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CASE REPORT

Malignant Brenner Tumor of Ovary

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Introduction

Brenner tumor is a relatively uncommon neoplasm. It constitutes 1.4–2.5 % of all ovarian tumors and has a predilection for the postmenopausal women. Most Brenner tumors are benign, with only 2–5 % being malignant. The malignant components of the tumor, which show heterogeneous epithelial growth and atypia with intervening stroma, consist of transitional cells, squamous or undifferentiated carcinoma, or an admixture of these types [1].

Case Report

A 60-year-old menopausal woman attended our hospital with history of pain abdomen for the past 3 months. There was no other complaint. On examination; a mass was felt per abdomen just above the symphysis pubis arising from pelvis. Another mass with a size of approximately 10 × 10 cm with cystic consistency was felt in the right lumbar region and umbilical region, which was non-tender and mobile. There was no lymphadenopathy. On gynecological examination, cervix and vagina were observed to be healthy. On per vaginal examination, uterus was mobile and irregularly enlarged to 8–10 week gestational size. The mass felt per abdomen was felt separate from the uterus, cystic, non-tender, mobile, approximately of 10 × 10 cm size. Investigations were done. CA125 was 4,073.3 U/mL (normal <35 U/mL). On USG, a cystic mass in right adnexa with internal septations separate from the ovary was seen. The uterus was irregular in outline and echo texture, with multiple intrauterine lesions. On CT scan, a heterogeneous irregular mass was seen in the pelvis on the right side with a size of 12 × 12 cm. The mass showed degeneration. Uterus was not seen separate from this mass.

On laparotomy, there were no ascites. A mass of size 8 × 8 cm was seen arising from the right ovary and adhering to the uterus. Another friable mass was seen over the fundus of the uterus. TAH with BSO with infracolic omentectomy and lymph node biopsy was done. On histopathology, multiple sections of the tumor revealed cells arranged in sheets with focal areas of papillary formations. The individual cells had round or oval nucleus showing moderate pleomorphism and prominent nucleoli along with high mitotic rate. She was treated with combination chemotherapy with cisplatinum, cyclophosphamide, and adriamycin for six cycles. After 6 months of follow-up, she had no evidence of recurrence on imaging studies, and CA125 levels were verified to be normal.

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Discussion

Malignant tumor was first described in 1945 by Von Numers. Several attempts have been made to establish criteria for a malignant Brenner tumor. The criteria proposed by Hall and Campbell in 1973 are as follows: (i) frankly malignant histopathological features must be present, (ii) there must be intimate association between the malignant element and a benign Brenner tumor, (iii) mucinous cystadenoma should preferably be absent or must be well separated from both the benign and the malignant Brenner tumors, and (iv) stromal invasion by epithelial elements of the malignant Brenner tumor must be demonstrated [1]. Clinical findings in our case suggested a malignant tumor that was diagnosed as malignant Brenner tumor after histopathology (Fig. 1).

It is difficult to diagnose Brenner tumor with imaging studies. USG and CT—both these techniques are limited in specificity because of the tumors' nonspecific appearance [2], as was found in our case. Malignant Brenner tumors may affect surrounding tissues and metastasize into other structures, but such incidents are so rare that a standard treatment has not been developed. Even if diagnosed early, they are usually the candidates for complete surgical resection [3]. The main epithelial component in our case consisted of transitional cells. CA125 was a useful tumor marker. Same observations were made by Yamamoto et al. [1] who observed that CA125, CA72-4, SCC, and CA72-4 were useful tumor markers in different cases, and as malignant Brenner tumor is a rare disease, further cases need to be studied to validate the above findings.

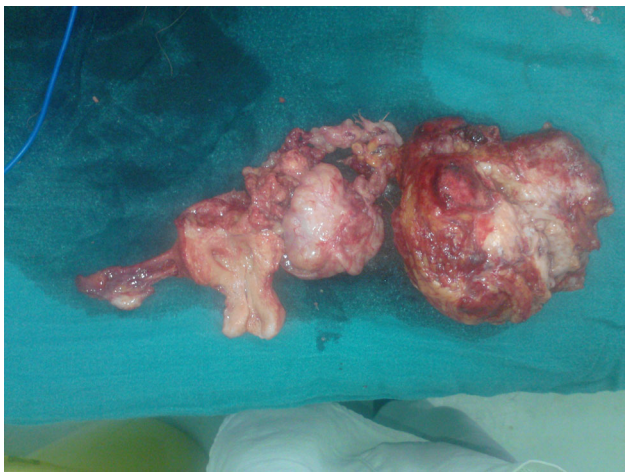

Fig. 1 Cut section of the uterus showing ovarian mass

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