

Peritoneal Loose Body in a Patient With Ampullary Adenocarcinoma

A.V. Pradeep, MD¹, Abdul Razik, MD, DNB¹, Ankur Goyal, MD, DNB¹, Atin Kumar, MD, DNB¹, Virinder Kumar Bansal, MS, FACS, FRCS², and Asuri Krishna, MS, FACS, FRCS²

¹Department of Radiology, All India Institute of Medical Sciences, New Delhi, India

²Department of Surgical Disciplines, All India Institute of Medical Sciences, New Delhi, India

CASE REPORT

A 51-year-old man with type 2 diabetes mellitus presents with episodic pain in the right hypochondrium for 1 month. On physical examination, the abdomen was nontender, and no lump was palpable. The laboratory investigations were normal except for elevated fasting blood sugar (212 mg/dL).

Contrast-enhanced computed tomography (CT) showed a resectable mass of size 3 × 2.5 cm at the duodenal ampulla. The CT also showed an ovoid retrovesical mass, which measured 4 × 4 cm. The mass consisted of a calcified central core and a thicker outer crust with a lamellated appearance (Figure 1). A small focus of calcification was also seen along the anterior wall of the distal descending colon (Figure 2). Given the above findings, a provisional diagnosis of the peritoneal loose body (PLB) was made.

The patient underwent staging laparoscopy, followed by open Whipple pancreaticoduodenectomy. During laparoscopy, the PLB was observed as a freely mobile, ovoid substance with a glistening white surface (Figure 3). It was mobilized to the right hypochondrium and retrieved through an extended right subcostal incision. On the cut section, the PLB had a small, yellowish central core and a thicker, whitish outer crust having a lamellated appearance (Figure 4). On histopathology, the outer core was composed of densely hyalinized fibrocollagenous tissue, and the inner core showed necrotic fat and dystrophic calcification. These findings were diagnostic of PLB.



Figure 1. Midsagittal bone window images of contrast-enhanced pelvic computed tomography shows an ovoid mass of size 4 × 4 cm in the rectovesical space (arrow), which has a smaller, calcified central core and a larger, lamellated outer crust.



Figure 2. Axial soft-tissue window images of contrast-enhanced pelvic computed tomography showing a small focus of calcification (arrow) along the anterior wall of the distal descending colon at the expected location of the epiploic appendices.

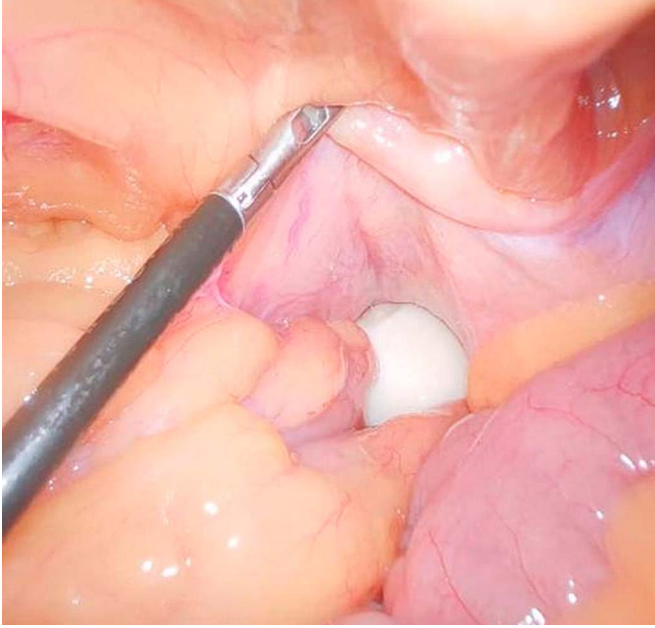


Figure 3. The laparoscopic appearance of the peritoneal loose body, which was observed as a freely mobile, ovoid substance with a glistening white surface reminiscent of a “boiled egg.”

PLBs, also known as peritoneal mice, are generally pea-sized (0.5–2.5 cm) and asymptomatic. Large PLBs may cause pressure symptoms. Free-floating PLBs tend to gravitate toward the pelvis, which is the most common site of localization. PLBs are hypothesized to arise from torsion, infarction, and the detachment of epiploic appendices, which subsequently undergo fat saponification and dystrophic calcification.¹ Over time, they get covered by layers of peritoneal serum, which later organize into dense collagen. The end product is a hard, glistening substance resembling a boiled egg.² The morphology on CT mirrors the pathological appearance and shows an inner core of dystrophic calcification and an outer lamellated crust representing layers of collagen.^{1,3–5} The presence of other calcified foci along the colonic wall, as seen in our case, validates the theory of an origin from infarcted epiploic appendices. The mobile nature of the mass can be confirmed by looking for a shift in position during dynamic ultrasonography, prone CT, or follow-up examinations.

DISCLOSURES

Author contributions: AV Pradeep and A. Razik wrote the manuscript. A. Goyal, A. Kumar, VK Bansal, and A. Krishna



Figure 4. The gross morphology of the peritoneal loose body. The cut sections demonstrated a small, yellowish central core and a thicker, whitish outer crust with a lamellated appearance.

edited the manuscript and provided the images. All authors approved the final version of the manuscript. A. Goyal is the article guarantor.

Financial disclosure: None to report.

Informed consent was obtained for this case report.

Received January 5, 2021; Accepted April 29, 2021

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