



Bilateral malignant Brenner tumor of ovary

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Introduction

Brenner tumors are rare tumors comprising 1-2% of ovarian neoplasms. Malignant Brenner tumor is much rarer. These tumors are believed to arise from urothelial metaplasia of ovarian surface epithelium.

In the present case the pathological features of benign, intermediate with low malignant potential and malignant tumor were all seen.

Case Report

A 53 year old post-menopausal woman presented at a peripheral referral hospital with a complaint of abdominal mass. Ultrasonography revealed bilateral ovarian tumors. She was operated and the specimen were sent to us for histopathological study.

Gross findings: Right ovarian mass measured 15x12x8 cm and left measured 8x5x4 cms. Gross section of both revealed multiloculated cystic spaces with inspissated mucoid material and focal solid, graywhite whorled areas. The inner surface of right ovarian mass showed papillary excrescences.

Microscopy : Multiple sections studied from the right

ovarian mass showed two patterns — one a benign Brenner tumour with bundles of tightly packed stromal cells enclosing solid islands of epithelial cell nests composed of polygonal cells with regular oval nuclei and longitudinal grooving (coffee-bean appearance, Figure 1) and second a malignant Brenner tumor showing multi-layered atypical transitional cell epithelium, classic nuclear grooving and abundant mitoses, along with evidence of invasion (Figure 2).

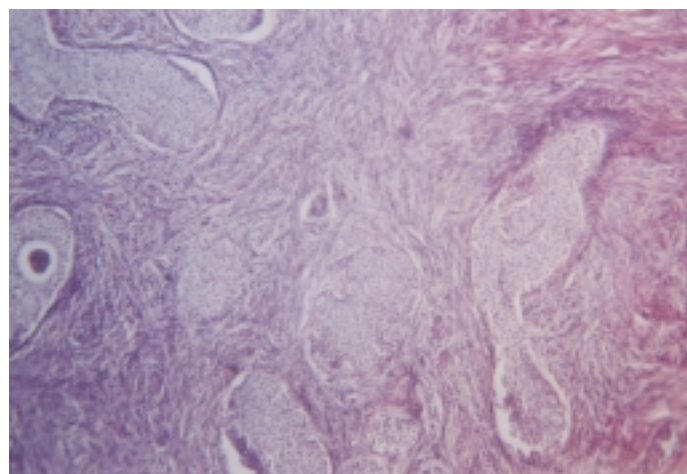


Figure 1. Benign component in malignant Brenner tumor showing epithelial cell islands surrounded by tightly packed stromal cells.

Sections studied from the left ovarian mass showed features of intermediate Brenner tumor with low malignant potential displaying non-invasive malignant features within the epithelium .

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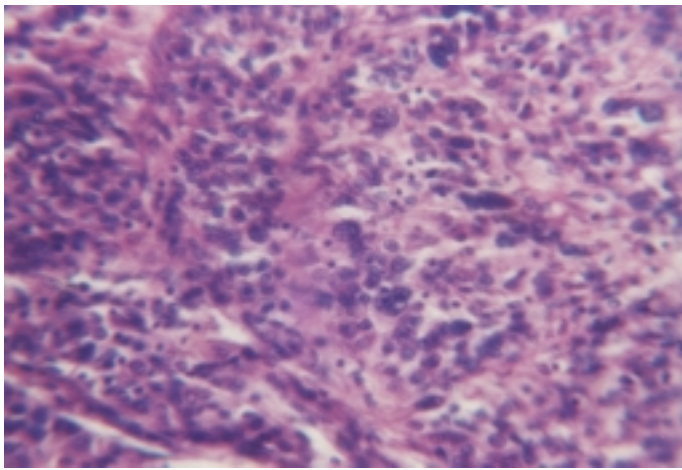


Figure 2. Malignant Brenner tumor showing invasive features with multilayered atypical transitional epithelium.

In spite our efforts we could not get further information or follow-up of the patient.

Discussion

Brenner tumors are classified under surface epithelial tumors of the ovary. The average age at presentation is 50 years with 71% of the patients being over 40 years. Grossly these tumors vary greatly in size and are usually unilateral, firm, solid graywhite with cystic spaces ^{1,2}. In contrast to such classical presentation, this tumor was bilateral with partly solid and partly cystic areas filled with mucinous material.

The histological patterns observed in Brenner tumor are typical benign, intermediate and malignant ²⁻⁴.

In the present study, the right ovarian mass showed microscopic features of malignant Brenner tumour in association with a typical benign Brenner component. The left ovarian mass showed classic features of borderline tumor with low malignant potential.

Brenner tumors have been reported to co-exist with transitional tumors of urinary bladder ^{5,6} but such a possibility was ruled out in our case.

The diagnosis of malignant Brenner tumor depends on the presence of invasive malignancy in association with a benign Brenner component. It is important to recognize this entity and differentiate it from 'Transitional cell carcinoma' (non-Brenner type) of ovary where there is no benign component as it carries a better prognosis than the latter.

References

1. Silverberg SG. *Principles and Practice of Surgical Pathology and cytopathology*, 3rd ed. New York. Churchill Livingstone 1997: 2544-6.
2. Damjanov I, Linder J, (eds). *Anderson's Pathology*. 10th edn Vol 2. St. Louis Mosby. 1997:2289.
3. Miles P A, Norris H. Proliferative and malignant Brenner tumors of ovary. *Cancer* 1972; 30:174-86.
4. Roth LM Czernobi Isky B . Ovarian Brenner tumour-Malignant. *Cancer*. 1985; 56:592-601.
5. Rosai J. (ed). *Ackerman's Surgical pathology*, 8th edn Vol 2 , Harcourt Brace and Company, 1997; 1485-8.
6. Young R H, Scully R E. Urothelial and ovarian carcinomas of identical cell types. Problems in interpretation. *Int J Gynecol Pathol* 1988;7: 197-211.