

**ACASE OF BENIGN MESOTHELIAL CYST PRESENTED BY EXUDATIVE ASCITES,  
CASE REPORT SERIES****Dr. Sayed Farouk Mohamed Ahmed\***

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**ABSTRACT**

Benign cystic mesothelioma (BCM) is a rare neoplasm of the peritoneum, consisting of solitary or multiple cysts coming from mesothelial cells. It is a rare intra abdominal tumor occurring predominantly in women of reproductive age. It's agreed that surgery is the only effective and mainstay of treatment, but there are no evidence-based treatment plan for BCM. Here we report a patient with chronic hepatitis c presented to us with unexplained ascites. The co-existence of these two entities has not been reported previously in literature.

**KEYWORDS:** Benign cystic mesothelioma (BCM), mesothelial.**INTRODUCTION**

Benign cystic mesothelioma (BCM) is a rare tumor of the abdominal and pelvic peritoneum consisting of solitary or multiple cysts arising from mesothelial cells, and was first described in 1979.<sup>[1]</sup> It presents with abdominal pain, distention and other mass symptoms which are due to compression effects. The differential diagnosis including cystic lymphangioma, mucinous cystadenoma, cystic teratoma and pseudomyxoma peritonei.<sup>[2]</sup>

Although diagnostic modalities such as ultrasonography, computed tomography or magnetic resonance scan can help the diagnosis, confirmation can be had only at surgery.<sup>[3]</sup> There are no evidence-based treatment protocol for BCM, and even if it is considered as a benign tumor, this tumor has a high local recurrence rate. Management consists of surgical excision, which unfortunately is not always curative since recurrences have often been documented.

**CASE REPORT**

In July 2016 a 37-year-old female patient not known diabetic or hypertensive was admitted to our hospital (Sayed Galal university hospital) because of abdominal distention. She had a history of bilateral oophorectomy since one (preoperative screening revealed she is HCV +ve by below detection limit and U/S, CT showed bilateral ovarian cysts. **On admission** she had moderate ascites. Her physical examination was otherwise normal. Routine laboratory tests including blood biochemistry, erythrocyte sedimentation rate, C-reactive protein, WBC, Hb, platelet count and urine analysis were within normal limits. FBG 87 mg/dl ALT (11) U/L, AST (15) U/L ALP (74) U/L; serum albumin: 4 g/dl, INR 1.1; total

bilirubin] 0.4 mg/dl; LDH: 224 U/L AFP 4.8 ng/dl; CA125 (67) u/ml {reference range < 35}; CA15-3 (17) U/L {reference range less than 25}; tuberculin test -ve; Ascitic fluid analysis macroscopically clear yellowish aspirate, total protein 5.3 g/dl, Albumin 3.1 g/dl, LDH 136 u/l, ADA 10 u/l (reference range 6.8-18.2). Her serum-ascites albumin gradient 0.9, which was below 1.1, confirmed exudative ascites. Child A on Child Pugh scoring. Acid-resistant bacilli were not seen on microscopic examination and the culture of ascitic fluid was sterile for aerobic and anaerobic microorganisms and tuberculosis. There were no malignant cells on pathological evaluation. Abdominal ultrasonography and computerized tomography showed bright liver moderate ascites; CT chest was normal; upper GI endoscopy and colonoscopy were normal.

Laparoscopic exploration, multiple peritoneal biopsies microscopically revealed multiple strips of benign cystic lesions. It is made up of fibrous tissue wall surrounded by lobules of fatty tissues showing chronic inflammatory reaction with many congested blood vessels; the wall is lined by flattened mesothelial cells. No specific granuloma or malignancy. Ascitic fluid cytological smears revealed a background of homogenous eosinophilic proteinaceous material in which some chronic inflammatory cells could be detected, no atypical or malignant cells.

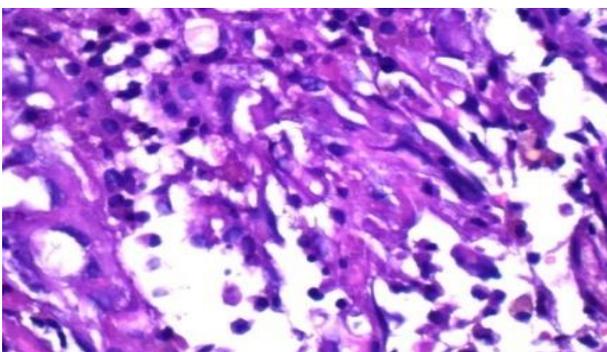
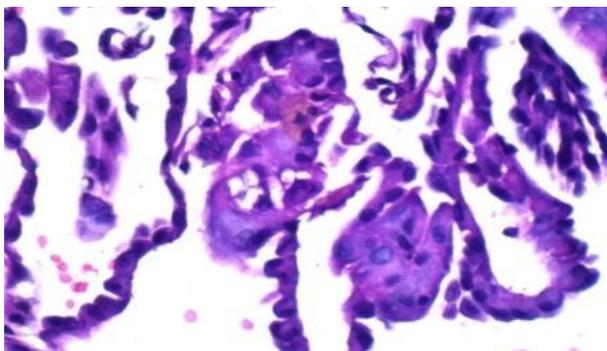
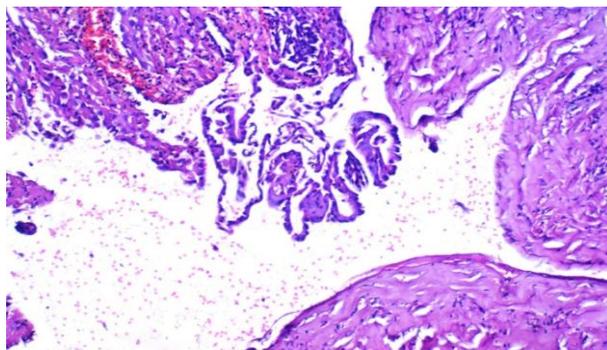
**DISCUSSION**

Benign cystic mesothelioma occurs predominantly in women of reproductive age and tends to recur locally but has no malignant potential.<sup>[4]</sup> Clinically it may be asymptomatic or present as abdominal discomfort, an

abdominal or pelvic mass, and pain. Although its etiology remains vague; infection; foreign bodies, chronic peritoneal irritation and endometriosis have been suggested as risk factors. Proliferation and inward migration of peripheral mesothelial cells, proliferation and metaplasia of underlying connective tissue cells, and differentiation of free-floating mononuclear cells all have been postulated as the mechanism of mesothelial cell proliferation in pathological conditions.<sup>[5]</sup> This peritoneal lesion is characterized by the formation of multiple multilocular thin-walled cysts, which may form large intraabdominal masses.<sup>[6]</sup> our patient in child bearing period so cystic benign mesothelioma was ascribed to either previous pelvic surgery; endometriosis or pelvic inflammatory disease associated with peritoneal reactive proliferations.

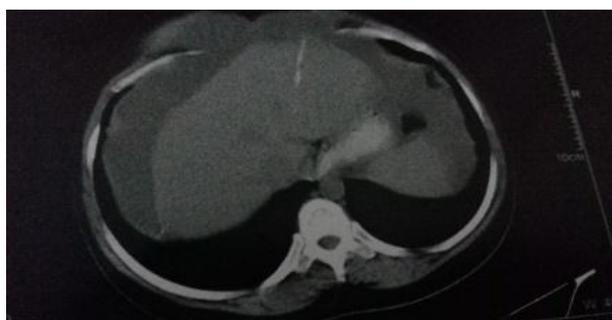
Diagnosis of benign cystic peritoneal mesothelioma is fraught with difficulties. In many patients, the diagnosis is made incidentally during investigation or surgery for other pathologies. Radiological tests including ultrasonography, CT and MRI may demonstrate the lesions but cannot differentiate them from other cystic lesions. Fine needle aspiration of the lesion is not informative. Exploratory laparoscopy is the most accurate diagnostic method since it allows local biopsy of the suspected tissue. Pathological differential diagnosis includes a number of benign (cystic lymphangioma, endometriosis and adenomatoid tumors) and malignant lesions (malignant mesothelioma and serous tumors involving the peritoneum). There is no evidence based treatment strategy for benign cystic mesothelioma. It is agreed that surgery is the only effective treatment, with complete removal of the cystic lesions as the mainstay of treatment and the only chance for avoiding local recurrence. An aggressive surgical approach including cytoreductive surgery with peritonectomy is therefore recommended. Malignant transformation of this benign tumor has been reported.<sup>[7]</sup> Some researchers<sup>[8]</sup> advocate aggressive surgery followed by heated intraperitoneal chemotherapy (HIPEC). Some researchers recommended using antiestrogen (tamoxifen) after surgery to avoid recurrence of benign cystic mesothelioma.<sup>[6]</sup> The coexistence of chronic hepatitis C and BCM not reported previously; report an extremely rare case of malignant peritoneal mesothelioma with chronic hepatitis B cirrhosis in a 58-year-old male patient.<sup>[9]</sup>

Hepatitis C virus (HCV) is an oncogenic virus and a well-known risk factor for hepatocellular carcinoma. Some reports suggested that its infection is associated with development of cholangiocarcinoma and some types of lymphomas, but a comprehensive assessment of the possible role of HCV in extrahepatic carcinogenesis has not been yet performed.<sup>[10]</sup>



Peritoneal biopsy: multiple strips of benign cystic lesion made up of fibrous tissue wall surrounded by lobules of fatty tissue showing chronic inflammatory reaction

CT abdomen: non cirrhotic ascites



### CONCLUSION

Benign cystic mesothelioma of the peritoneum (BCM) is a rare tumor with a high local recurrence rate. It requires optimal care especially as there is no evidence-based treatment protocol.

**CONSENT**

Written informed consent was obtained from the patient for publication of this Case report and any accompanying images.

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