University Journal of Surgery and Surgical Specialities

ISSN 2455-2860 2017, Vol. 3(4)

BENIGN MULTICYSTIC PERITONEAL MESOTHELIOMA-A RARE CASE REPORT

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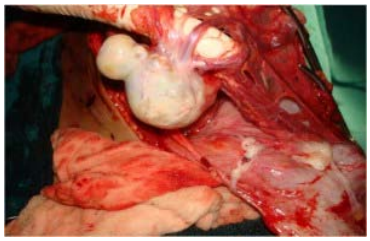
Abstract : The well defined but rare entity of benign cystic mesothelioma is reported. The aetiology of this neoplasm remains obscure. The presenting features make a precise preoperative diagnosis difficult information provided by computed tomography and cytology may help. A firm diagnosis can only come from electron microscopic or immuno histochemical examination of the tumour.Diagnostic accuracy and diligent follow up are essential because, although the tumour is considered benign, it does tend towards local recurrence.

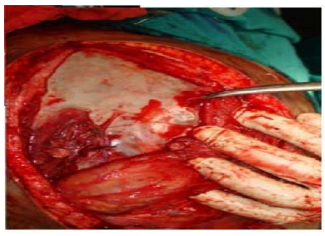
Keyword :BENIGN MULTICYSTIC PERITONEAL MESOTHELIOMA

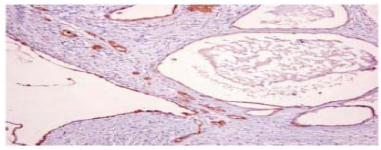
Benign multicystic peritoneal mesothelioma (BMPM), also known as *multilocular peritoneal inclusion cysts, is an uncommon lesion arising from the peritoneal mesothelium that covers the serous cavity. This lesion occurs most frequently in women during their reproductive years, and is associated with a history of previous abdominal surgery, endometriosis, or pelvic inflammatory Disease. However, there are reports concerning men or children, as well as rare extra-abdominal cases. While the origin of the disease is known, the pathogenesis and pathological differential diagnosis remain unclear and controversial. We report a case of BMPM admitted in our department with a review of the literature.*

CASE REPORT:

62 yr old male patient, presented with complaint of abdominal distension for the past one month gradually increasing in size. It was associated with vomiting & abdominal pain. Pt gave history of loss of weight, loss of appetite & jaundice. On examination abdomen was distended with a mass occupying the entire abdomen was present which was mobile on respiration.Umbilicus was flushed with the surface. Dilated veins were present over the abdomen. Upper margin 8cm from xiphoid process. Lower margin extends up to pubic symphysis. Laterally extends both sides to midaxillary line. Surface was smooth, cystic in consistency with side to side mobility & fluid thrill were present .Resonant on percussion. Usg abdomen showed multiple heteroechoic lesion in right lobe of liver largest measuring 7*4cm & large cystic lesion 12*5*13cm lesion with septations. CT showed multiple hypo dense lesion both lobes of liver.Ascitic fluid cytology revealed scanty smear showing scattered mesothelial cells only. USG guided liver biopsy yielded necrotic material only. Alfa feto protein- 2 IU/ml. On laptotomy,a large cyst of size 15*10 cm occupying the abdominal cavity with 1500ml of turbid brownish fluid was found with feeding vessel from the mesentery. Two more small cysts were in the mesentery. One cyst was in the liver.Base of the large cyst was adherent to the bladder. Excision of the cyst was done.post-op period was uneventful.







Histopathology came as dilated cystic spaces lined by flattened to cuboidal & mesothelial cells.Parts of adjoining stroma shows focal increased cellularity composed of lymphocyte , fibroblast , plump mesothelial cells , hyalinised blood vessels & fibro collagenous tissue.The lumen of cysts show hemorrhage & fibrinous material.

MULTICYSTIC BENIGN MESOTHELIOMA

STATISTICS:

No of cases reported in our institution-1
No of cases reported in world literature-130 No of male cases-18

INTRODUCTION:

Benign multicystic peritoneal mesothelioma was first described in 1979 by Mesenmeyer andSmith. This disease is classified as an exceedingly rare medical entity, occurringpredominantly in women in the reproductive age group. Also known as multi locular peritoneal inclusion cyst.

ETIOPATHOGENESIS:

The pathogenesis is controversial. Some authors believe that the lesion is neoplastic, while some favour a reactive process. No relation with asbestosis has been found. The presence of a history of prior surgery, endometriosis, uterine leiomyoma, and inflammation suggests that it is a peculiar peritoneal reaction to chronic irritation stimuli, with mesothelial cell entrapment, reactive proliferation and cystic formation. In addition, an association of BMPM with familial Mediterranean fever characterized by periodic fever and peritonitis reinforces this assumption. The neoplastic origin is based on a slow but progressive growth of untreated lesions, tendency to recurrence, and a high disease-related mortality.

BENIGN / MALIGNANT: True stromal invasion is most accurate indicator of malignancy but it is difficult to ascertain In peritoneal cavity invasion of fat or of organ wall is the most reliable sign. But entrapment of benign cells in organizing granulation tissue or between fat lobules is frequent Cytological atypia is often not helpful because benign processes are commonly atypical & mesothelial cells are deceptively monotonous CLINICAL FEATURES: The most common presenting complaints are pelvic and low abdominal pain, but the lesions are sometimes incidental findings at laparotomy. Most patients are diagnosed incidentally during laprotomy for other cause. Rarely, weight loss and a huge abdominal mass can prompt the diagnosis. BMPM is a localized tumor arising from the epithelial and mesenchymal elements of the mesothelial cells, and does not metastasize. The tumor can attach to serosal surfaces of the intestine and omentum or in the retroperitoneal space, spleen and liver if located in the peritoneal cavity.

Never metastasizes but is locally recurrent-recurrence even after 10 years has been reported.

Mostly it is a post op histological diagnosis.

PATHOLOGY: Grossly, the cysts filled with mucinous or gelatinous fluid range from several millimeters to more than 20 cm in diameter. Characteristically, the tumor is composed of a multiple mesothelial-lined cystic structure, with fragile fibrovascular stroma holding the formation together. The mesothelial origin is confirmed by electron microscopy or immunohistochemistry Electron microscopy: Characteristics of mesothelial cells-slender microvilli on the luminal surface of the cells, desmosomes,intracytoplasmic intermediate filaments,endoplasmic reticulum and dilated mitochondria Immunohistochemistry: Strong staining for cytokeratin in the cyst linings and for vimentin in the subepithelial cells.

+ve for calretinin , vimentin , wilms tumor antigen

-ve for BerEP4 , CEA , CD 15

TREATMENT:

Surgery is the only effective treatment. Aggressive surgical approaches including cytoreductive surgery with complete peritonectomy & removal of all peritoneal cysts & lesions are recommended. However, sclerosive therapy with tetracycline, continuous hyperthermic peritoneal perfusion with cisplatin and peritonectomy with intraperitoneal chemotherapy have been attempted in individual cases with varied degrees of success Even after a successful surgery recurrence is 50% The prognosis of BCPM is excellent. The reported recurrence rate is slightly higher in women(40-50%) than in men (33%).Considering the potential of this tumour to recur, close follow up is essential. Substantial recurrence usually warrants further resection.

CONCLUSION:

Benign multicystic peritoneal mesothelioma is a very rare benign cystic tumor. This lesion has a non-specific appearance on imaging which does not permit differential diagnosis from other cystic lesions and always requires histological evaluation. It has a high recurrence rate after surgical resection. A systematic follow-up of these patients is required and further resection or other therapy may be indicated.

Reference:

1.Snyder J, Carman R Jr, Aggon A, Cardinale J. Benign multicystic peritoneal mesothelioma: A rare case presenting as pneumoperitoneum and pneumotosis intestinalis. J Gastrointest Oncol. 2011;2(1):55-58. DOI:10.3978/j.issn.2078-6891.2010.026

2.Benign cystic peritoneal mesothelioma D S Bhandarkar, V J Smith, D A Evans, T V Taylor. J Clin Pathol 1993;46:867-868

3.Benign multicystic peritoneal mesothelioma: a case report Xanthi Pitta , Efstathios Andreadis, Athanasios Ekonomou, Athanasia Papachristodoulou, Chrisostomos Tziouvaras , Leonidas Papapaulou, Nikolaos Sapidis and Thomas Chrisidis.Journal of Medical Case Reports 2010, 4:385 doi:10.1186/1752-1947-4-385.

4.Benign multicystic peritoneal mesothelioma-Nüket ÜZÜM1, Necdet ÖZÇAY2, Ömür ATAOLU3 Mikro-Pat Pathology Laboratory, 2Güven Hospital, General Surgery Division, and 3Department of Pathology, Gazi University,School of Medicine, Ankara.Turk J Gastroenterol 2009; 20 (2): 138-141

5.Muscarella P, Cowgill S, DeRenne LA, Ellison EC. Retroperitoneal benign cystic peritoneal mesothelioma. Surgery 2004; 135: 228-31.