Cukurova Medical Journal
ÇUKUROVA ÜNİVERSİTESİ TIP FAKÜLTESİ DERGİSİ

Cukurova Med J 2017;42(1):179-181
DOI: 10.17826/cutf.280483

OLGU SUNUMU/CASE REPORT

Ovarian malignancy incidentally diagnosed during caesarean section

Sezaryen sırasında insidental olarak saptanan over tümörü

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Cukurova Medical Journal 2017;42(1):179-181.

Abstract
Ovarian mucinous tumors are the second most commonly encountered epithelial ovarian cancer, following the serous ovarian tumors. Overall, ovarian tumors are rare during pregnancy. Some cases are diagnosed by ultrasound or physical exams during routine antenatal follow up, others are incidentally diagnosed during caesarean section. In this case report, we presented our management of an incidentally diagnosed epithelial ovarian tumor at cesarean section of a 30 year old nulliparous patient.

Key words: Ovary, pregnancy, tumor

Öz
Overin müsinöz tümörleri, seröz over tümörlerinden sonra en sık karşımızı çıkan epitelyal over tümörlerindendir. Gebelik esnasında over tümörleri ile nadir olarak karşılaşmaktayız. Olguların bir kısmı, rutin antenatal takipler sırasında ultrasonografi ve fizik muayene ile tanı alırken, diğer bir kısmı ise insidental olarak sezaryen sırasında karşımıza çıkmaktadır. Bu olguda, 30 yaşında nullipar hastada, sezaryen ile doğumu gerçekleştirildiği esnada insidental olarak tespit edilen over tümöründen söz edilmiştir.

Anahtar kelimeler: Over, gebelik, tümör

INTRODUCTION

Ovarian malignant tumors are rare during pregnancy[1,2], and are the second most frequent gynecological malignancies after cervical carcinoma[3]. As a result of routine ultrasound exams during pregnancy period, the incidence of adnexal masses increased to 2% - 10%[4]. Many adnexal masses seen in pregnancy usually are non-neoplastic, and most of them are corpus luteum cysts due to the hormonal changes of pregnancy[4]. By the 16th - 20th week of pregnancy, most of the masses (about 96%) resolve[5]. Malignancy rate in persistent masses after pregnancy is 4% to 6%, the malignant masses are generally dysgerminomas and fewer than 20% of them are epithelial ovarian tumors[3,4,5].

Here, we presented our management of an incidentally diagnosed epithelial ovarian tumor at cesarean section.

CASE

A 30-year old nulliparous woman with unremarkable antenatal screening tests underwent caesarean section for dystocia and had a 3500 g healthy female infant. Intraoperatively, a 3x4 centimeters cystic mass was observed in the right ovary. The left ovary appeared normal. The macroscopic evaluation of the cyst revealing non-fixation, non-nodularity, tenderness and no ascites were indicative of non-malignant tumor, so simple cystectomy was planned. Subsequently, the cystic mass in the right ovary carefully excised and sent to pathology laboratory. The histological examination of the specimen was reported as atypical proliferative (borderline) mucinous tumor with a focal area of non-invasive intraepithelial carcinoma. After this pathology

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Geliş tarihi/Received: 23.06.2016 Kabul tarihi/Accepted: 24.08.2016

report, we planned a laparoscopic staging procedure for ovarian cancer, six months after delivery.

In the surgery; peritoneal washings were taken before starting the staging procedure. Then, laparoscopic right salpingo-oopherectomy was performed and sent for frozen section analysis. The left ovary was assessed as normal. The appendix was grossly normal. After frozen-section examination identified the malignant tumor, right pelvic lymphadenectomy was performed and the omentum which was attached to the right pelvic wall was resected. At this stage, the operation was ended for future childbearing wish of the patient.

The histological examination showed a cystic lesion having complex papillary structures lined by mucinous epithelium growing into the lumina (Fig.1a). Higher magnification revealed complex glandular structures arranged back to back. On these areas, epithelium showed marked cytological atypia (Fig.1b). Immunohistochemical study of the specimen using monoclonal antibody of CK20(Fig.2a) and CDX2(Fig.2b) showed intestinal type epithelium on some areas. Cyst epithelium was reacted fully with CK7 antibody (Fig.2c). The case was reported as atypical proliferative (borderline) mucinous tumor without ovarian serosal invasion; peritoneal washings, pelvic lymph nodes and omentum were negative for metastasis.

The case was evaluated in the multidisciplinary tumor council, which decided to the follow-up of the patient, because of an early stage tumor.

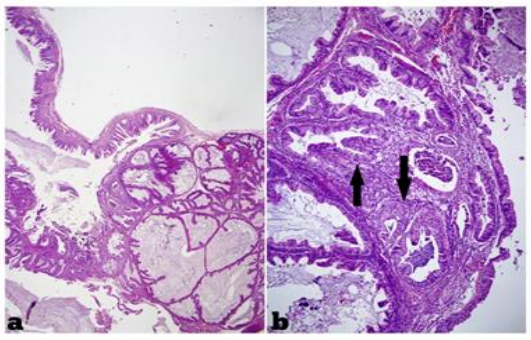

Figure 1. Cystic lesion having complex papillary structure lined by mucinous epithelium into the lumina (a). Complex glandular structure arranged with a back to back pattern; on these areas, epithelium showed markedly cytological atypia(b).

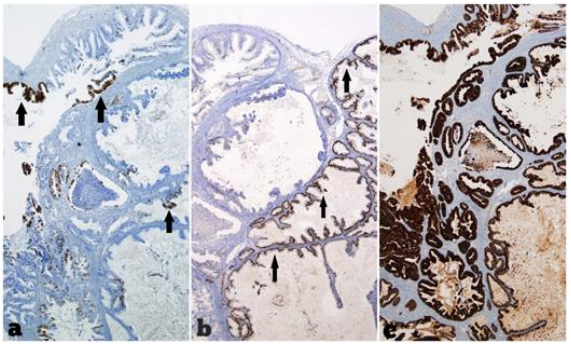

Figure 2. Immunohistochemical study showed intestinal type epithelium on some areas by using monoclonal antibody of CK20 (a) and CDX2 (b). Cyst epithelium was fully reacted with CK7 antibody (c)

DISCUSSION

Ovarian mucinous tumors are the second most common epithelial ovarian cancers after the serous ovarian tumors[6]. During pregnancy, the most commonly encountered benign ovarian tumor is mature cystic teratoma, while dysgerminoma is the most common malignant tumor[5].

However, it is still not common to encounter ovarian tumors during pregnancy[1,2]. Pregnants with adnexal masses may have no symptoms or may have a risk of torsion, rupture or obstruction during pregnancy[5]. In our case, the patient didn't have any symptoms; the adnexal mass was incidentally diagnosed during caesarean section and didn't have positive signs for tumoral mass during routine antenatal follow-up exams.

Borderline ovarian tumors (BOTs) are a subset of epithelial ovarian tumors between benign and malign ovarian cancers making up 10% - 20% of all epithelial ovarian tumors[7]. In pregnant women with adnexal masses, BOTs have an incidence of 0% to 8% [7,8]. There are three histologic subgroups of BOTs: serous, mucinous and clear cell; with serous being more common (%65)[9]. In our case, the specimen was reported as an atypical proliferative tumor with a mucinous subtype. The mucinous subgroup of BOTs account for approximately 11% of BOTs and generally, most of them are in early stage at diagnosis (stage 1)[10]. In BOTs, the treatment choice of radical surgery or fertility-sparing surgery or cystectomy is controversial. In

some publications simple cystectomy is also acceptable[11]. Chan JK *et al.* reported in their research article, fertility-sparing surgery for BOTs should be considered for women who desire preservation of fertility[12]. In our case, during cesarean section we did conservative surgery with cystectomy. After the histological examination of the first specimen was reported as atypical proliferative (borderline) mucinous tumor with a focal area of non-invasive intraepithelial carcinoma, we planned laparoscopic staging procedure for ovarian cancer. In the second operation, the patient again underwent a conservative surgery procedure for future childbearing, we did a right salpingo-oophorectomy and right pelvic lymphadenectomy.

We did not performed appendectomy in our case, because it is mentioned in the last studies; if the appendix is totally normal, appendectomy should not be performed for borderline mucinous tumors[13]. For BOTs, follow up is the same as invasive ovarian tumors and is usually a combination of an outpatient visit (including pelvic and pyhsical exams), ultrasound and tumor markers (especially CA 125). Outpatient visits should be offered every three to six months for five years postoperatively, then should be annually[14].

In conclusion, one-third of BOTs are diagnosed in women of reproductive age under 40 years, so our opinion for the treatment of early stage tumors is sparing fertility as mentioned in the medical literature. The literature refers to fertility-sparing surgery in women who want to conserve fertility, but there is clear evidence that complete surgery offers the lowest rates of recurrence.

This case was presented in 15th National Perinatology Congress, at October 15-18 2015, Sarıgerme/Muğla.

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