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Benign multicystic peritoneal mesothelioma: use of hyperthermic intraperitoneal chemotherapy (HIPEC)

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Dear Editor:

Benign multicystic peritoneal mesothelioma (BMPM) is a rare mesothelial-origin neoplasm, first described by Mennemeyer and Smith in 1979 [1]. It is characterized by the presence of multilocular intra-abdominal cystic masses, with an estimated incidence of 1–2 cases per million. It primarily affects women of reproductive age and has been associated with chronic inflammatory conditions such as endometriosis or prior surgeries [2]. It is crucial to include gynecological pathology in the differential diagnosis, given the clinical and radiological similarities with ovarian-origin neoplasms.

We present the case of a 49-year-old woman with gynecological history, including a salpingectomy due to a suspicious ovarian lesion (GIRADS 4), whose histopathological study revealed nonspecific chronic inflammation. She presented with abdominal pain and a palpable mass. Computed tomography (CT) showed a 14 cm multiloculated cystic lesion in the left hemipelvis with peritoneal spread. Laparoscopy revealed a multicystic vesicular mass with multiple implants. Biopsy confirmed BMPM (positive for CK19, WT1, calretinin, and CK7; wild-type P53; Ki67 <1%).

Complete cytoreductive surgery (CRS), hysterectomy, left adnexectomy, peritonectomy, and hyperthermic intraperitoneal chemotherapy (HIPEC) with mitomycin C for 90 minutes were performed. The patient had a favorable postoperative course and remains disease-free at six months.

Although complete surgical excision is the treatment of choice, high recurrence rates (up to 50%) have led to the use of adjuvant strategies such as HIPEC. In a multicenter cohort, Kepenekian et al. reported a 20% recurrence rate in patients treated with HIPEC, compared to surgery alone, with no statistically significant differences [3].

However, in benign diseases, the risk-benefit balance of HIPEC remains controversial. Of particular concern are its potential effects on fertility. While viable pregnancies have been reported after HIPEC, gonadal toxicity remains uncertain [4,5]. In our case,

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the use of HIPEC was justified due to extensive peritoneal involvement and the patient's completed reproductive plans.

The lack of clear guidelines for non-malignant conditions such as BMPM raises questions about patient selection and the indication of aggressive treatments. This case highlights the need to establish consensus criteria and therapeutic algorithms tailored to the benign nature of the disease, carefully evaluating recurrence risk, disease extent, and reproductive implications.

Pending more robust evidence, we consider it essential to individualize treatment and encourage discussion on the role of HIPEC beyond the oncological context.

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