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Case report

BRENNER TUMOR WITH SEROUS CYSTADENOMA- AN UNUSUAL COMBINATION: A CASE REPORT

*Syam Sundar B[1], Shanthi V[1], Mohan Rao N[1], Bhavana Grandhi[2], Chidananda Reddy V[2], Swathi S[2]

[1]Associate Professor, [2]Assistant professor, Department of Pathology, Narayana Medical College, Nellore, A.P, India

*Corresponding author email: syam.byna&gmail.com

ABSTRACT

Surface epithelial tumors are most common, which comprise 58% of all ovarian tumors. Serous and mucinous cystadenoma are the most common epithelial tumors which accounts for about 35% of ovarian tumors. Different combinations of epithelial tumors can occur in ovary most common among them is Mucinous cystadenoma and Brenner tumor. We report a case of an ovarian tumor with rare combination Brenner tumor with serous cyst adenoma of ovary in 56 year old female patient. Only a few cases with this combination are very rarely reported in the literature.

Keywords: Brenner Tumor, Serous cystadenoma.

INTRODUCTION

Surface epithelial tumors are the most important group of neoplasm of ovary which are namely serous, mucinous, endometroid, clear cell and Brenner along with combinations of these types[1]. Surface epithelial tumors occur at all ages with a peak incidence in 2nd to 5th decade of life. Serous tumors represent 46% of all surface epithelial ovarian neoplasm of which 50% are benign serous tumors[1].They are usually cystic with the lack of solid areas and with a few papillary excrescences. Brenner tumor is known to coexist with mucinous ovarian tumors[2]. Seidman and khedmati[3] observed 1.3 – 4% incidence of coexisting Brenner tumor and mucinous cystadenoma. Most Brenner tumors occur in women between the ages of 40 and 60 years. Most are small and are incidental findings[4]. Here we report a case of a benign cystic tumor of ovary with focal solid areas which showed a combination of serous cystadenoma with a Brenner tumor.

CASE REPORT

A 56 year old female patient presented with a swelling in the lower abdomen with intermittent abdominal pain over a period of 1 year. Clinically, her general condition was good. On a routine physical examination no abnormality was detected. On ultrasound abdomen a cystic ovarian neoplasm was suspected. Hysterectomy with salpingo opherectomy was done and the specimen was sent to pathology department for further evaluation. Macroscopically hysterectomy specimen measuring 8x5x3 cm and ovarian cystic mass measuring 4x3x2 cm(fig-1) and tube measuring 4cm. Ovarian cystic mass surface was smooth and grey white. On cut section it shows unilocular cyst containing brownish material and periphery of the cyst showed 2 x 1cm solid hard grey white area. The inner wall of the cyst was smooth with papillary excrescences. Microscopically uterus, cervix showed proliferative endometrium and chronic cervicitis. Fallopian tube grossly and microscopically

was unremarkable. Microscopic examinations from the ovarian cyst wall shows cyst lined by benign looking columnar epithelium (fig-2) and focal papillary formations. Sections from the solid areas show nests of transitional epithelial cells with foci cystic change. The epithelial cell is round to with nucleus showing grooving and moderate cytoplasm. Surrounding stroma shows dense fibrocollagenous tissue.

Fig1: Cut surface of cyst showing grey, brown material with tiny grey white area

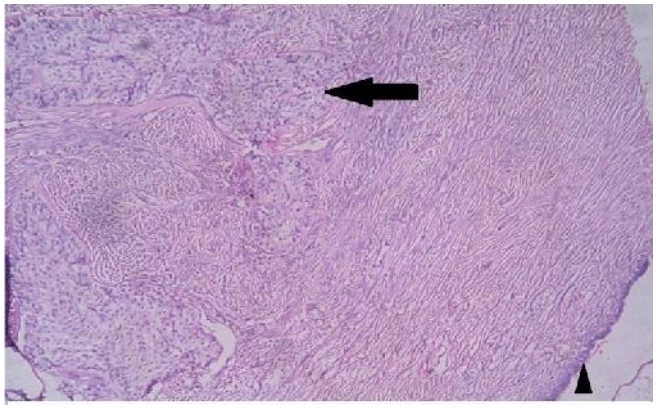

Fig: 2 Cyst wall lined by columnar epithelium, foci of transitional nests (H& E 400X)

DISCUSSION

Surface epithelial tumors are most common ovarian tumors. Serous tumors constitute 30% of all ovarian tumors which making them the single most common group. Brenner tumor comprises around 2% of all ovarian tumors[5]. 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[6]. A serous tumor is rarely found coexisting with a benign Brenner tumo[7]. The combination of serous 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. About 20% Brenner tumors occur together with a mucinous or serous cystadenoma or a benign cystic teratoma[8]. Serouscystadenoma may be unilocular or multilocular. It has a thin wall and contains clear fluid. The interior and exterior surfaces are usually smooth with focal small papillary excrescences may be present on the interior surface of the ovary. In our case there was a papillary excrescence on the interior surface of cystic component of the ovary. Microscopically serous cystadenomas are lined by ciliated and non ciliated low columnar cells with bland ovoid nuclei. Although benign serous tumors are typically lined by an epithelium similar to that of the fallopian tube with ciliated and less frequently non ciliated secretory cells, cysts with flattened lining may be seen which represent desquamation of the lining epithelium[9]. Brenner tumor is usually sited in the ovarian cortex and may also occur as a mural nodule in a mucinous or serous cystadenoma and mature cystic teratoma. The Brenner tumor is a type of adenofibroma in which nests of transitional epithelium grow in a fibrous stroma[10]. Grossly Brenner tumors are circumscribed, firm, pale yellow or grey white solid fibrous tumors. Many are of microscopic size and most measure less than 2 cm in diameter. On section they are formed of hard whitish grey tissue with a slight whorled appearance. 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. 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 serous cystadenoma supports the theory of a common origin either from celomic epithelium or remnants of the embryonic mesonephric system. Extensive search of literature showed only one such case report by Pschera H and Wikstrom B titled “Extra ovarian Brenner tumor coexisting with serous cystadenoma” was published in 1991[7]. To the best of our knowledge, this is the second case with this combination to be reported in our pathology department.

CONCLUSION

We are reporting this case for creating awareness among the pathologists and gynaecologists about the occurrence of this rare combination of ovarian tumor so that misdiagnosis and mismanagement can be avoided.

Conflict of Interest: Nil

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