountered colorectal diseases in the surgical department. Supralevator and extraperitoneal extension is a rare occurrence. Extraperitoneal space is a potential space bounded by the parietal peritoneum and transversalis fascia. It includes the retroperitoneum posteriorly and the preperitoneal space anteriorly including the peri- and paravesical spaces.[4] Inadequate treatment of the abscess usually is the prime reason for supra levator extension.[5]

Owing to its rarity, the scenario is a diagnostic challenge in which an inevitable delay may directly impact the outcome. As mentioned by Crepps et al in a retrospective review of 50 patients, extraperitoneal abscess often is occult and usually does not present with any symptoms.[3,6]

Patients commonly present with vague symptoms of discomfort. In our patient, he had a short history suggestive of an acute exacerbation probably due to the peritoneal breach which may have caused transient peritonitis before it was sealed by omentum. This explains the high white cell count and tachycardia. The patient denied any abdominal symptoms except for mild abdominal discomfort. It hence fell to an immaculate clinical examination to decide further imaging to confirm the diagnosis.

Similar cases of preperitoneal abscess originating from ischiorectal infection have been noted in the literature.[7-9] However, those cases had a clear diagnosis of a previous ischiorectal abscess. Our patient had no antecedent history but for a fall one year ago. This may, however, be argued as a case of chronic perirectal abscess with cephalad extension as similar extensions have been noted in rectal abscesses.[10] As with any abscess, treatment includes drainage and antibiotics. Percutaneous drainage, commonly performed under ultrasound or CT guidance, is the preferred method.[11] Advantages include decreased

morbidity and the absence of general anaesthesia. However, most of the reported cases were managed surgically with a lower midline incision, laparotomy or multiple stab incisions.[7,9,12] While the peritoneum is usually not breached for fear of contamination, in our case peritoneal cavity was opened to check for collections due to a pre-existing breach in the parietal peritoneum in the left lower quadrant.

CONCLUSION

An extraperitoneal abscess may rarely present with features of peritonism; hence, high suspicion of widespread infection should be included as a differential diagnosis in a patient with clinical signs of sepsis. Early recognition and aggressive management can save the patient from impending complications. Hence, we strongly advocate using imaging modalities before intervention in cases with an unusual constellation of symptoms that suggests an acute presentation, like tachycardia.

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