

CASE REPORT

Seromucinous Cystadenoma of Ovary – A Rare Case Report*Savitri M. Nerune¹, R. M. Potekar¹, Varsha R. Deshpande¹**¹Department of Pathology, BLDEU's Shri B M Patil Medical College, Hospital and Research Centre, Vijayapur-586103(Karnataka) India***Abstract:**

Ovarian epithelial tumours are common diseases of female genital tract, they account for the majority of female ovarian neoplasms. The recent World Health Organization (WHO) 2014 classification of tumours of female reproductive Organs introduced a new category of ovarian neoplasm designated as “seromucinous tumours” as they exhibit both serous and mucinous features. These are uncommon ovarian tumours; here we report a rare case of seromucinous cystadenoma in a 27 year old female patient.

Keywords: Epithelial Tumours, Female Genital Tract, Ovarian Neoplasm

Introduction:

Ovarian neoplasms are common disease of female genital tract. Ovarian epithelial tumours account for approximately two-thirds of all ovarian neoplasms and their malignant forms represent about 90% of ovarian cancers. Worldwide ovarian cancer is the sixth most common cancer and the seventh leading cause of cancer deaths among women [1].

Ovarian epithelial neoplasms usually originate from single epithelium. The recent World Health Organization (WHO) 2014 classification of Tumours of female reproductive organs introduced a new category of ovarian neoplasm designated as “seromucinous tumours” as they exhibit both serous and mucinous features. These seromucinous tumours are composed of serous cells, endocervical type of mucinous epithelium, endometroid cells, squamous cells and undifferentiated cells [2].

Case Report:

A 27 year old female patient G- 6 P2 L2 A3 with 38 weeks 2 days of period of gestation with previous 2 Lower Segment Caesarean Section (LSCS) was admitted for safe confinement and tubectomy. All her antenatal scans were within normal limits. She delivered a live male baby by LSCS. Intra-operatively left ovarian cyst measuring 10x10 cm adherent to bowel wall was noted. Accidentally the cyst wall was punctured and mucinous fluid was drained. A right salphingectomy and left salphingectomy with cystectomy was done and remaining ovarian tissue left behind. The excised tissue was sent for histopathological examination. Two containers were received. Container 1 showed an already cut open left ovarian cyst measuring 7x6x3 cm with attached fallopian tube measuring 2 cm in length. The cyst was capsulated, glistening with areas of hemorrhage. On cut section, the ovarian cyst was multiloculated and the cyst wall was smooth with areas of hemorrhage (Fig. 1). The larger cyst measured 5x4 cm and smaller measured 0.8x0.1 cm. Container 2 showed a single pink tubular structure measuring 1.2 cm in length. Multiple sections were taken from the left ovary and cyst. Sections were also taken from the left and right fallopian tubes. On microscopy sections studied from the left ovarian cyst showed cyst wall, which was lined partly by cuboidal epithelium (Fig. 2) and partly by ciliated columnar epithelium (Fig. 3). In addition to it the cyst wall was also lined by tall

columnar mucin secreting epithelium suggestive of an endocervical type of mucin secreting epithelium (Fig. 4). The subepithelium showed ovarian stroma, fibroconnective tissue and chronic inflammatory cell infiltrate. Left and right fallopian tubes were normal with focal decidual tissue within the lumen.



Fig.1: Gross Photograph Showing Multi-loculated Cyst with Smooth Cyst Wall on Cut Surface

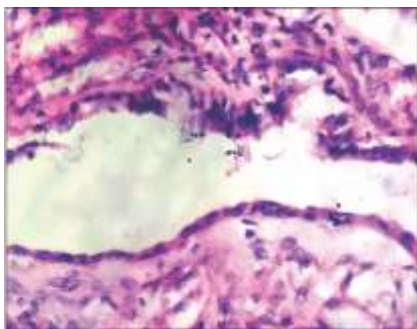


Fig.2: Microphotograph showing Cuboidal Lining of Cyst Wall (H and E 400X)

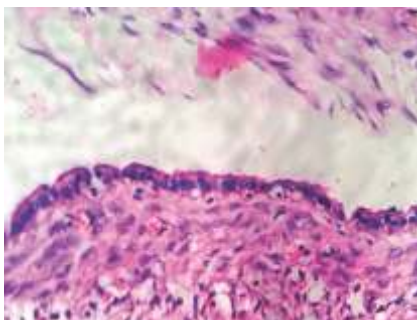


Fig.3: Microphotograph showing Ciliated Columnar Epithelium of Cyst Wall (H and E 400X)

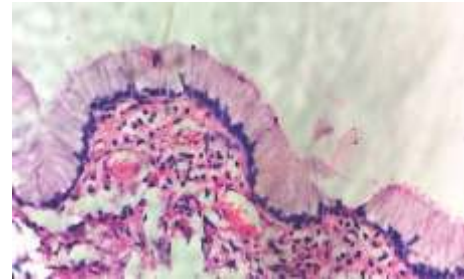


Fig.4: Microphotograph Showing Mucin Secreting Tall Columnar Epithelium (Endocervical Type) of Cyst Wall (H and E 400X)

Discussion:

Epithelial tumours are the common ovarian neoplasms. They arise from the surface epithelium and adjacent stroma. Serous cystadenoma constitutes between 20 to 50 percent of ovarian neoplasms and mucinous cystadenoma account for 15- 25%. Other epithelial tumours occur less frequently [3].

In 1976, Fox and Langley first introduced the word seromucinous tumour which was composed of endocervical type mucinous epithelium and serous type of cells. Later in 1988, Rutgers and Scully described similar appearing borderline tumour into two sub classes. The first was classified as “ovarian mullerian mucinous cystadenoma of borderline malignancy” which was composed of pure endocervical type of epithelium and the second one was classified as “ovarian mixed epithelial papillary cystadenoma of borderline malignancy” consisting of mixture of serous, endocervical type mucinous, endometrioid and undifferentiated cells with abundant eosinophilic cytoplasm. In 2002 Shappell *et al.* reused the term “seromucinous tumor” as they found these neoplasms were composed of a mixture of different cell types with clinically significant differences between these two classes, hence combined into single group [2, 4].

The recent 2014 WHO classification of tumours of the female reproductive organs introduced a new class of ovarian neoplasms called “seromucinous tumours” [4]. Morphologically these tumours are composed of serous and endocervical type mucinous epithelium along with endometrioid, indifferent and squamous types of epithelium. These groups of tumours like other epithelial tumours include adenomas, atypical proliferative (borderline) tumours and invasive carcinomas [3, 4].

Tumours composed of endocervical type mucinous, serous, endometrioid cells and undifferentiated cells with abundant eosinophilic cytoplasm without cellular atypia are classified as benign tumours. In the present case also there was admixture of serous and endocervical type of cells without any cellular atypia and stromal invasion, and hence was diagnosed as seromucinous cystadenoma.

Tumours with complex papillary architecture and epithelium showing variable cellular stratification,

mild to moderate cytological atypia without stromal invasion are classified as atypical proliferative or borderline tumours. Tumours with similar architecture and epithelial lining having either marked cytologic atypia or cribriform growth pattern with stromal invasion >5 mm in diameter in any focus are classified as malignant tumours [5].

On the basis of immuno histochemical findings, atypical proliferative tumors frequently express ER (100%), PR (67%), CA125 (92%) and negative for CK20 and CDX2 [2,6].

Conclusion:

2014 WHO classification of tumors female genital organ has introduced a new category of ovarian tumours as “seromucinous tumours”. These tumours are also sub classified as benign, borderline and malignant tumours; hence proper histopathological diagnosis is important for better treatment and to reduce the use of aggressive therapies.

References

1. Basu P, De P, Mandal S, Ray K, Biswas J. Study of 'patterns of care' of ovarian cancer patients in a specialized cancer institute in Kolkata, Eastern India. *Indian J Cancer* 2009; 46(1): 28-33.
2. Lee JC, Hung YC, Yeh LS, Chang WC. Ovarian seromucinous (endocervical- type mucinous and mixed cell type) tumor: A case report. *Taiwanese J Obstet Gynecol* 2005; 44(12): 62-64.
3. Berenson AB, Edmonds K, Davies JP. Seromucinous cystadenoma in a true hermaphrodite: A case report. *Adolesc Pediatr Gynecol* 1993; 6(1): 36-38
4. Kurman RJ, Shih LM. Seromucinous Tumors of Ovary. What's in a Name? *Int J Gynecol Pathol* 2016; 35(1): 78-81
5. Shappel HW, Riopel MA, Sehdev AS, Ronnet BM, Kurman RJ. Diagnostic criteria and behavior of ovarian seromucinous (endocervical-type mucinous and mixed cell type) tumors. *Am J Surg Pathol* 2002; 26(12): 1529-41
6. Nakamura E, Sato Y, Moriguchi S, Yamashita A, Higo T, Asada Y. Ovarian seromucinous borderline tumour and clear cell carcinoma: An unusual combination. *Case Rep Obstet Gynecol* 2015; 2015: 690891.

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