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A Pyemic Preperitoneal Abscess Presenting as Peritonitis. Is It a Perforation or Ischiorectal abscess? A Rare Case Report with Review of Literature

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Abstract
A preperitoneal abscess is an uncommon manifestation of extraperitoneal collection. We present a case of an anterior abdominal wall preperitoneal abscess in 35-years-male who presented in emergency department of our institute with 10 days history of lower and mid abdominal pain and chronic constipation and with typical signs of peritoneal irritation.This case highlights the importance of detailed history, clinical examination, and atypical presentation which has low threshold of suspicion in patients with risk factors.

Keywords: *Intestinal perforation, Preperitoneal abscess, Abdominal pain,*

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I. Introduction

Preperitoneal space is an uncommon site in the extraperitoneal space for an abscess to develop. Abscess in the extraperitoneal space can result from an infectious, inflammatory, traumatic, or neoplastic process[1],[2]Detailed history including any history of immunosuppressive or anti-inflammatory medications, physical examination, laboratory tests, and imaging studies must be appropriately pursued to avoid serious complications including death. In this report, we discuss a very rare case of 35-year-old male who presented to casualty with symptoms of left paraumbilical and hypogastric abdominal pain and signs of peritonitis. Case was promptly operated and managed successfully.

II. Case Presentation

A 35-year-old-male presented to emergency department with 10 days history of pain in mid and lower abdomen, multiple fever episodes, unable to pass flatus and stool from 2 days.Abdominal pain was insidious in onset, dull, and generalized but worse at the left paraumbilical and hypograstric quadrant of the abdomen, non-radiating, and no aggravating or relieving factor was noted by the patient. Past medical history revealed that patient had also complains of pain and pus collection in right gluteal region from 10 days for which he was started on oral amoxicillin and symptomatic medications in the outdoor patient department (OPD) of general surgery which eventually burst and pus drained out at home. Rest past medical history was insignificant and he was not a known hypertensive, diabetic, asthmatic, or peptic ulcer patient.

Patient's vitals were deranged with blood pressure of 100/62 mmHg, pulse 135/min, SpO2 92% on room air and was started on 4 litres/min oxygen via oxygen mask. Clinically, patient's abdomen was tense, distended and tender in left paraumbilical and hypogastric region of abdomen. Guarding and rigidity werepresent. Urgent, X-ray abdomen erect and supine was done that showed air under both the domes of diaphragm and multiple air fluid levels were seen (Figure 1). All urgent routine investigations were sent which showed hemoglobin-8.9 L, total leukocyte count-15700 cells/cumm, PT/INR-15.1/1.3 seconds, Serum Amylase-52, Serum Lipase- 48, Bilirubin total/direct/indirect-6.5/3.6/2.9 mg/dL, blood urea- 118, creatinine- 1.7, HCV-reactive.

On the basis of clinical findings and investigations, patient was taken up for urgentlaparotomy for intestinal perforation. While entering abdominal cavity, preperitoneal abscess was noted in infra-umbilical region(Figure 2), distended Jejunal loops were seen but no transition point was noted. Also,proximal

sigmoidacutely inflamed was noted, which was adhered to peritoneal wall anteriorly and hence, diagnosis of perforation with adherent sigmoid colon was made (Figure 3). Pus cavity was drained(Figure 4)& doubtful area of perforation was closed with interruptedsero-muscularvicryl sutures. Prophylactic appendectomy was also performed. Abdominal lavage was done with warm saline and closure was done after inserting preperitoneal and intrapelvic drains. Post operatively patient was kept in surgical ICU and four unit Fresh Frozen Plasma and two unit packed RBC were transfused following which hospital stay was uneventful and patient was discharged on post operative day 15 with removal of alternate sutures. On follow up visit after 1 week, patient was symptomatically and clinically stable and remaining sutures were removed and he recovered without any significant complications.

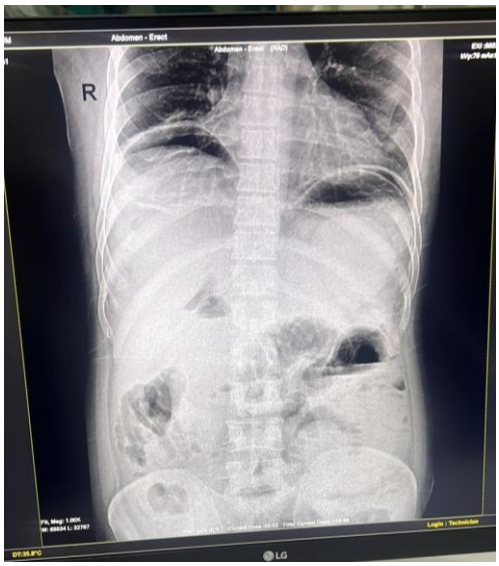

Figure 1-X-ray Abdomen Erect

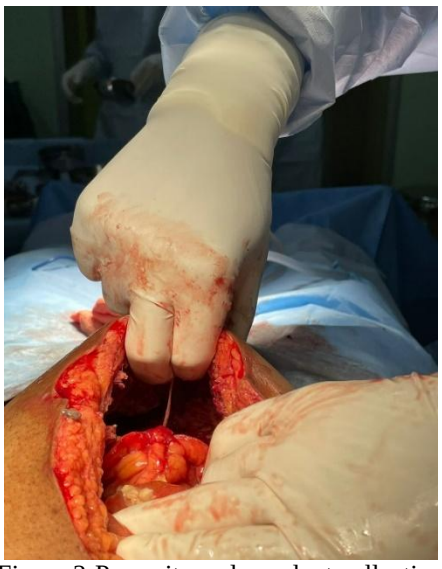
Figure 2-Preperitoneal purulent collection

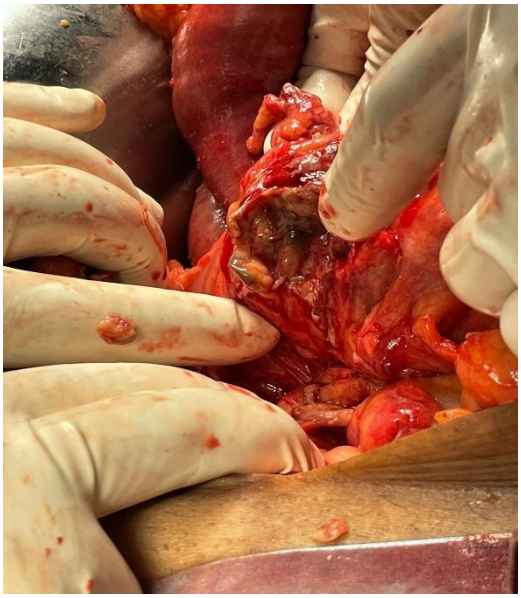

Figure 3:Sigmoid Sealed Perforation

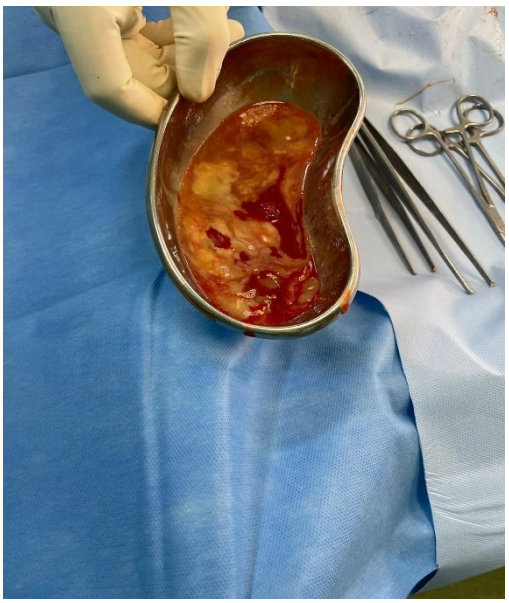

Figure 4: Purulent Collection from preperitoneal space

III. 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 para-vesical spaces.[3] Inadequate treatment of the abscess usually is the prime reason for supra levator extension.[4]

Owing to itsrarity, 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. [4 5]

Classically, pneumoperitoneum secondary to bowel perforation presents with typical symptoms including fever, nausea, and severe abdominal pain, in addition to clinical signs of peritonitis on examination. In rare cases, pneumoperitoneum can present silently without clinical signs of illness; and such instances have been described in case reports.[6] Perforation of the colon is associated with high morbidity and mortality, and hence it requiresearly diagnosis. However, the diagnosis of perforation arising from atypical causes can be challenging.[7-9]

Similar cases of preperitoneal abscess originating from ischiorectal infection have been noted in the literature.Most of the reported cases of preperitoneal abscess were managed surgically with a lower midline incision, laparotomy, multiple stab incisions, or even by laparoscopy.[10-13] However, percutaneous drainages are favoured over surgical interventions.[10] Generally, advantages of image-guided percutaneous drainages include the reliability of the procedures, no need for general anaesthesia, better tolerated with much lower morbidity and mortality compared with other surgical techniques[14].

To the best of our knowledge, there is no published study on preperitoneal abscess presenting as peritonitis in an Indian patient, and which was treated as a case of perforation.

IV. 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 pyemia. Early diagnosis and immediate management can save the patient from complications and mortality. Hence, we strongly advise on identifying clinical signs and using imaging modalities as well as early and intervention in cases with anunusual constellation of symptoms that suggests an acute presentation.

CONFLICT OF INTEREST

No conflict of interest linked to this case report.

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