



Case report

Incidental peritoneal loose body in a polytrauma patient: The unnoticed scenario: A case report

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ABSTRACT

Introduction: Peritoneal loose bodies are rare, often asymptomatic lesions that can be found during radiologic examinations or abdominal surgery. They don't require specific treatment unless they are complicated.

Presentation of case: We present a rare case of incidentally diagnosed peritoneal loose body in a 38 years old man who undergone exploratory laparotomy for the diagnosis of hypovolemic shock secondary to acute intra-abdominal bleeding with solid organ injury secondary to blunt abdominal trauma and left proximal tibia fracture.

Discussion: Symptomatic peritoneal loose bodies present with compressive symptoms of urinary system or bowel obstruction. As a result, they create diagnostic dilemmas in patients with previous history of abdominal surgery who present with acute abdominal pain, commonly confusing with retained foreign body.

Conclusion: Although most incidental loose bodies are diagnosed intraoperatively on laparatomies done for other indications, it's very unusual to suspect such findings in hemodynamically unstable polytrauma patient undergoing surgical exploration. Considering the diagnostic challenges they create in post-operative patients presenting with abdominal complaints, its better practice to consider such rare findings when exploring the abdomen in trauma settings.

1. Introduction

Peritoneal loose bodies or mice are rare lesion that can be found during radiologic examinations or abdominal surgery. The real etiology hasn't been well understood but is thought to be from an infarcted appendices epiploicae that subsequently detach and undergo saponification followed by calcification [1,2]. Usually, their size is less than 1 cm and giant loose bodies (>5 cm) are very rarely reported in literatures [1].

Peritoneal loose bodies are often asymptomatic and don't require specific treatment unless they are complicated [1]. Computed tomography (CT) and magnetic resonance imaging (MRI) are useful for diagnosis. *The case report has been reported in line with the SCARE 2020 criteria [3].*

2. Case presentation

Thirty-eight years old male, passenger presented to our emergency room (Saint Paul's Hospital Millennium Medical college, SPHMMC) with a complaint of abdominal pain of 4 h duration associated with abdominal distension, nausea and vomiting of ingested matter after he sustained a road traffic accident 12 h prior to his presentation. He also had left leg pain with difficulty of mobilization. He has no previous complaint of abdominal pain or surgery. He has no history of drug allergy, self or family history of relevant medical or surgical illness. On presentation he was hypotensive (blood pressure of 80/40 mmHg & pulse rate of 120 beat/min). His abdomen was distended with diffuse guarding and tenderness, and hypoactive bowel sound. There was also tenderness over the left leg proximal area but distal pulsations were intact. There was no remarkable finding on other systems evaluation. His serum hemoglobin was 6 g/dl and serum creatinine was 2.6 mg/dl but serum electrolytes were in the normal range.

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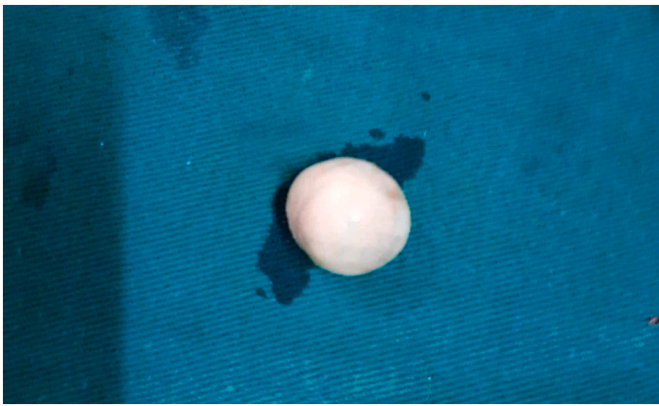


Fig. 1. 3 × 3 cm white spherical, mobile, firm mass with a smooth surface appearing boiled egg.

With the diagnosis of hypovolemic shock secondary to acute intra-abdominal bleeding with solid organ injury secondary to blunt abdominal trauma and left proximal tibia fracture he was resuscitated with crystalloids, transfused with whole blood and immediately taken to the operating theater after taking informed written consent. The intra operative finding was about 3 l hemoperitoneum in the general peritoneal cavity with grade 4 splenic injury extending to the hilum with active bleeding. With these findings, the hemoperitoneum was sucked out and splenectomy was done. Upon further exploration of the abdomen we found about 3 × 3 cm white, spherical, freely mobile, firm, extra luminal mass on the mesenteric side of transverse colon. We removed the mass and subjected it for histopathologic study (Fig. 1). The proximal tibia fracture was managed with skeletal traction and the patient was subsequently transferred to intensive care unit and showed marked improvement of his hemodynamic and renal function for which he was transferred to the ward on the second day.

Post procedure, he had remarkable improvement and was discharged from the hospital in a stable condition.

Histopathologic study of the mass showed laminated strands of hyalinated material at the periphery with central area of necrotic fat with areas of calcification which was suggestive of peritoneal loose body (Fig. 2).

3. Discussion

The first peritoneal loose body was reported by Littre in 1703 and it is uncommon intra-abdominal finding. Like our case it commonly occurs in males age from 40 to 70 years [4]. It is resulted from torsion of epiploica followed by ischemia, saponification and calcification. As its pedicle atrophies it detaches from the colonic surface and accumulation of protein rich serum fluid around it results gradual increment in size [1,5]. The increased intra-abdominal temperature gives it classic 'boiled egg' appearance [1]. Pre-operative diagnosis of peritoneal loose bodies is very difficult as they are very rare and most patients are asymptomatic. When grown to significant size it can present with acute compressive symptoms of urinary system or bowel obstruction [1]. As a result it creates diagnostic dilemmas in patients with previous history of abdominal surgery who present with acute abdominal pain, commonly confusing with retained foreign body [5,6]. On imaging peritoneal loose bodies appear as calcified bodies with the unusual ability to change position due to their mobile nature, but it needs through evaluation to differentiate it from differentials like teratomas, leiomyoma, desmoid tumors, urinary stones and gall stones [1,2,7]. Although most incidental loose bodies are intraoperatively diagnosed on laparotomies done for other indications its very unusual to suspect such findings in hemodynamically unstable polytrauma patient undergoing surgical exploration. Considering the diagnostic challenges such rare cases create in post-operative patients presenting with abdominal complaints its better practice to consider such rare findings as well when exploring abdomen in trauma settings.

4. Conclusion

Peritoneal loose bodies are quite rare, benign pathologies which create diagnostic difficulties in patients with abdominal complaint unless considered into differential diagnosis. Most are incidentally diagnosed on abdominal surgeries done for other purpose. But it's quite unusual to think of them in stressful abdominal trauma emergencies where most physicians focus visceral injuries. Considering the diagnostic dilemmas, they create in post-operative patients presenting with abdominal complaints, they should be removed when encountered during abdominal surgeries including trauma patients.

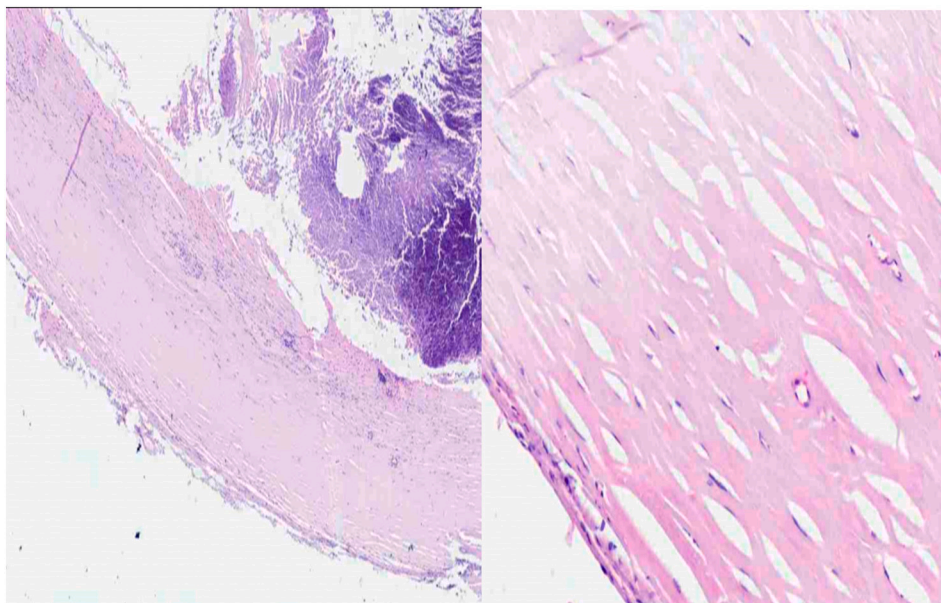


Fig. 2. Showing laminated strands of hyalinated material at the periphery with central area of necrotic fat.

Abbreviations

CT	computerized tomography
MRI	magnetic resonance imaging
PR	pulse rate
RR	respiratory rate
SPHMMC	St. Paul's Hospital Millennium Medical College

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Declaration of competing interest

All authors declare that they have no conflict of interest.

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Ethical approval

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Consent

Written informed consent was obtained from the patient for publication of this case report and accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal on request.

Author contribution

1. Abraham Arayia, MD
Conceived and conducted the study, did literature search and

Critical revision of the manuscript, involved in the management of the case

2. Musse Ahmed, MD
Conducted over all supervision and critical revision of the manuscript
3. Esubalew T. Mindaye, MD
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Registration of research studies

Not applicable.

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