

**Research Article**

## BENIGN CYSTIC MESOTHELIOMA OF THE PERITONEUM

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### ABSTRACT

Benign cystic mesothelioma of the peritoneum also known as peritoneal inclusion cyst is a rare lesion that develops at the expense of peritoneal mesothelium. There's an evident lack of data on this disease, more publications are requested in order to better define its clinical and histological features as well as the treatment modalities.

**Key Words:** Mesothelioma, Cyst, Peritoneum

### INTRODUCTION

Benign cystic mesothelioma of the peritoneum (BCMP), also known as peritoneal inclusion cyst is a rare lesion that develops at the expense of peritoneal mesothelium. The etiology and pathogenesis of this disease remains unknown. Preoperative diagnosis is difficult and the therapeutic management is not well defined (Safiolas *et al.*, 2006).

### CASES

A 54 years old woman, with a medical history of appendectomy in 1998 and hysterectomy for polomyomatous uterus in 2004, presented on July 2009 for a subumbilical mass. At physical examination we found an incarcerated hernia of the linea alba and abdominal CT scan, showed a cystic mass of the right iliac fossa (Figure 1).



**Figure 1:** CT scan showing a hernia of the linea alba and a mesenteric cyst

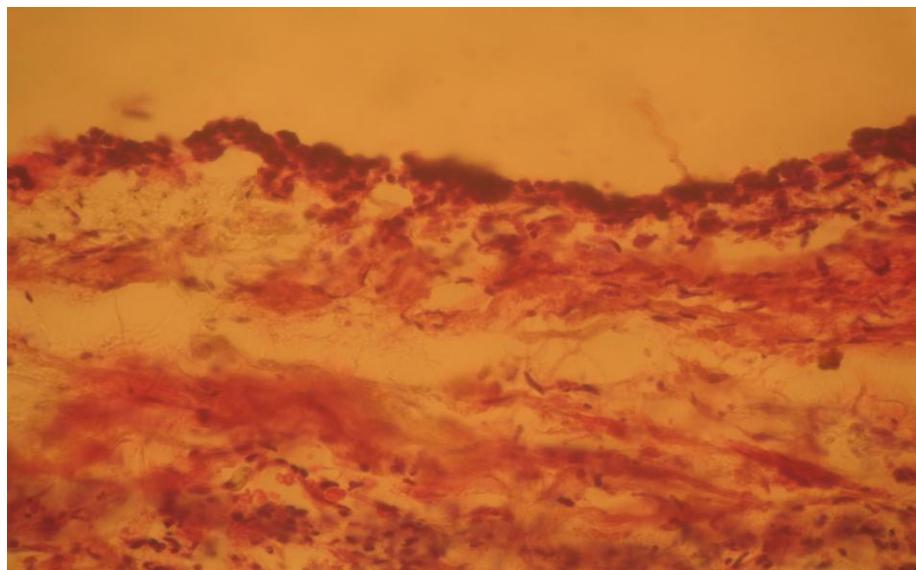
Surgical exploration after midline laparotomy and reduction of the hernia contents, revealed a thin-walled cystic mass with fluid content, located in the mesentery of the last ileal loop. The act consisted on an enucleation-resection of the mass (Figure 2) followed by a prosthetic parietoplasty.

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**Figure 2: Macroscopic aspect of the surgical specimen**

The postoperative course was uneventful. Histological examination showed a BCMP with, at the cutting multiple cystic lumens full of a fluid and clear liquid. Microscopic analysis showed multiple cystic lesions of different sizes, lined by one or several layers of high cuboidal cells with no cytonuclear atypia. This coating layed on a fibroblastic, often densified tissue. The lumen showed no visible content (Figure 3).



**Figure 3: Mesothelial cyst wall lined by a flat endotheliform coating (HE X 400)**

**DISCUSSION**

The BCMP is a rare tumor, that usually affects women at procreation age, but interesting reports of

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affected men and children have been published (Uzum *et al.*, 2009). Data on this disease are rare, for only few cases (140) have been described in the literature (Machlenkin *et al.*, 2006). It is a proliferation of mesothelial cells of the peritoneum, with a predilection for the pelvic viscera. Usually, the cysts are filled with a gelatinous or mucinous liquid and sized from few mm to over 20 cm. Typically, the tumor is composed of multiple cysts lined by one or several layers of cuboidal cells with a high fibrovascular stroma, holding the structures together. If the origin of the tumor is known, the pathogenesis remains unclear and controversial. For some authors, it would be a proliferative lesion secondary to intraperitoneal surgery or locoregional inflammatory disease. Surgical history of hysterectomy and appendectomy in our patient supports this theory. Other authors consider this lesion as neoplastic based on the slow but progressive growth of the tumor and the frequent recurrence after surgical resection (Uzum *et al.*, 2009). Clinically, BCMP may manifest as an abdominal or pelvic pain, rarely as a palpable mass. More often, as in our case it is fortuitously discovered at physical examination or even surgical exploration. On the CT scan, the problem is the differential diagnosis with other cystic masses, especially cystic lymphangioma. Laparoscopy is the most accurate method to perform a biopsy for histological diagnosis (Safiolas *et al.*, 2006; Machlenkin *et al.*, 2006), but surgical excision remains the only effective treatment of the BCMP. Actually, some teams recommend ultra-radical surgery i.e large or limited peritonectomy depending on the morphology of the lesion. Other therapeutic modalities, in particular the management of local recurrences have been described, with varying degrees of success. The most usual are intraperitoneal chemo-hyperthermia and sclerotherapy with tetracycline, associated or not with surgery. Based on the predominance of BCMP in women at procreation age, some authors have attempted treatment with anti-estrogen (tamoxifen) with encouraging results (Safiolas *et al.*, 2006; Uzum *et al.*, 2009; Machlenkin *et al.*, 2006).

There's an evident lack of data on this disease, more publications are requested in order to better define its clinical and histological features as well as the treatment modalities.

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