

Mucinous Cystadenocarcinoma with Brenner's tumour of the ovary in a 70 year old postmenopausal female - A case report

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Abstract

Surface epithelial tumours are the most commonly encountered neoplasms of the ovary. Among these, Mucinous tumours accounts for 14% of ovarian tumours. Coexistence of mucinous tumour with another surface epithelial tumour is rare. We report here a rare case of mucinous cystadenocarcinoma with Brenner's component in a 70-year-old postmenopausal female. She presented with chief complaints of Constipation and abdominal distention since 4 months. The symptoms were gradually progressive in nature. Co-occurrence of these two tumours favours the theory of common origin of surface epithelial tumours from coelomic or germinal epithelium, and hence, it undergoes metaplastic changes to transitional or urothelial- likes morphology.

Keywords: Epithelial tumour, Brenner's Tumour, mucinous cystadenocarcinoma.

1. Introduction

Ovarian epithelial tumours comprise more than 90% of malignant tumours.[1] Mucinous cystadenocarcinoma constitutes about 1% of ovarian tumours.[2] Brenner's tumour of ovary is also rare epithelial tumour of ovary accounting only 2% with special predilection for post-menopausal women.[1] Mucinous cystadenoma of ovary occasionally contains small nodules of Brenner's tumours. Also, Brenner's tumour often have mucinous epithelial cells lining the centre of the transitional cell nests, and they occasionally develop a discrete mucinous component identical in other respects to mucinous cystadenoma.[4]

2. Case report

A 70 years old female presented with chief complaints of abdominal distention and constipation since 4 months. The general condition of the patient was stable.

CECT Scan whole abdomen showed a large well defined solid- cystic lesion (with predominant cystic component) measuring 23x 33x 39 cm with multiple thick septations (6 mm). The lesion contains an enhancing nodule

measuring approximately 33 x 16 mm. CA-125 was also raised. The observed value was 244.84 units. Patient underwent salpingo-oophorectomy of right side.

On gross examination, the specimen consisted of right side ovarian cyst measuring 30 x 30 cm. Attached fallopian tube measures 7cm in length. External surface of ovary is grey white and cystic. Cut surface shows mucoid area and a solid grey white solid area measuring 10 x 6 cm.

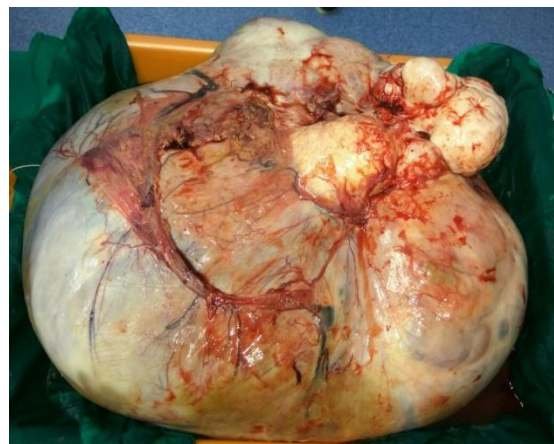


Figure 1: Gross examination of specimen



Figure 2: Gross examination of specimen

Microscopic Examination shows areas of glands and tubules lined by columnar epithelium. In some areas the glands show cribriform pattern and back to back arrangement. There is also multilayering of lining epithelium with enlarged hyper chromatic nuclei showing high mitotic rate, some areas also showing invasion of the stroma; Sections given from the solid area shows nests of small round transitional epithelial cells. The cells show nuclear grooving at places small lumen is also present. Significant nuclear atypia or mitotic activity is not seen. Sections also show extensive areas of calcification. Overall picture is of well differentiated mucinous adenocarcinoma with Brenner's tumour. The tumour does not break the ovarian capsule. Attached fallopian tube is unremarkable

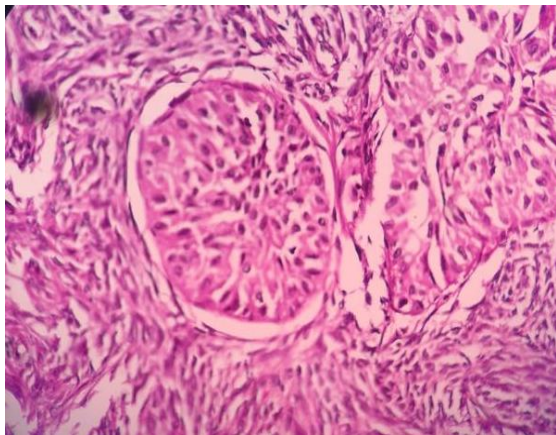


Figure 3: Microscopic Examination of glands

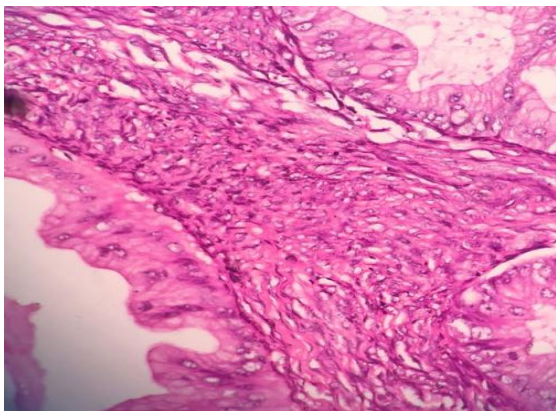


Figure 4: Microscopic Examination of glands

3. Discussion

The three main categories of primary ovarian tumours are-

- 1) Epithelial tumours- which originate from the surface epithelium of ovary.
- 2) Sex cord-stromal tumours- which originate from ovarian stroma, sex cord derivative
- 3) Germ cell tumour- which originates from germ cell.[1]

Epithelial tumours of ovary are the most important group of neoplasms, have traditionally been thought to derive from the epithelium that normally lines the outer aspect of the ovary, variously referred to as surface, coelomic or germinal [2] Minor foci of cell types other than the predominant one can be ignored, but when significant amount (10%) of several cell types are present, the tumour is best classified as mixed epithelial tumour. [1]

Features favouring primary ovarian carcinoma vs. metastasis are: unilateral, "expansile" pattern of invasion, complex papillary pattern, size > 10 cm, smooth external surface, microscopic cystic glands, necrotic luminal debris, mural nodules and accompanying teratoma, adenofibroma, endometriosis or Brenner tumour. [3]

About 20% of Brenner's tumour occurs together with a mucinous or serous cystadenoma or a benign cystic teratoma. Brenner's tumour is usually sited in the ovarian cortex and may also occur as a mural nodule in mucinous neoplasms. It is a type of adenofibroma in which nests of transitional epithelium grow in fibrous stroma. Grossly Brenner's tumours are well circumscribed, firm, pale yellow or grey white solid forms. [1,5]

Microscopically they contain solid and cystic nests of epithelial cells resembling transitional epithelium (urothelium) surrounded by an abundant stromal component of dense, fibroblastic nature. The epithelial cells have sharply defined outlines; those lining the cysts may be flattened, cuboidal, or columnar. The nuclei of tumour cells are oval, with small but distinct nucleolus and longitudinal grooves similar to those seen in granulosa cell tumour[2].

Coexistence of Brenner's and mucinous cystadenocarcinoma supports the theory of a common origin either from coelomic epithelium or remnants of embryonic mesonephric system.

4. Conclusion

We are reporting a case of co-existence of a malignant ovarian tumour i.e. mucinous cystadenocarcinoma with a benign tumour i.e. Brenner's in the same ovary. Frequent reporting of such mixed tumours can help provide proper management plan to the patient.

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