VOLUME-7, ISSUE-6, JUNE-2018 • PRINT ISSN No 2277 - 8160

Original Research Paper

Pathology

MALIGNANT BRENNER TUMOUR OF THE OVARY

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ABSTRACT Brenner tumour accounts for approximately 1-2% of all ovarian neoplasms ,the average age of presentation being 50 years. Majority of the cases are reported to be of benign nature but borderline and malignant counterparts have also been reported. We are presenting a case of 46 year old perimenopausal woman with malignant Brenner tumour.

KEYWORDS : Malignant Brenner tumour ,ovarian tumours, gross, histopathology.

CASE PRESENTATION : A 46 year old woman presented with complaint of chronic pain in the lower abdomen and irregular scanty menses for the last 1 year.

Ultrasonography of lower abdomen revealed a complex mass , 6.5 x 5.4 cm in size having both solid and cystic areas. It seemed to be originating from left ovary. Contrast enhanced computed tomography (CECT) of abdomen and pelvis was advised to delineate the origin of the tumour.

CECT of lower abdomen showed moderate ascites with a 8.5x 7.0 cm x 3.5 cm sized thick walled enhancing mass lesion. The mass had both solid and cystic component. It was located on the left side of the pelvic cavity, appeared to be arising from left adnexa and extended towards the umbilicus. The right ovary and adnexa, appeared to be normal. A final impression of left sided pelvic mass lesion of ovarian origin was given.

A provisional diagnosis of ovarian neoplasm was given and surgical excision of the mass was planned. Subtotal hysterectomy with bilateral salpingoopherectomy was done under general anaesthesia. Samples were sent for histopathological examination. On gross examination the uterus measured 19 x 5x 3 cm. The right adnexa measured 2 x2 x1 cm and the left adnexa with the globular mass adhered to it measured 14 x 7 x4 cm.

On cut section the left ovary showed both solid as well as cystic areas in equal proportion. Foci of hemorrhage and necrotic areas were grossly visible.

Microscopic examination of the H and E stained section of the left adnexa with the globular mass showed sharply demarcated epithelial nests within the ovarian stroma. The cells forming these Brenner nests had moderate degree of cytological atypia with prominent nucleoli. The stroma also showed invasion by neoplastic cells resembling transitional epithelium. The right adnexa was unremarkable on histopathological examination. The uterus and cervix also showed epithelial nests with cells exhibiting moderate atypia and stroma resembling that of ovaries being invaded by neoplastic cells. Normal histological picture of uterus and cervix could not be appreciated in any section taken.

INTRODUCTION: Transitional cell tumours also known as Brenner tumours comprise 10% of ovarian epithelial tumours. Majority of these cases are of benign nature. Atypical proliferative and malignant forms are rarely seen. The transitional epithelial cell type ,characterised by a relatively uniform population of stratified cells with ovoid nuclei displaying nuclear grooves, is so named because of its resemblance to urothelium.

DISCUSSION: Brenner tumours are also referred to as transitional cell tumours since they comprise of neoplastic epithelial cells resembling transitional epithelium. The average age at presentation is approximately 50 years, with majority of the patients being over 40 years of age.The size varies from small lesion less than 1cm in diameter to massive tumours having a diameter of 20-30 cm.

Grossly these fibroepithelial tumours maybe solid or cystic. They are usually unilateral. Most Brenner tumors are benign, but borderline and malignant counterparts have been reported. Tumors with benign Brenner nests admixed with malignant tumor cells are referred to as malignant Brenner tumors, while tumors with greater than 50% malignant transitional type epithelium are considered transitional cell carcinomas of the ovary.

The epithelial cells have sharply defined outlines; those lining the cysts may be flattened, cuboidal, or columnar. The nuclei of the tumor cells are oval, with a small but distinct nucleolus and longitudinal grooves similar to those seen in granulosa cell tumors. Brenner tumors have exceptionally been seen to occur in accessory ovariesor in other female genital tract sites, including vagina.

CONCLUSION: This case is is being reported for its rarity. Malignant Brenner tumour in itself is reported as a rare entity. But this particular case showed involvement of uterus and cervix by epithelial nests and neoplastic cells which makes it even further unusual.

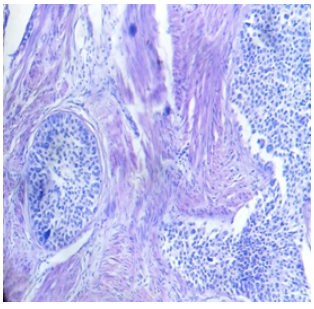

Fig.1- Section from ovary showing nest of malignant epithelial cells.

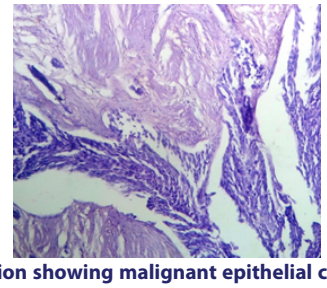

Fig.2- Section showing malignant epithelial cells invading the stroma.

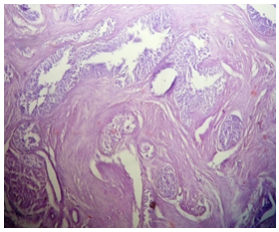

Fig.3- Section from the uterus showing nest of malignant epithelial cells

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