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An Unusual Presentation of Brenner Tumor from Northern Pakistan

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Abstract

Brenner tumors are rare surface epithelial stromal tumors that account for less than 1-2% of ovarian malignancies. Brenner tumor can be benign, borderline, and malignant. Benign Brenner tumor is common as compared to malignant Brenner tumors. They tend to occur mostly in post-menopausal women. About 90% of Brenner tumors are unilateral. Here we present a 66-year-old female diagnosed with malignant Brenner tumor in one ovary and benign Brenner tumor in opposite ovary simultaneously.

Keywords: Brenner Tumor; Malignant Brenner tumor; Benign Brenner tumor

Introduction

Brenner tumors are divided into benign, which comprise of 95% of Brenner tumors, borderline Brenner

(proliferative) and malignant Brenner tumors, which are extremely rare and comprise of less than 5% [1] of Brenner tumours. Brenner tumors are usually asymptomatic unless the tumor size is very large, but it can cause abdominal distension [2], lower abdominal pain, post-menopausal bleeding and symptoms related to bladder (pressure effects).

Case

A 66-year-old post-menopausal woman presented in oncology department of AECH NORI, with the history of progressively increasing abdominal distension for about 6 months. It was not associated with pain or any other urinary or gynecological symptoms. Her ultrasound abdomen pelvis was done which showed no mass lesion and normal sized ovary on left side while there was a complex lesion measuring 138x12.8x8.2 cm in right adnexa. Right ovary was not separately visualized. Her CT scan showed a large well defined, soft tissue attenuation complex pelvis mass measuring 12.7x10.7x13.8cm in midline slightly more towards right; the lesion had solid as well as cystic components with areas of calcification but no internal fat. No pelvic lymph node enlargement or fluid collection was seen. Patient underwent exploratory laparotomy. Total abdominal hysterectomy with bilateral salpingo-oophorectomy was done and peritoneal washings were taken On gross examination the left ovary was 3x1.5x1cm and was attached to fallopian tube, cut surface of the ovary was unremarkable, while the specimen of right ovary comprised of a cyst attached to fallopian tube, the cyst was 14x12 cm and fallopian tube 10x0.3cm in size. It showed solid and cystic areas, it contained yellowish fluid and foci of necrosis were seen.

Histological examination of the right ovarian cyst revealed malignant Brenner tumor. It was composed of groups, sheets and papillary structures lined by rounded cells with central nuclei and eosinophilic cytoplasm. Areas of pleomorphism, spindling and mitosis were seen, nuclear grooving was identified. There was stromal invasion. Large areas of necrosis identified. No lymphovascular and perineural invasion was seen. Section of left ovary revealed foci of benign Brenner tumor; it was composed of solid and cystic nests of benign epithelial cells resembling transitional epithelium. The surrounding stroma was dense and fibroblastic. No malignant cells were seen. The malignant Brenner tumor was staged as T1cNoMo. Preoperatively her CA-125 was 54.16U/ml and post operatively it dropped to 14.24U/ml (Figures 1 & 2).

Discussion

Brenner tumor arises from the surface epithelium of the ovary. Histologically it resembles transitional cell

carcinoma [3]. It can very rarely occur in vagina and testes. It usually occurs in post-menopausal females and mean age is 55. Brenner tumor is a rare entity and due to rarity, its literature is not well established. Brenner tumor is usually unilateral but can occur bilaterally as malignant Brenner's. We report a case of bilateral Brenner tumor, right ovary malignant Brenner tumor and left benign Brenner tumor occurring simultaneously. Its symptoms are vague like any other ovarian malignancy; its usual presentation is abdominal distension or a mass in the lower abdomen. Our patient aged 66 years had abdominal distension and mass in her lower abdomen, and diagnosis was made after surgery. Mostly it is diagnosed incidentally and the cause of Brenner tumor is unknown. The main modality of treatment is surgical staging and the role of chemo radiation is not well established due to limited studies [4].

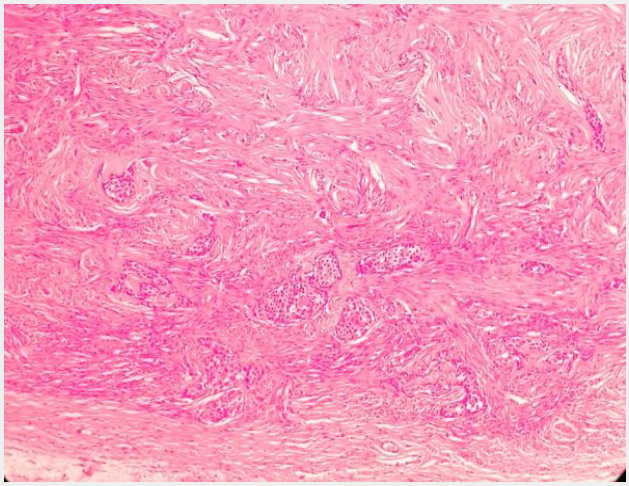

Figure 1: Benign Brenner tumor.

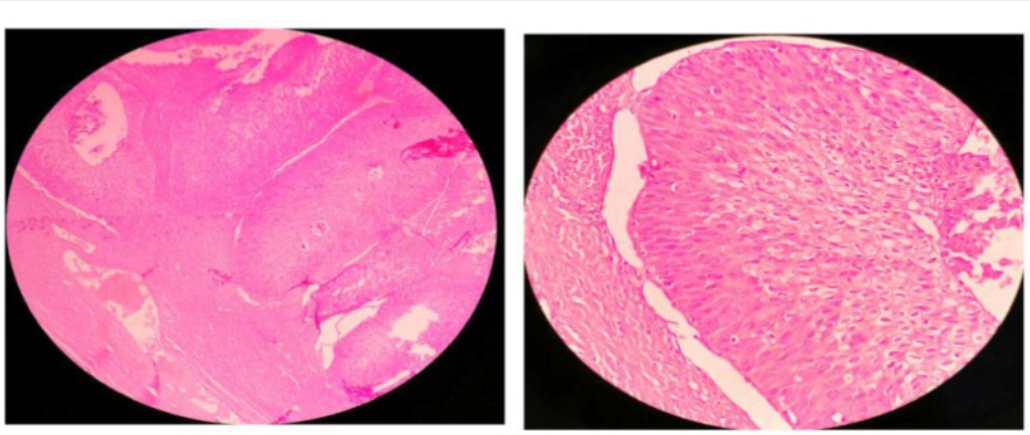

Figure 2: Malignant Brenner tumor.

There is no specific reliable tumor marker for Brenner's but CA-125 is reported to be raised in 30-70% of malignant Brenner tumor [4,5]. CA 125 is not a reliable marker but in our patient, it markedly dropped after surgery. IHC is usually done for the confirmation of Brenner's but in our case the diagnosis was clear on morphology. Prognosis is generally considered good and surgery is the main modality of treatment [5]. There is no single competent chemotherapy regimen established but platinum-based agents [6] and paclitaxel post-operatively has demonstrated survival benefits in small retrospective studies [6]. Our patient has also been planned for platinum-based adjuvant chemotherapy.

Conclusion

While reporting radiology and histopathology more varieties of epithelial ovarian tumors should also kept in mind so as not to miss the diagnosis and provide optimal treatment to the patient involving multidisciplinary team.

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Conflict of Interest

The authors declare that there is no conflict of interest regarding the publication of this article.

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Patient Consent

Written informed consent was taken from patient.

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