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CORRESPONDENCE AND BRIEF REPORTS

Paraovarian tumor of borderline malignancy – a case report

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Abstract. De Areia ALFA, Frutuoso C, Amaral N, Dias I, De Oliveira C. Paraovarian tumor of borderline malignancy – a case report. *Int J Gynecol Cancer* 2004;**14:**680–682.

A case of a 23-year-old woman with a paraovarian tumor is presented. The patient complained of pelvic pain and abdominal swelling. Cystectomy was the initial surgical treatment, but after the histological diagnosis, a staging surgery was carried out. The clinical aspects and subsequent management of related cases are discussed, and a literature review is made.

KEYWORDS: borderline malignancy, paraovarian tumors, staging laparotomy.

Case report

A 23-year-old Caucasian woman attended her gynecologist complaining of sudden abdominal enlargement and pelvic pain. Pelvic examination revealed an 8×8 cm mass occupying the right adnexa; it was a painful, mobile mass, with a hard-elastic consistency.

Ultrasound investigation revealed, above the uterus, an unilocular cystic mass measuring $118 \times 102 \times 100$ mm. This cystic formation was avascular and had avascular vegetations. Preoperative investigations (cell blood count, biochemistry, electrocardiogram, chest X-ray, and CA-125) were normal. At laparotomy, the right paraovarium contained a large homogeneous cystic mass, measuring 16×16 cm, which was removed. Because abdominal and pelvic examination was normal, no further resection was made. Histologically, the cyst wall was covered by simple cuboidal epithelium without any secretory activity. There were papillary ingrowths whose fibrovascular axis was lined by cuboidal epithelium, sometimes with nuclear stratification and irregular boundaries; focally, micropapilla could be seen. There was no stromal invasion nor invasion of the fibrovascular axis. The cyst was identified as paramesonephric in its origin.

The lesion was classified as a borderline serous cystadenocarcinoma arising from a paraovarian cyst (Fig. 1).

As so, the patient was submitted to a staging laparotomy: multiple biopsies (peritoneal biopsies from cul-de-sac, sigmoid and bladder serosa, right and left pelvic sidewalls, right and left paracolic gutters, right and left diaphragms, and from both ovaries), and peritoneal washings were taken.

The final histology revealed that peritoneal washings and multiple biopsies were negative for malignancy, staging the case as IA (FIGO).

The postoperative course was uneventful. The patient has been regularly followed, and there is no clinical evidence of disease, 5 months after diagnosis.

Discussion

Borderline epithelial ovarian tumors represent 15–25% of all epithelial ovarian cancers. Borderline tumors have a biological behavior between benignity and frank malignancy[1].

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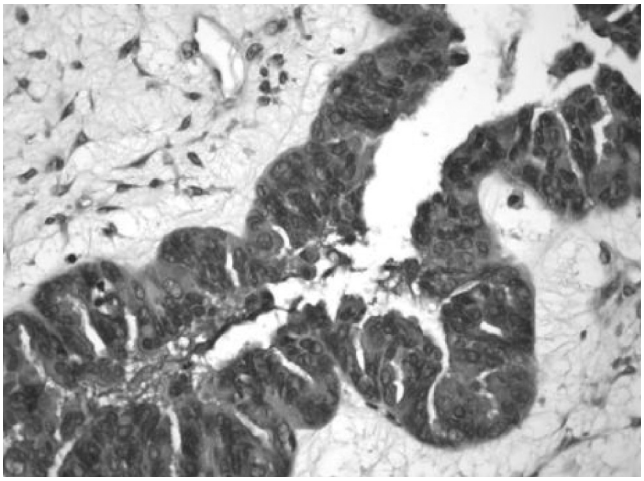

Fig. 1. Aspects of borderline malignancy.

Paraovarian cysts develop in the mesosalpinx between the ovarian hilus and the fallopian tube. Their origin may be mesothelial, mesonephric, or, more commonly, paramesonephric (Mullerian)[1]. There seems to be a relationship between prenatal diethylstilbestrol exposure and histological anomalies in paraovarian cysts[2].

Most tumors developed from paraovarian cysts are benign serous tumors[1]. Primary malignant paraovarian epithelial tumors (PETs) are rare with only 35 cases described in the literature, and of these, 26 were cystadenocarcinomas with low malignant potential[3,6–11].

PETs mostly occur in young women (91% during fertile age). Abdominal enlargement and pelvic pain are the usual complaints[3]. Usually, they have a capsule, are unilateral, and are connected to the broad ligament. Ultrasound studies reveal a mutiloculated cystic mass that, in histology, has thin walls with multiple internal papillary projections[3].

A retrospective study published in 1990 concluded that the diagnosis was never made before surgery (only histology was conclusive); all women were submitted to surgical re-intervention and 10% coexisted with pregnancy. As we are dealing with women who wish to preserve their fertility, treatment is controversial[3].

Most authors defend that borderline PETs should be handled like their ovarian counterparts with staging surgery associated with conservative or more aggressive surgery according to rigid clinical and histological criteria. Conservative surgery consists of cystectomy, oophorectomy, or anexectomy[1].

The criteria for conservative surgery are lack of external vegetations, lack of adhesions, tumor excision without rupture, no ascitis, no other structures involved, low-grade malignancy, and whish to maintain fertility. Nonetheless, if one of these criteria is not accomplished or fertility is not wanted, more aggressive surgery is advised (total abdominal hysterectomy + bilateral adenectomy + multiple biopsies + omentectomy)[1]. The absence of free surgical margins and the removal of several cysts have been associated with persistence or recurrence of the tumor[4].

Borderline ovarian tumors are associated with peritoneal implants in 15–40% of the cases[5]. Therefore, it is essential that we make sure that the disease has not spread, submitting patients to staging laparotomy[1].

Because the entity is rare, there is no standardized follow-up strategy. Although never reported, some authors defend that these tumors may behave like their ovarian counterparts having late recurrences[1,3].

Conclusions

Primary PETs are rare, and only 35 cases have been documented in the literature. These tumors occur mostly in young women, which makes it difficult to have a standard treatment.

Many authors have accepted that paraovarian borderline tumors behave like their ovarian counterparts. Hence, we recommend the same management to these tumors, obeying to rigid clinical and histological criteria.

Paraovarian borderline tumors seem to have a good prognosis; but as they can have late recurrences, we recommend a tight follow-up.

The treatment of borderline PET should be individualized.

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