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CAVERNOUS HAEMANGIOMA OF OVARY –AN UNUSUAL MESENCHYMAL TUMOUR: A CASE REPORT

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ABSTRACT
Vascular tumours of female genital tract especially in the ovary is very rare to occur. Haemangiomas have been reported in other organs but ovarian haemangioma is a rare mesenchymal tumor. Till date 60 cases have been reported in English literature. Smaller lesions are usually asymptomatic and presents as an incidental autopsy finding where as larger lesions tend to present clinically with pain and ascites. Considering their rare occurrence such tumors pose a diagnostic challenge for clinicians. Aim of this article is to emphasise on its rarity and discuss its clinicopathological features and differential diagnosis.

KEYWORDS: Ovary, cavernous haemangioma.

INTRODUCTION
Ovarian Haemangioma's are rare vascular tumours of female genital tract. This is not expected as ovary has a rich vascular supply. They are usually discovered incidentally or during autopsy. These neoplasms have been reported in different ages ranging from infancy to 81 years.[1] Here we report a case of 45 yr old female who was diagnosed to have cavernous haemangioma of ovary that was found incidentally. During the histopathological examination of hysterectomy and bilateral salpingo-oophorectomy specimen which was performed with clinical suspicion of ovarian tumour.

CASE REPORT
A 45 year-old woman presented with an acute onset of lower abdominal pain of 15 days duration. On bimanual pelvic examination, a right adnexal mass was palpated. Routine haematological and biochemical parameters were within normal limits. Ultrasonography revealed a right ovarian mass measuring 3.5 cm × 2.5 cm × 2 cm while left ovary was within normal limits. There was no evidence of ascites. The serum Ca-125 level of the patient was 32 IU/ml. Cervical smear revealed normal cytological findings. Patient underwent Hysterectomy with bilateral salpingooophorectomy with a suspicion of right ovarian tumour. The postoperative recovery was uneventful. Sample was sent to our department for HP study. Sections from cervix and endo myo were given which appeared grossly normal. Macroscopically, the outer surface of the right ovary which was clinically suspected to be ovarian tumour was smooth and glistening with a grayish white to purplish tint. The cut surface showed a spongy texture and honeycomb appearance due to multioculated cystic spaces filled with frank blood. Sections were also given from the normal looking left ovary. Microscopically, most of the right ovary was replaced by numerous dilated thin walled vascular channels, of variable size and configuration some of which were filled with red blood cells. These vascular channels were separated by connective tissue septa. Fig no. 2(a-e). These vessels were lined by a single layer of flattened endothelium without atypical features. The diagnosis of primary right ovarian haemangioma, a benign vascular tumor was made. Left ovary was normal in histopathology. Sections studied from cervix showed chronic non specific cervicitis while that from endo myo was Non secretory endometrium.

Fig. 1: (a) (b)-Gross pic [Right ovary] - smooth and glistening with a grayish white to purplish tint measuring 3.5x2.5x2 cm. The cut surface showed a spongy texture and honeycomb appearance due to multioculated cystic spaces filled with frank blood. Left ovary (arrow)- grossly normal.

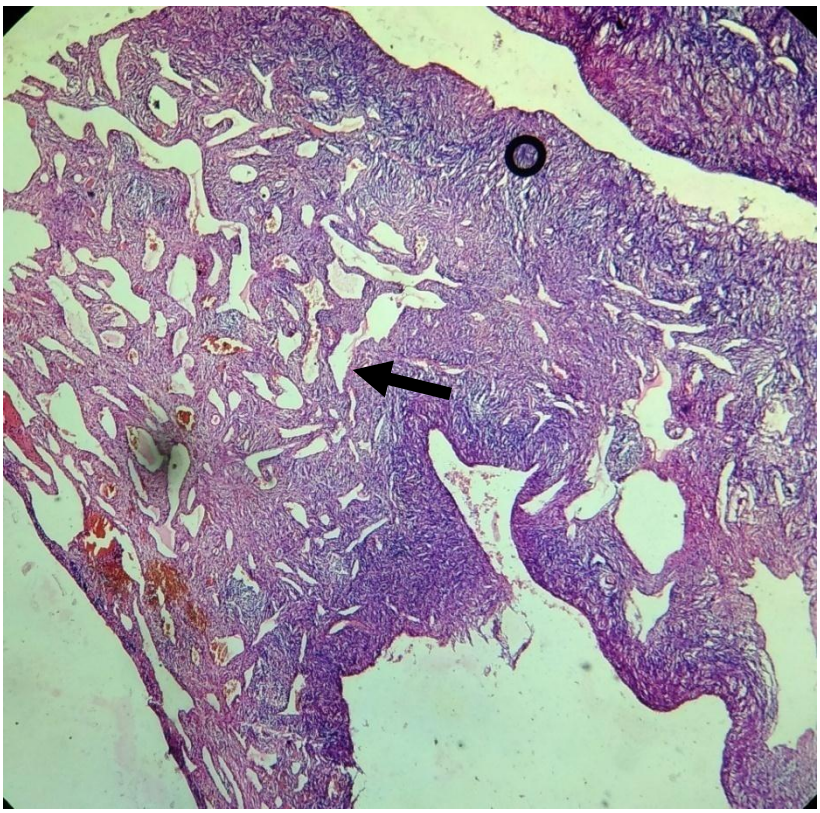

Fig. 2: (a)- Scanner view 40x.

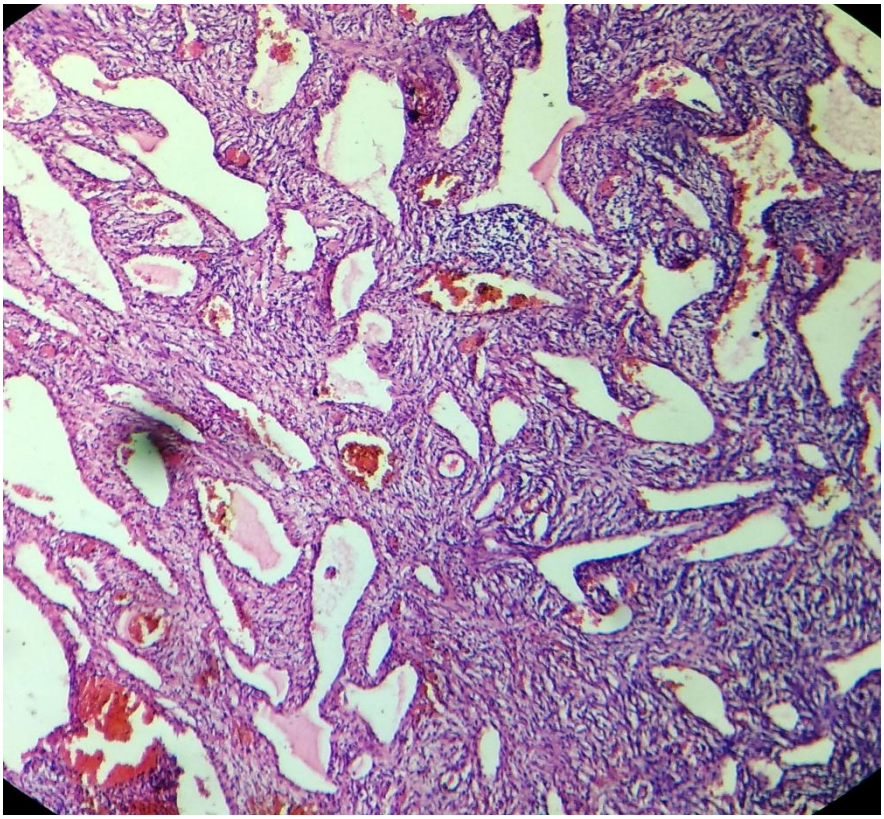

Fig. 2: (b)- LP 100X.

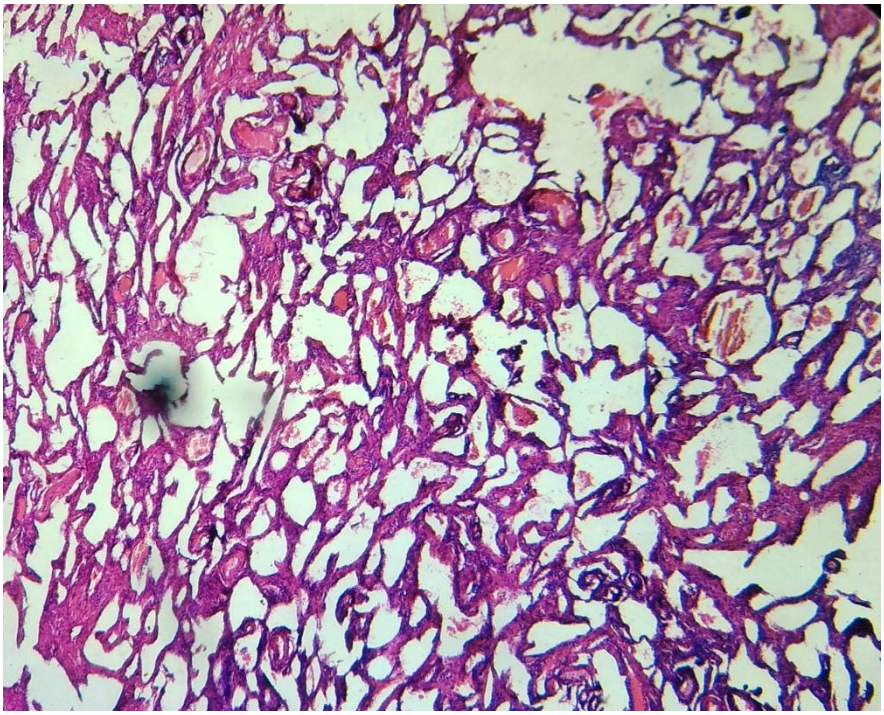

Fig. 2: (c)-Scanner view 40x.

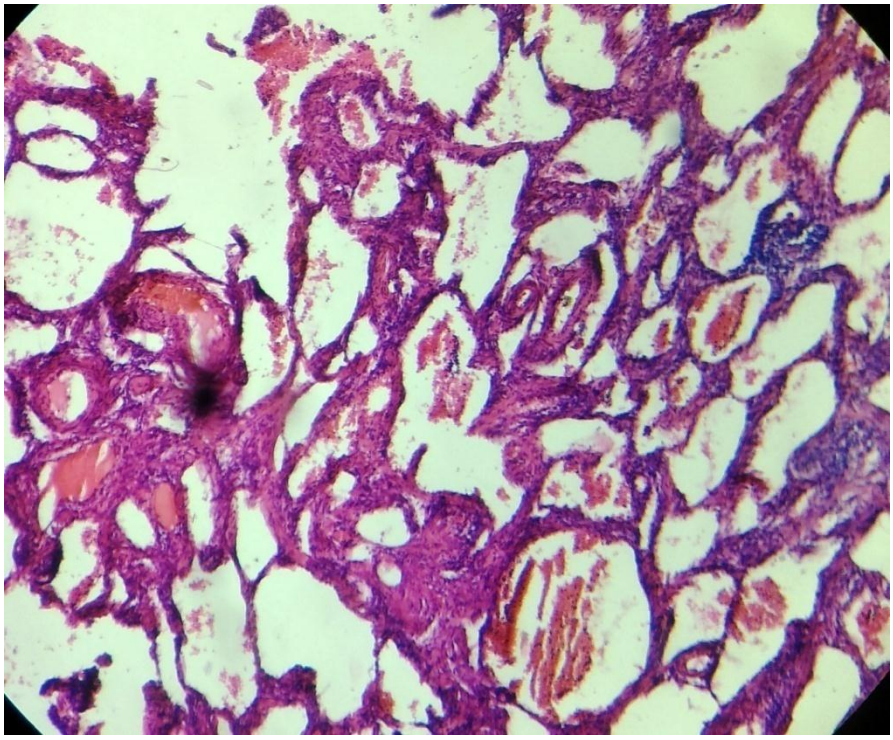

Fig. 2: (d)- LP 100x.

Fig. 2: (a-d): Shows numerous dilated thin walled vascular channels, of variable size and configuration filled with red blood cells separated by connective tissue septa.

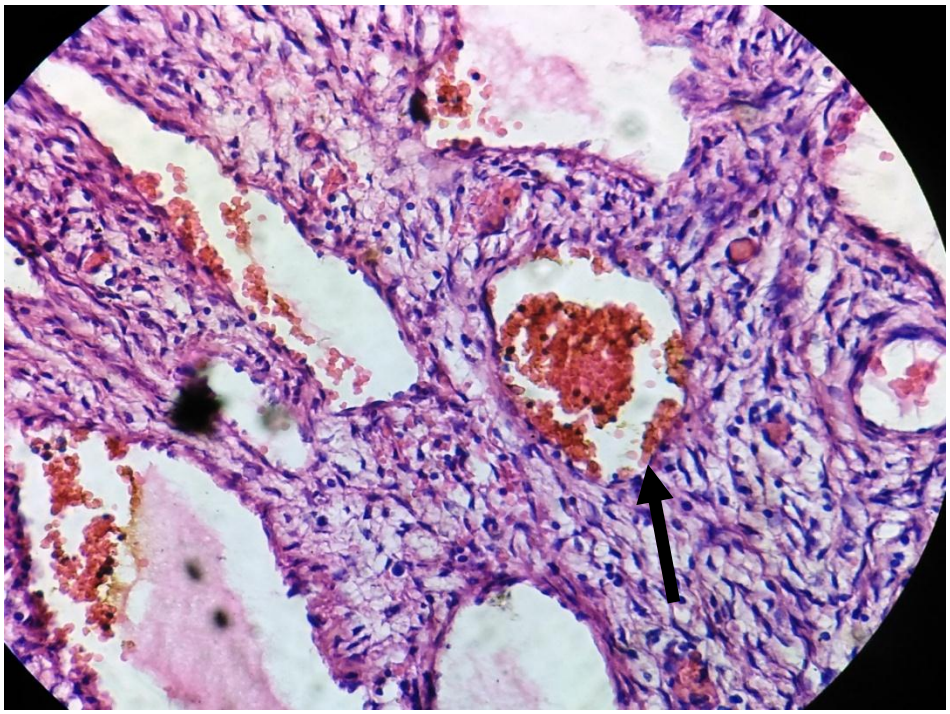

Fig. 2: (e)- HP400X- Shows a dialated blood vessel filled with RBC's lined by a single layer of flattened endothelium without any cytological atypia.

DISCUSSION

Haemangioma of ovary was first described by PAYNE in the year 1869.[2] They are usually unilateral although cases of bilaterality has been reported in few literatures.[3] In the present case tumour was unilateral. Histologically these are of cavernous, capillary or mixed type with cavernous type predominating as in the present case, unlike the rest of the body where capillary haemangiomas are more common.[4]

The most common locations of ovarian hemangioma are the medulla and hilar regions, which usually have larger

vascular channels, and thus differentiating ovarian hemangioma from proliferations of dilated blood vessels in ovarian hilum at times becomes difficult, which is its closer mimic.[5]

As mentioned earlier the smaller lesions are usually asymptomatic and discovered incidentally ,the larger ones are symptomatic and presents with ascites and abdominal pain due to mass per se or torsion. They may occur concomitantly with hemangiomas in the genital tract or other sites, and may cause abdominal and pelvic symptoms.

Review of literatures shows its association with massive ascites clinically mimicking ovarian carcinoma with raised CA-125 levels.[6] Pseudo-Meigs' syndrome, stromal luteinization, stromal hyperplasia and thrombocytopenia have also been reported as complications of ovarian haemangioma.[4,6] The decreased platelet count is regarded as one of the manifestations of Kasabach and Merritt syndrome, particularly in bilateral cases associated with diffuse abdominopelvic haemangiomatosis.[4] Other non-ovarian neoplasms such as endometrial carcinoma, cervical carcinoma, rectosigmoid carcinoma, and tubal carcinoma have also been reported to co-exist along with haemangioma.[7]

The etiology of ovarian hemangiomas is unknown and controversial. These lesions have been considered either as hematomatous malformations or true neoplasm in which pregnancy, other hormonal effects, or infections have been implicated as factors enhancing the growth of hemangioma.[8] Pre-existing stromal luteinization of the ovaries may stimulate the development of an ovarian hemangioma due to the growth stimulatory effects of estrogens in vessels and expression of estrogen receptors by hemangioma.[9] According to another hypothesis, the presence of an expansile ovarian hemangioma induces stromal luteinization; these luteinized stromal cells produce steroid hormones, mainly androgens, which are subsequently converted to estrogens in adipose tissue, that cause unopposed estrogenic stimulation to the endometrium. The end results of this phenomena may present with postmenopausal or dysfunctional uterine bleeding, male type hair loss and elevated androgen and estradiol levels.[9]

Macroscopically, ovarian hemangiomas are usually small and the size of the lesion has been reported from 5 mm to 24 cm in the greatest diameter. Grossly, ovaries are enlarged with a smooth glistening outer surface showing a spongy textured and honeycomb appearance on cut section due to multiloculated cystic spaces filled with frank blood or serous fluid. In our case, ovary was enlarged with 3 cm in dia, with spongy texture and honeycomb appearance on cut section similar to other cases. Microscopically, they are composed of dilated, blood filled, generally thin-walled vessels ranging from small to large size lined by a single layer of flattened endothelial cells. The vessels may be haphazardly located and there may be presence of inflammation, hemorrhage and hemosiderin deposits in connective tissue stroma.[10]

The non neoplastic differential diagnosis of ovarian haemangioma includes tubo-ovarian mass, twisted ovarian cyst, and chocolate cyst[7], while the neoplastic differential diagnosis are those of vascular proliferations, lymphangioma and monodermal teratoma with vascular component prominence.[4] Haemangioma in the ovary must be differentiated from proliferations of dilated blood vessels of the ovarian hilar region which is the closer mimick and pose a diagnostic challene for the pathologists. In order to define the lesion as a true hemangioma, a mass of vascular channels with minimal amounts of stroma should form a reasonably circumscribed lesion distinct from the remainder of the ovary.[11] Another differential diagnosis of this case being Lymphangioma, because of a similar morphological appearance, but can be excluded due to the absence of pale eosinophilic homogeneous material within the vascular channels.[12] Another controversial issues regarding the differential diagnosis is, distinguishing a monodermal teratoma having an angiomatous component from a pure haemangioma. Although vascular elements are not generally a component of ovarian teratomas, bilateral ovarian teratomas with a large hemangiomatosis component have been reported in which the lesions were distinguished from a pure hemangioma by the presence of a ectodermal element.[13] Other rare differential diagnosis also includes malignant angiosarcoma with a large haemangiomatous component. Grossly angiosarcomas are unilateral cystic, soft, friable and spongy. Histologically angiosarcomas shows cytological atypia, nuclear pleomorphism, papillary endothelial tufting, increased necrosis and haemorrhage.[14]

CONCLUSION

As ovarian hemangioma can be associated with gynecologic cancer and hemangiomas of the genital tract or other sites, therefore along with surgical removal of the involved areas one must look for and carefully examine the contralateral ovary, endometrium and abdominopelvic region for a possible malignancy to rule out hemangiomatosis which is essential. Prognosis of haemangioma of ovary is extremely good. As preoperative findings, imaging studies and intra-operative structures can be misleading at times, it can be misdiagnosed as malignancy leading to unnecessary radical surgery. In order to avoid this, a detailed clinicoradiological along with histopathological examination is necessary for making an accurate diagnosis for better management of the patients.

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