PARASITIZED PERITONEAL MICE-AN INCIDENTALOMA.

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Abstract
Peritoneal loose bodies or peritoneal mice are incidentalomas, found commonly during abdominal surgery, during imaging procedures or autopsy. It arises due to torsion and separation of the appendices epiploicae or due to accumulation of peritoneal serum in the appendices epiploicae. Parasitized peritoneal mice are those which lie loose and later gets attached to omentum, mesentery or to the spleen. We present a case of an incidental parasitized peritoneal loose body in a 49 yr old female who was operated for distal common bile duct growth with obstructive jaundice.

KEY WORD: Peritoneal loose bodies, Parasitized, omentum.

INTRODUCTION:
Parasitized peritoneal loose bodies are rare and only few cases have been documented. Peritoneal mice are infarcted appendices epiploicae that get detached and lie loose in the peritoneum or can get attached to adjacent organs such as omentum and spleen, when it is termed parasitized peritoneal mice. Omental appendices measures 1.5 x 3.5 cms and are about 50-100 in number which are distributed along the tinea liberas and omentalis of large bowel in two rows and as a single row along the transverse colon. Peritoneal mice are usually asymptomatic and can be picked up by CT or MRI. Movable peritoneal mice are a diagnostic dilemma. Histomorphological examination is a must to pin down the diagnosis.

CASE REPORT:
A 49 year old female was admitted for distal common bile duct growth with obstructive jaundice. A hard incidental mass was found to be attached to the omentum intraoperatively. It was sent to our department in the clinical suspicion of a calcified lymph node. Gross appearance of the mass was oval shaped, measuring 1x0.5 cms. The external surface was smooth and hard in consistency. Cut section revealed a peripheral white and central yellow portion resembling a boiled egg. Histopathological examination showed laminated strands of fibrinoid substance and eosinophilic proteinaceous material in the peripheral white part and saponified fat with calcification in the central yellow part.

DISCUSSION:
Littre in the year 1703, was the first to report a case of peritoneal loose body. Though the exact pathogenesis is unknown, it was Virchow(1) who proposed the sequential changes of the peritoneal mice, in his study in the year 1863. According to his view, obesity or infection can lead to increase in the amount of fat deposited in the appendices epiploicae, which undergoes saponification, calcification and progressive obstruction to the blood vessels of the pedicle. Complete vascular obstruction leads to necrosis and atrophy of the pedicle and thus the appendix epiploicae falls into the peritoneal cavity(2). Torsion and inflammation leads to detachment of the appendices epiploicae according to Paterson’s observation(3). Recent report shows that a loose body was identified in the presence of a unilateral absence of adnexal structure, thereby postulating the cause to be as, childhood adnexal torsion with autoamputation and gradual calcification(4).

Figure 1: Cut section showing peripheral grey white and central yellow portion resembling boiled egg
Loose bodies are usually less than 1 cm in size and the right iliac fossa is the commonest site. They rarely go beyond 5 cm due to saponification, calcification and subsequent layering of serum over years which are then called as “giant loose bodies” (5,6,7). They are usually asymptomatic but giant loose bodies may present with various symptoms due to external compression of the viscera like acute retention of urine, constipation and intestinal obstruction (8). It can also mimic like acute appendicitis. Loose bodies that get attached to the omentum, mesentery or lower aspect of the spleen and receive blood supply from it are termed as “Parasitized loose bodies”. Rare cases of loose bodies from tormented separated ovaries have been documented (9).

Preoperative diagnosis is difficult as it is usually asymptomatic and is discovered incidentally while exploring for some other pathology. Imaging can aid in the diagnosis but carries its own limitations. It can be picked up by CT as a concentric round to oval well defined mass surrounded by a peripheral soft tissue density and by MRI as a well circumscribed, low intensity mass on both T1 and T2 weight images. A repeat scan in prone position is useful to make out a mobile peritoneal mice which obviates the need for a surgical intervention for an asymptomatic peritoneal mice (10).

Grossly they have a typical boiled egg appearance with yellow central part and a white peripheral part. This is due to the accumulation of serum which gets saponified and calcified due to increased temperature in the peritoneal cavity. Histologically the wall shows concentric lamellar fibrosis and calcification with large amount of proteinaceous material in the peripheral white part enclosing necrosed mature adipocytes with features of saponification and calcification. Differentials for calcified intraperitoneal masses includes calcified lymph node, fibroma, leiomyoma, dermoid tumor teratoma and tubercular granuloma.

**CONCLUSION:**

Parasitized loose bodies are rare entities. Preoperative diagnosis is difficult and histopathological confirmation is mandatory so as to rule out other calcified intraperitoneal masses. No surgical intervention is necessary unless patient becomes symptomatic or when the diagnosis is in doubt. A diagnostic laparoscopy can be done for removal of symptomatic peritoneal mice to obviate unnecessary surgery and to minimize morbidity.

**REFERENCES:**