Aggressive ovarian psammocarcinoma: a case report

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Summary

Serous psammocarcinoma is a rare form of ovarian carcinoma characterized by massive psammoma body formation. We report a new case of aggressive ovarian psammocarcinoma with omental and peritoneal implants.

Key words: Psammocarcinoma; Ovary; Psammoma body.

Introduction

Psammocarcinoma is an unusual form of epithelial serous ovarian carcinoma characterized by the presence of psammoma bodies.

Histologically, it is characterized by massive psammoma body formation, destructive invasion of ovarian stroma, vascular invasion or intraperitoneal visceria in extraovarian tumors and moderate cytological atypia [1].

We report a new case of serous psammocarcinoma with clinical and pathological aspects.

Case Report

A 52-year-old woman (gravid 4, para 4) was admitted to a gynecology clinic for an adnexal mass which was suspected at first to be a dermoid cyst.

The patient underwent a minilaparotomy which revealed a voluminous abdominopelvic mass with multiple pelvic adherences. The biopsy of the mass revealed a psammocarcinoma of the ovary (Figure 1). She was then referred to our institution for treatment. Pelvic examination showed a sensitive voluminous abdominopelvic mass. Abdominal computed tomography scan revealed a heavily calcified abdominopelvic mass (= 10 cm) (Figure 2). The serum CA-125 level was elevated (79 UI/ml; normal: < 35 UI/ml).

Primary chemotherapy was planned. The patient received three courses of paclitaxel 175 mg/m^2 and carboplatin (5 AUC). Then she underwent exploratory laparotomy. Intraoperative findings showed the presence of an irregular mass adherent to the bladder, the small bowel, the sigmoid colon and Glisson's capsule.The omentum and peritoneal surface were covered with tumor implants. The International Federation of Gynecology and Obstetrics (FIGO) stage was IV, and surgical debulking was impossible (Figures 3 and 4). The patient received three postoperative courses of paclitaxel (175 mg/m^2) and carboplatin (5 AUC). The chest-abdominal and pelvic CT scan revealed a progression of the abdominopelvic mass and the CA-125 level was more elevated (1000 UI/ml). Gemcitabine was administered at 1000 mg/m^2 on days 1, 8 and 15 of a 28-day cycle.

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Discussion

Psammocarcinoma is a rare form of low-grade serous carcinoma characterized by the presence of psammocarcinoma bodies. Thirty-seven cases have been published up to now. Gilks *et al*. [1] defined some criteria for diagnosis of psammocarcinomas:

– destructive invasion of ovarian stroma, vascular invasion, or in extra ovarian cases, invasion of intraperitoneal visceria;

– no more than moderate nuclear atypia;

– no areas of solid epithelial proliferation except for occasional solid nests with no more than 15 cells in diameter;

– 75% of papillae or nests associated with or completely replaced by psammoma bodies [1].

In our case, histopathology was compatible with Gilks *et al's* criteria.

Psammoma bodies are commonly found in certain human cancers (e.g., thyroïd, meningeal, ovarian, gastrointestinal tumors, and gastric adenocarcinoma) [2].

The median age of clinical presentation of the disease is 54 years and FIGO stage is commonly Stage III (only one case was classified as IA) [3].

Psammocarcinoma can be asymptomatic or incidentally detected but in a lot of cases there is lower abdominal pain or swelling, a pelvic mass, nausea, vomiting, and then at last heavy menstrual bleeding [4, 6]. In our case it was a pelvic mass and pelvic pain.

Psammocarcinoma is an ovarian neoplasm with a more favorable prognosis than other serous carcinomas and is similar to serous borderline lesions of the ovary with no difference in rate of survival [2].

The mechanism of psammoma body formation in ovarian serous adenocarcinomas is the consequence of neoplastic and histiocytic cellular degeneration [5].

High CA-125 levels are usually detected in psammocarcinoma of ovary [6].

Treatment consists of total hysterectomy, bilateral salpingo-oophorectomy, omentectomy, lymphadenectomy, appendicectomy, and maximal tumor debulking [7].

Sometimes, adjuvant chemotherapy or tamoxifen therapy in recurrent tumors has been planned [4]. There are no studies indicating the best treatment for this neoplasm [4].

Fig. 1

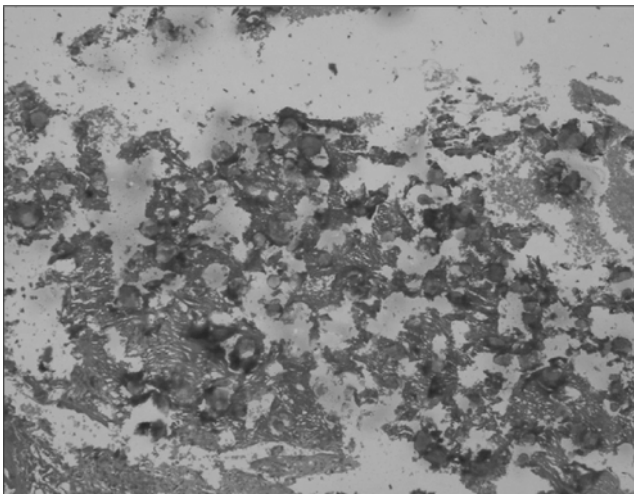

Fig. 2

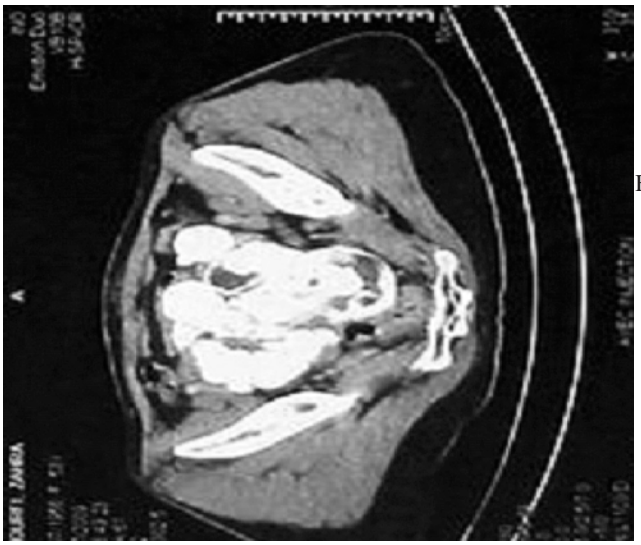

Fig. 3

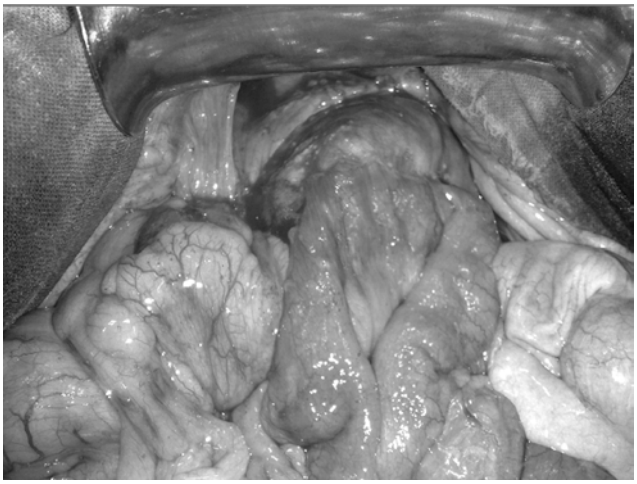

Figure 1. — Histological examination: numerous psammoma bodies.

Figure 2. — CT scan of calcified abdominopelvic mass.

Figure 3. — Exploratory laparotomy.

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