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Case Report

Serous papillary cystadenofibroma of ovary: A rare entity diagnosed on frozen section

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ABSTRACT

Ovarian cystadenofibroma are rare slow growing benign epithelial ovarian neoplasms. It usually occurs as solid and cystic component. Most of the tumours are asymptomatic and detected incidentally during abdominal ultrasound for some other purpose. They may mimick malignant neoplasm with their gross appearance and imaging modalities. So a diagnosis of serous papillary cystadenofibroma of ovary on frozen section can save the patient from unwanted extensive surgery. We here in discuss a case of serous papillary cystadenofibroma of ovary in a 45 year old multipara that was diagnosed initially on frozen section and later confirmed on histopathology, thus highlighting the role of frozen section in diagnosis of intraoperative ovarian neoplasms.

1. Introduction

Surface epithelial neoplasms are most common neoplasms of ovary. Ovarian cystadenofibromas are relatively rare seen mostly in 15 to 65yrs of age.[1] The exact incidence is reported as 1.7% of all ovarian neoplasm.[2] It contains both epithelial and fibrous stromal components. The classification of cystadenomas is based on the epithelial types of tumour as serous, endometroid, mucinous, clear cells and mixed category.[3] The majority of the reported adenofibromas are of serous type. Depending on the degree of epithelial proliferation the behaviour of the tumour is described as benign, borderline or malignant.[3] We discuss here in a case of a 45 year female who was diagnosed to have a ovarian neoplasm with a suspicion of being malignant on imaging studies and was later planned for surgery, where it was further diagnosed as benign Serous papillary cystadenofibroma both on frozen section as well as on histopathology.

2. Case Report

A 45-year-old multiparous woman presented to the Gynaecology OPD with complaints of mild dull aching pain in the abdomen since 5 months. She also complained of fullness in the lower abdomen with a dragging sensation that has increased more since one week. There was no history of loss of appetite or weight. On examination, the patient was afebrile. Her vitals were stable. Her abdominal examination revealed a mass of 18-20 weeks size, in the midline and was firm in consistency. Per vaginal examination revealed the same mass. A complex adnexal cysts of size – 18x10cms was noted in the left adnexa along with few thick septations on USG. No ascites or free fluid was present. Serum CA-125 titre was 40 mIU/L which was higher than the normal range. Routine pre-operative blood investigations were within normal limits.

She was planned for exploratory laprarotomy with a provisional diagnosis of unilateral complex ovarian cyst.

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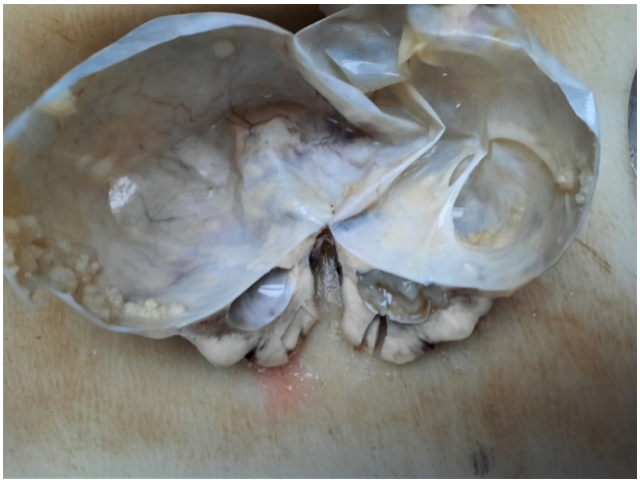

Fig. 1: Gross pic showing solid to cystic left ovarian mass measuring 16x12 cms. Cyst wall lined bypapillary excresences.

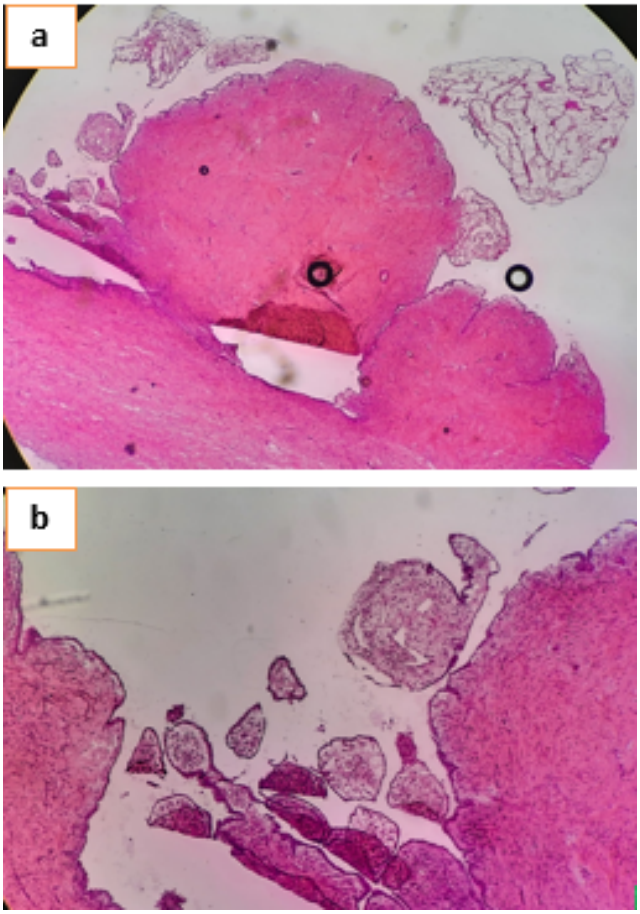

Fig. 2: a: -HP 400X and **b:** Low power 400x Cyst wall with small papillary processes lined by cuboidal epithelium and stroma contained bland looking fibroblasts

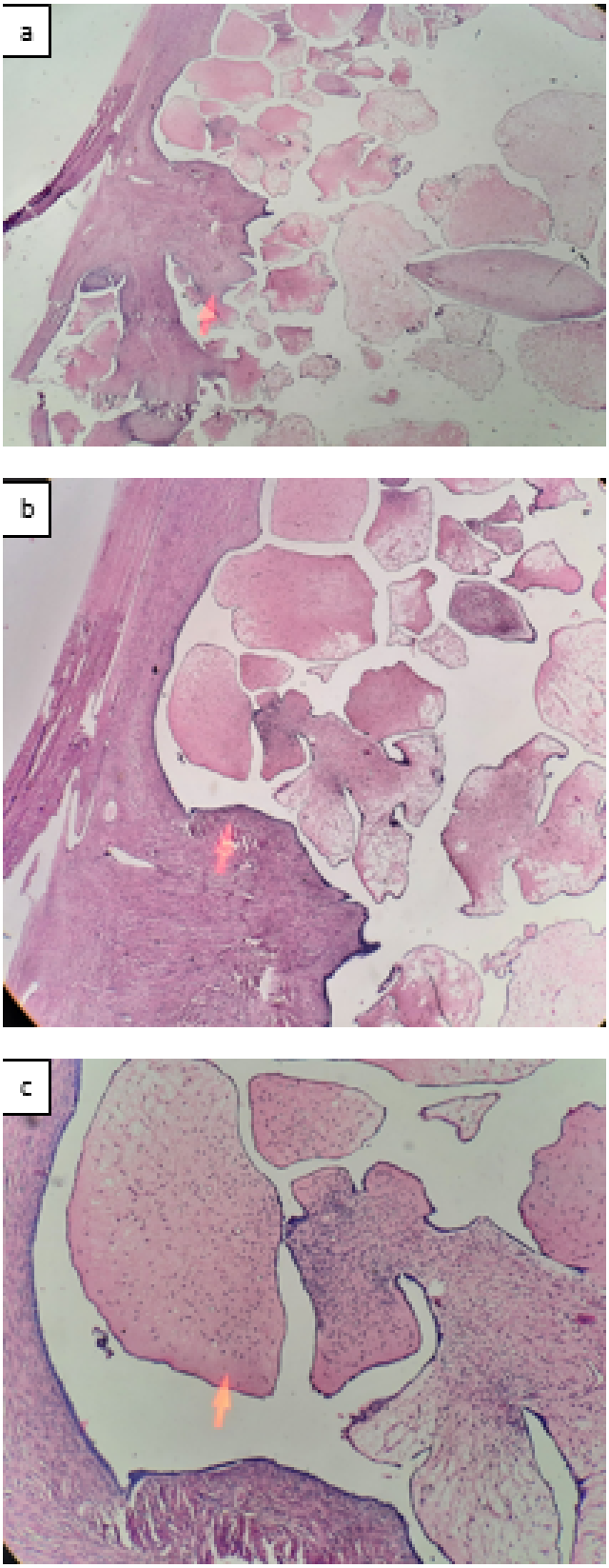

Fig. 3: a: Scanner 40x, **b:** low power 100x; **c:** High power 400x cyst wall with simple papillary processes lined by cuboidal epithelium and stroma containing spindly fibroblasts, b: LP 400x

Intra-operatively she was found to have an atrophic uterus with a large cystic mass in the left ovary. The left ovary along with the large cystic mass measuring 16x12 cm was enucleated and sample was sent quickly for Frozen section.(Figure 1) C/s of cystic mass, showed clear fluid drained out and inner surface of the cyst wall showed papillary excresences. Frozen section showed cyst wall with small papillary processes lined by cuboidal epithelium and stroma contained bland looking fibroblasts (Figure 2a-b). The report was dispatched as Serous papillary cystadenofibroma of left ovary. Surgeon decided to proceed for abdominal hysterectomy with the controlateral normal ovary and sample was sent for histopathology. Grossly we received an hysterectomy specimen with unilateral normal looking adnexa in one container. Uterus on the other hand was atrophic measuring 5x3x2 cm and a normal looking healthy cervix. The other controlateral ovary appeared grossly normal. Sections were given from the left ovary that was received as frozen specimen and also given from endomyometrium, cervix, controlateral normal ovary and fallopian tube. Microsections from the large cystic mass showed cyst wall with simple papillary processes lined by cuboidal epithelium and stroma containing spindly fibroblasts. There was no atypia, no architectural complexity and no invasion (Figure 3a-c). Finally diagnosis of serous papillary cystadenofibroma was rendered for the left large cystic ovary. Microsections from endomyometrium was reported as cystic atrophy of endometrium with unreamarkable myometrium. Cervix showed features of non specific chronic cervicitis. Controlateral tube and ovary were normal on histopathology.

3. Discussion

Ovarian cystadenofibromas are rare epithelial tumours seen in premenopausal and postmenopausal period. It occurs as a combination of solid and cystic masses within the ovary. The tumour may also show papillary projections. In majority of cases the tumour may present as a single mass within the ovary, though rarely the tumour may occur as multiple masses within a single ovary. These tumours are considered to be of serous type based on the characateristic appearance under the microscope. These tumours are known to occur spontaneously and the exact etiology is still unknown. They are asymptomatic in majority of cases and detected incidentally during USG performed for some other reasons.[4] Those with symptoms present with abdominal pain or vaginal bleeding which is seen in a minority of cases.

The routine imaging features of this tumour may mimick a malignant neoplasm but the presence of fibrous component often gives a characteristics MRI appearance of low signal intensity on T2W images that differentiates it from malignant tumours.[2,5,6] Sonographic features were described by Alcazar et al[7] as unilocular or multilocular cystic structures that may be purely anechoic or contain septations, papillary projections or solid nodules. Computed Tomography (CT) has a limited value in evaluation of cystadenofibromas as it can cause preoperative misdiagnosis of malignancy.[2]

Differential diagnosis of ovarian cystadenofibroma includes other benign tumours which have similar MRI findings like fibroma, fibrothecoma and Brenner tumour and malignant tumours like clear cell carcinoma and granulosa cell tumour because of solid and cystic components.[2,8,9] The complications due to this ovarian neoplasm is however rare and may include rupture of cystic portion of the tumour within the abdomen or torsion of the ovary. Early detection of the tumour and complete surgical removal of the tumour offers excellent prognosis. They have a very low recurrence risk on compete removal.

4. Conclusion

The tumour is discussed here due to rarity in literature of gyneacological Pathology and its necessity for early detection as it is a closer mimicker of malignant neoplasms both macroscopically and on radiological imaging studies. It also stresses on the fact that frozen section plays a crucial role in diagnosis of intraoperative ovarian neoplasms thus preventing the patient from unnecessary extensive surgery.

5. Conflict of Interest

The authors declare no relevant conflicts of interest.

6. Source of Funding

None.

References

1. Czernobilsky B, Borenstein R, Lancet M. Cystadenofibroma of the ovary. A clinicopathologic study of 34 cases and comparison with serous cystadenoma. *Cancer*. 1974;34(6):1971–81. doi:10.1002/1097-0142(197412)34:6<1971::aid-cncr2820340616>3.0.co;2-n.
2. Cho SM, Byun JY, Rha SE, Jung SE, Park GS. CT and MRI findings of cystadenofibromas of the ovary. *Eur Radiol*. 2004;14(5):798–804. doi:10.1007/s00330-003-2060-z.
3. Serov SF, Scully RE, Sobin LH. Histological typing of ovarian tumours / S. F. Serov, R. E. Scully, in collaboration with L. H. Sobin and pathologists in ten countries. World Health Organization; 1973.
4. Groutz A, Wolman I, Wolf Y, Luxman D, Sagi J, Jaffa AJ, et al. Cystadenofibroma of the ovary in young women. *Eur J Obstet Gyanecol Reprod Biol*. 1994;54(2):137–9. doi:10.1016/0028-2243(94)90253-4.
5. Jung DC, Kim SH, Kim SH. MR imaging findings of ovarian cystadenofibroma and cystadenocarcinofibroma: clues for the differential diagnosis. *Korean J Radiol*. 2006;7(3):199–204. doi:10.3348/kjr.2006.7.3.199.
6. Takeuchi M, Matsuzaki K, Kusaka M, Shimazu H, Yoshida S, Nishitani H, et al. Ovarian cystadenofibromas: Characteristic magnetic resonance findings with pathologic correlation. *J Comput Assist Tomogr*. 2003;27(6):871–3. doi:10.1097/00004728-200311000-00007.
7. Alcázar JL, Errasti T, Mínguez JA, Galán MJ, García-Manero M. Sonographic features of ovarian cystadenofibromas: spectrum of findings. *J Ultrasound Med*. 2001;20(8):915–9. doi:10.7863/jum.2001.20.8.915.

8. Wasnik A, Elsayes K. Ovarian cystadenofibroma: A masquerader of malignancy. *Indian J Radiol Imaging*. 2010;20(4):297–9. doi:10.4103/0971-3026.73538.
9. Byun JY. MR imaging findings of ovarian cystadenofibroma: clues for making the differential diagnosis from ovarian malignancy. *Korean J Radiol*. 2006;7(3):153–5. doi:10.3348/kjr.2006.7.3.153.

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