CASE REPORT

MUCINOUS CYSTADENOMA WITH BRENNER TUMOR: A CASE REPORT

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ABSTRACT: Surface epithelial tumors are the most common neoplasms of the ovary. Among these, mucinous tumors accounts for 14% of ovarian tumors. Coexistence of mucinous tumor with other surface epithelial tumors is rare. We report here a rare case of mucinous cystadenoma of the ovary, with Brenner component in a 52-year-old post-menopausal woman who presented with chief complaint of mass per abdomen since one month and retention of urine since one week. Coexistence of these two tumors supports the theory of a common origin of surface epithelial tumors from coelomic or germinal epithelium, and therefore, it undergoes metaplastic change to transitional or urothelial-like morphology.

KEYWORDS: Mucinous cystadenoma, Brenner tumor, ovary, ovarian tumors.

INTRODUCTION: Ovarian epithelial tumors comprise more than 90% of malignant tumors.[1] While mucinous cystadenomas constitute about 14% of ovarian tumors,[1] Brenner tumors (BTs) of the ovary are rare epithelial tumors that account for 1% - 2% of all ovarian neoplasms[2] The average age at presentation of brenner tumors is approximately 50 years, about 70% of the patients being over 40 years of age[2] Mixtures of cell types are common. Minor foci of cell types other than the predominant one can be ignored, but when significant amounts (>10%) of several cell types are present, the tumor is best classified as a mixed epithelial tumor.[1] Mucinous cystadenoma occasionally contains a small nodules of Brenner tumor, with reported incidence of 1.3% of ovarian mucinous neoplasms ranging upto 4% In addition, Brenner tumors occasionally have mucinous epithelial cells lining the centre of transitional cell nests, which occasionally develop a discrete mucinous component. We are presenting a case of mucinous cystadenoma of ovary with Brenner component in a 52 year old female patient.

CASE REPORT: A 52-year- old postmenopausal woman presented with mass per abdomen since 1 month, retention of urine since 1 week, with pelvic discomfort. Patient was a known case of diabetic and hypertensive. Clinical examination revealed bulky uterus, vaginal fullness in anterior fornix, with elongated cervix and enterocele.

Ultrasound abdomen showed a complex left side ovarian mass with partially echogenic components measuring 8 x 7x 5 cm size. The mass was cystic and non-tender with well-defined margins. No free fluid was detected in the pelvic cavity.

A provisional diagnosis of left side ovarian cyst was made. Intra-operative findings revealed multilocular ovarian cyst measuring 8 x7 x 5 cm adherent to the left ovary was present. Right ovary and right tube appear normal. Total abdominal hysterectomy with bilateral salpingo-oophorectomy was performed and specimen received for histopathological examination.

Grossly, 10 x 6 x 4 cm hysterectomy specimen with unhealthy hypertrophied cervix with bilateral adnexa was received. One side ovarian cyst measuring 8 x 7 x 5 cm with smooth external surface along with 6 cm long tube. Also received other side ovary measuring 3 x 2 x 1 cm with 4 cm tube. Cut section uterus appears normal. Cervix appears unhealthy .Cut section of one ovary and tube appears normal. Cut section of ovarian cyst shows multilocular, filled with mucinous material and foci of solid area measuring 1 x 1 cm, grey tan to grey white in color. (Fig. 1). Multiple sections studied from the uterus showed, proliferative endometrium and cervix with chronic nonspecific cervicitis with procidential changes. In one side ovary shows corpora albicantia with nodular stromal hyperplasia. Sections from the ovarian tumour showed cyst wall lined by tall columnar epithelial cells with pale eosinophilic cytoplasm and basal nuclei with subepithelial foci of congested blood vessels. (Fig. 2). Sections from solid area shows uniform sheets of cuboidal cells with scanty cytoplasm and grooved nuclei. (Fig. 3, 4) Histological features are consistent with mucinous cystadenoma with brenner component.

DISCUSSION: The ovarian tumors are classified on the basis of differentiation and extent of proliferation of the epithelium.[1] The most common ovarian tumors are Surface epithelial tumors. Mucinous tumors constitute 14% of all ovarian tumors. Brenner tumor comprises around 2% of all ovarian tumors.[3] Most common mixed ovarian tumors are mucinous cystadenoma with combination of Brenner tumor, mature cystic teratoma, sertoli-Leydig cell tumor or even a serous cystadenoma may be seen.[4] The combination of mucinous cystadenoma with Brenner tumor suggests common mullerian histogenesis. We believe that rarely Brenner tumor as a result of mullerian metaplasia, can also lead to development of surface epithelial tumors. Mucinous tumors are multiloculated tumors filled with sticky, gelatinous fluid rich in glycoproteins.[3]Approximately 75% of ovarian mucinous neoplasms are benign, 20% are borderline, and 75% are invasive carcinomas. Histologically, mucinous cystadenoma is lined by tall columnar epithelial cells with apical mucin and basal nuclei.[5] About 20% Brenner tumors occurs together with a mucinous or serous cystadenoma or a benign cystic teratoma.[6] Brenner tumor is usually sited in the ovarian cortex and may also occur as a mural nodule in a mucinous cystadenoma.

The Brenner tumor is a type of adenofibroma in which nests of transitional epithelium grow in a fibrous stroma. Grossly Brenner tumors are circumscribed, firm, pale yellow or grey white solid fibrous tumors.[2] Many are of microscopic size and most measure less than 2 cm in diameter. On cut section they are formed of hard whitish grey tissue with as light whorled appearance.[2] Microscopically the lesion is composed of well delineated epithelial nests set in a fibrous stroma. The epithelial cells are round or polygonal with round or oval nuclei and have small nucleoli and the cytoplasm ranges from clear to eosinophilic.[7] The central portion of the cell nests is cystic which often is lined by flattened endothelial like cells to cuboidal or columnar cells. Coexistence of Brenner and mucinous cystadenoma supports the theory of a common origin either from coelomic epithelium or remnants of the embryonic mesonephric system.

CONCLUSION: We are reporting this case of coexistence of mucinous cystadenoma with Brenner tumor for creating awareness among the pathologists and gynaecologists about occurrence of this combination of ovarian tumor.

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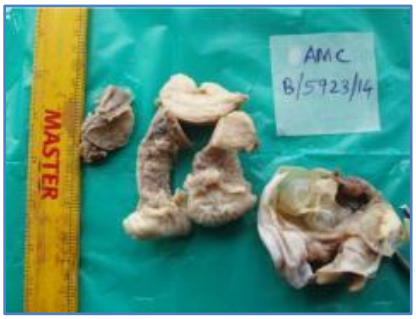

Figure 1

Figure 1: Gross photograph showing ovarian cyst measuring 8x7x5 cms. Cut section was multilocular, filled with mucinous material and a foci of solid area measuring 1 x 1 cm, grey tan to grey white in color.

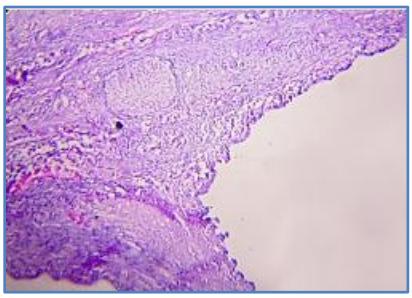

Figure 2

Figure 2: Photomicrograph showing cyst wall lined by tall columnar epithelial cells (H & E 100 X).

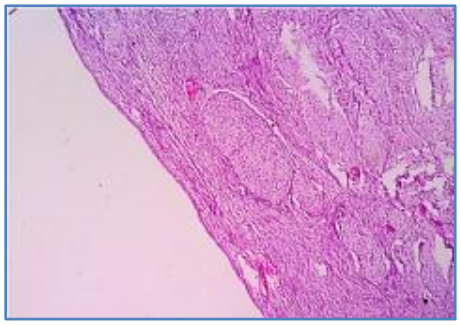

Figure 3

Figure 3: Photomicrograph showing cyst wall lined by tall columnar epithelial cells and nests of cuboidal cells. 100x (H & E 100 X).

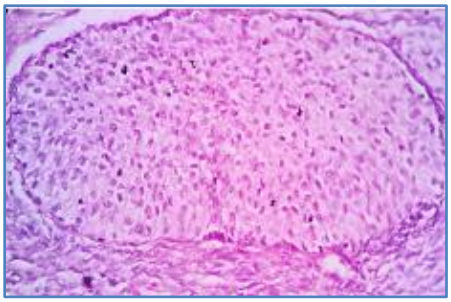

Figure 4

Figure 4: Photomicrograph showing nest of transitional epithelial cells with scanteosinophilic cytoplasm and grooved nuclei. (H & E 400X)

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