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CASE REPORT

Bilateral Ovarian Transitional Cell Carcinoma

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ABSTRACT

Ovarian cancer accounts for 6% of all cancers among women. The majority (85–90%) of malignant ovarian tumors are epithelial. Transitional cell carcinoma (TCC) has been described as a primary ovarian carcinoma in which definite urothelial features are present, but no benign, metaplastic, and/or proliferating Brenner tumor can be identified. It accounts for 1 to 2% of all ovarian tumors. Bilateral involvement is still rare. It is reported to be chemosensitive and has better prognosis than other types of common epithelial tumors of the ovary. Here we report a rare case of bilateral TCC of the ovary managed by staging operation, followed by postoperative chemotherapy.

Keywords: Bilateral, Malignant tumor, Ovary, Transitional cell carcinoma.

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INTRODUCTION

Transitional cell carcinoma (TCC) of the ovary is a recently recognized subtype of ovarian surface epithelial cancer. It was first defined by Austin and Norris.[1] In addition to not having a benign Brenner tumor component, TCC lacks the prominent stromal calcification. The true incidence of TCC of the ovary remains unknown. Patients with TCC have better prognosis compared with patients with all other types of ovarian carcinomas following cisplatin-based chemotherapy.

CASE REPORT

A 44-year-old woman presented with gradual abdominal distension and loss of weight of 6 months duration. On examination, she had ascites. Abdominal ultrasound and computed tomography showed bilateral ovarian masses, suggestive of ovarian malignancy. There was no evidence of abnormal lymphadenopathy. Urinary bladder was normal. Her routine investigations were within normal limits. Peritoneal fluid analysis was negative for malignant cells. Total abdominal hysterectomy, bilateral salphingo-oophorectomy, and infracolic omentectomy were performed. Uterus with cervix measured 6 × 4 × 2.5 cm. Cut section showed patent endocervical canal with uterine wall measuring 2 cm. The left ovary measured 8 × 7 × 4 cm and the right ovary 4 × 3 × 2 cm. Cut section showed solid and cystic areas (Fig. 1). Microscopically, endometrium showed proliferative phase, myometrium adenomyosis and cervix, and chronic nonspecific cervicitis with papillary endocervicitis. Both the ovarian masses showed similar features – papillae lined by malignant transitional epithelium. The cytoplasm of the cells was pale and granular. Nuclei were oval, vesicular, and showed nucleoli (Fig. 2). Search was made for benign Brenner component, which was not evident. Omentum did not show any malignant deposits. A diagnosis of TCC involving both ovaries was given, with International Federation of Gynecology and Obstetrics staging of stage Ib, grade III. The patient was referred to the oncology center for chemotherapy.

DISCUSSION

Transitional cell carcinoma of the ovary is a recently recognized subtype of ovarian surface epithelial cancer.

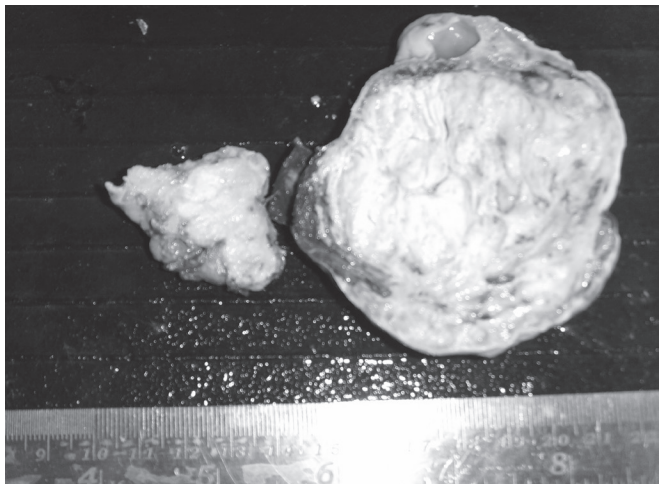

Fig. 1: Cut section of both ovarian masses showing solid and cystic areas

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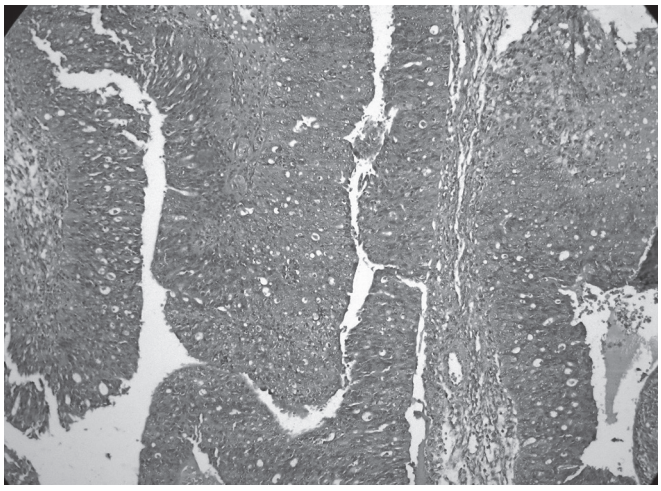

Fig. 2: Photomicrograph showing blunt papillae lined by malignant transitional epithelium (hematoxylin and eosin stain; 200×)

These tumors are rare and account for 1 to 2% of all surface epithelial tumors of the ovary. Ovarian tumors containing cells with transitional cell morphology are recognized in the 1990 World Health Organization classification and include benign Brenner tumor, borderline and malignant Brenner tumor, and TCC.[2] Karnezis et al[3] reported transitional cell-like growth in 10 tumors (14%) out of 71 ovarian endometroid carcinoma, but did not appear to independently affect patient outcome. Common presenting symptoms of TCC of ovary are abdominal pain, abdominal swelling or distension, and weight loss. Occasionally, uterine bleeding, back pain, bowel, or urinary symptoms can occur. Microscopically, it shows undulating, diffuse, insular, and trabecular growth patterns.[4] Our case showed large blunt papillae, which was also observed by Eichhorn and Young[5] in 63% of their cases.

Primary TCC of ovary needs to be differentiated from metastatic TCC from urinary bladder. Logan et al[2] used urothelial markers to distinguish between these two. Transitional cell carcinoma of the ovary was cytokeratin (CK)20 −ve, uroplakin III (URO III) −/+, Wilm's tumor protein (WT_1) +, while invasive TCC of bladder metastatic to ovary was CK20 +, URO III +/−, and WT_1−. Austin and Norris[1] have concluded that ovarian TCC arises from the pluripotent surface epithelium of the ovary and from cells with urothelial potential, rather than from a benign or proliferative Brenner tumor precursor. Cancer antigen 125 was positive in all malignant Brenner tumors and TCCs but not in benign and borderline tumors. Surgical resection is the primary therapeutic approach, and patient outcome after chemotherapy is better than for other types of ovarian cancer.[6]

Here we report a rare occurrence of primary TCC involving both the ovaries. Extensive literature search did not reveal reports of bilateral involvement.

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