Case Report

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Benign Multicystic Peritoneal Mesothelioma of the Pancreas in a Female Patient

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Abstract

Benign multicystic peritoneal mesothelioma is a rare tumor, common in females and known for recurrence. It is characterized by the formation of multiple, thin-walled cysts that frequently produce large, intra-abdominal masses.Our case is 55 year old female with history of lump in left side of abdomen, of 6 months duration with no history of exposure to asbestos. Ultrasound suggested of a large multicystic lesion in the left lumbar region. CECT suggestive of cystic microadenoma of pancreas. Laparotomy performed to excise the tumour with spleen and histopathology report suggested of benign multicystic peritoneal mesothelioma. Immunopositivity to calretinin and WT-1 suggested of mesothelial cells.

Keywords: Benign multicystic peritoneal mesothelioma; Tail of pancreas; Female.

Introduction

Benign multicystic peritoneal mesothelioma (BMPM), also known as multilocular peritoneal inclusion cyst, was first described in 1928 by Plaut.[1] The aetiology and pathogenesis are controversial regarding its neoplastic and reactive nature. The biological behaviour of BMPM is usually benign. We present a benign multicystic mesothelioma arising from the pancreas.

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Case Presentation

A 55-year-old woman presented to the hospital with a history of abdominal lump. The lump gradually increased in size since first noted by her 6 months back and was not associated with pain, fever, nausea or vomiting. She had no urinary symptoms. No significant past surgical or medical history. No history of medications or allergies. No history of exposure to asbestos.

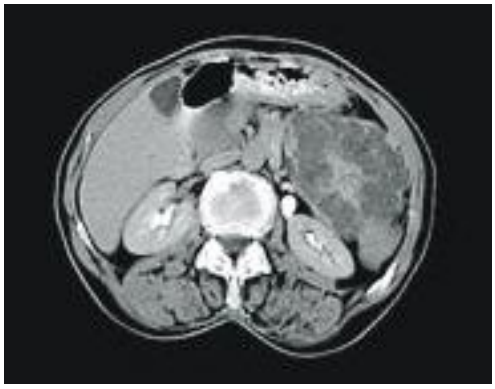
On examination, her vital signs were normal.

Examination of the abdomen revealed a solitary,intraabdominal palpable mass 6×4 cm, in left upper quadrant extending towards umbilicus, smooth surface, ill defined margins, non tender with variegated consistency, no movement with respiration, non ballotable. Percussion revealed a dull note all over the lump.

Laboratory investigations complete blood counts were normal. Renal function tests, liver function tests and electrolytes were within normal ranges.

Ultrasound: Well defined multicystic lesion with heterogenous echogenic pattern with vascular channels measuring 10.5 cm × 8.1 cm × 6.8cm in the left lumbar region displacing the descending colon laterally and small bowel loops medially.

Figure 1: CT Scan Image



A computed tomography (CT) (Figure 1) revealed 10.4 × 5.7 × 6.8 cm cystic mass in the tail of pancreas extending upto left iliac fossa suggestive of (microcystic adenoma of the pancreas).

Clinically, we made a working diagnosis of pancreatic tail mass.

The patient consented for a laparotomy. Midline incision from xiphisternum to 5cm below umbilicus. Mass was approached by opening the lesser sac. Splenic flexure was mobilised. Mass 10.5 cm × 5.7 cm × 6.8 cm with multiple cysts was found in contiguity with tail of pancreas and splenic hilum (Figure 2). Splenic artery and vein was ligated. Mass was separated from pancreatic tail.Mass with spleen was resected in toto (Figure 3). Hemostasis was achieved. Lesser sac was drained using a tube drain. Incision was sutured in layers.

Gross appearance showed 10.5 cm × 5.7 cm × 6.8 cm mass with multiple cysts with variable size ranging from 1 cm to 5 cm. Cysts were filled with clear fluid.

Figure 2: On Exploration (Multicystic Lump)

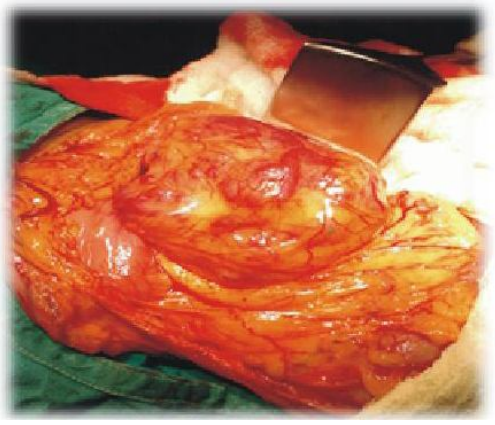


Figure 3: Multicystic Mass with Spleen

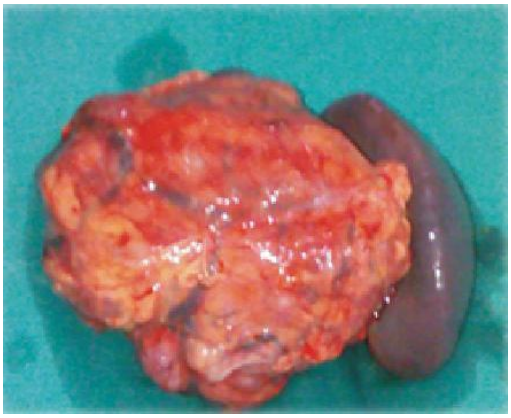
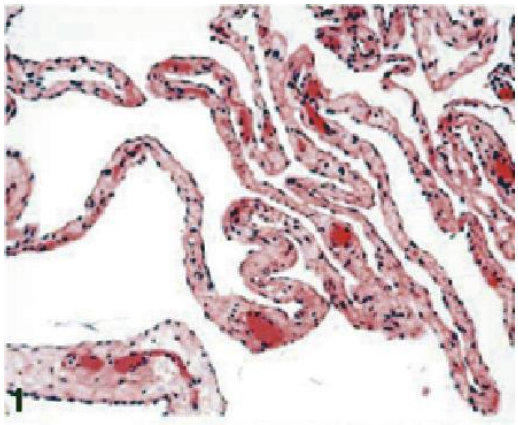


Figure 4: On Microscopy



Microscopy (Figure 4) revealed a single layer of flat cells lining the cysts with no pleomorphism, hyperchromasia and mitoses. Immunohistochemistry was positive for calretinin and WT-1.

The patient had an uneventful postoperative period, was discharged well on the twelfth postoperative day. Patient is doing well at one and half year and is being followed up every 6 monthly.

Discussion

Benign multicystic peritoneal mesothelioma (BMPM), also known as multilocular peritoneal inclusion cyst, was first described in 1928 by Plaut, who came across a collection of the thin-walled cysts as an incidental finding during surgery for uterine leiomyomas.[1]

Mesothelioma is a rare form of neoplasm arising from mesothelium, the cellular lining covering many internal organs. It originates from any abdominal peritoneal or pleural surface.[2,3,4,5] The most common site is the pleura, followed by the peritoneum and the pericardium. Its incidence is approximately 1 /1,000,000 and peritoneal mesothelioma accounts for $1/5^{th}$ to $1/3^{rd}$ of all mesotheliomas.[6] 130 cases of BMPM have been reported.[7] Plaut first described multiple peritoneal cysts in 1928 but their mesothelial nature was confirmed by Menemeyer and Smith in 1979.[1,8] Named 'benign cystic mesothelioma in 1980 by Moore, *et al*[9] Unlike pleural mesothelioma, this condition is not asbestos related.[1]

The aetiology and pathogenesis are controversial.[3,4,5] The progressive growth, a marked tendency to recur especially after an incomplete excision, a low incidence of abdominal infection and a high disease-related mortality suggest a neoplastic origin.[3,10,11] It is considered to be a peculiar peritoneal reaction to chronic irritation stimuli, with mesothelial cell entrapment, reactive proliferation and cystic formation.[3,4,5] BMPM is a benign, probably reactive condition with slowly progressive nature, rate of recurrence being 40 to 55 % female patients and a 33 % in male patients[12] after surgical resection and only one fatal outcome is reported in the literature.[1,5] One case with malignant transformation of BMPM has been reported.[13] Total surgical excision, particularly of the localised disease, is the most effective treatment. Chemotherapy and radiotherapy are not effective.[3,11,14,15]

Conclusion

Benign multicystic peritoneal mesothelioma is a very rare tumour. Benign multicystic tumor should be included in the list of differentials for abdominal masses and always requires histological evaluation. Surgical excision is the treatment of choice. It has a high recurrence rate after surgical resection and malignant transformation has been reported. A systematic follow up of these patients is required as further resection may be indicated.

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