

Capillary Hemangioma: A Concurrent Presentation in Ovary and Fallopian Tube

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ABSTRACT

Hemangioma of the female genital tract is very uncommon. Histologically, these are predominantly cavernous type, with few capillary and mixed type reported in the literature. Hence, we report a case of concurrent occurrence of capillary hemangioma of the ovary and fallopian tube, an incidental finding.

KEYWORDS: *Capillary, fallopian tube, hemangioma, immunohistochemistry, ovary*

INTRODUCTION

Vascular malformations are the heterogeneous group of lesions that are typically congenital error of vessel morphogenesis; they demonstrate cellular turnover without true proliferation.^[1] The International Society for Study of Vascular Anomalies (ISSVA) classification has classified vascular lesions based on morphological and immunohistochemical markers. Capillary hemangioma has been commented as “difficult to classify” as their morphological features did not match any of the morphological types of the ISSVA classification. On the other hand, cavernous hemangioma has been considered as true vascular malformation.^[2] The most common site of occurrence of capillary hemangioma is the skin, the subcutaneous tissue, and mucosal surface of oral cavities, and they rarely occur in internal organs, especially in female genital tract. The size of these lesions ranges from few millimeters to few centimeters where small lesions go unnoticed and large lesions present with acute complications.

CASE REPORT

A 52-year-old female, Para-3, living-3, and not sterilized was evaluated for menorrhagia. Clinically, the uterus was approximately 14–16 weeks' size and anteverted, and no fornicial tenderness noted. The radiological diagnosis revealed a large fibroid measuring 4 cm × 4 cm on the ultrasonogram. She underwent hysterectomy with bilateral salpingo-oophorectomy. Grossly, the uterus with cervix measured 14 cm × 9 cm × 6 cm. Cut section, endometrium measured 0.1 cm in thickness. Myometrium measured 4 cm and showed trabeculated

areas. Submucosal fibroid measuring 4 cm in diameter was also noted. Endocervical canal measured 1.5 cm and showed a single nabothian cyst. The left side ovary measured 2.5 cm × 2 cm × 0.5 cm, appeared unremarkable on cut section. The left fallopian tube measured 4 cm in length with patent lumen. The right side ovary measured 2.5 cm × 1.5 cm × 0.5 cm. On cut section, a tiny brown area measuring 0.1 cm in diameter was noted grossly [Figure 1]. The right fallopian tube measured 4 cm in length. External surface showed focal congestion over an area of 0.1 cm, and on cutting, lumen appeared unremarkable.

Microscopically, sections from cervix showed features of papillary endocervicitis with a single nabothian cyst; endomyometrium showed secretory endometrium, with submucosal leiomyoma and adenomyosis. The left adnexa showed unremarkable histology. The right ovary showed lobular proliferation of closely packed capillaries with scant intervening stroma [Figure 2]. Right fallopian tube wall also demonstrated similar morphology with proliferation of closely packed capillaries [Figure 3]. A Walther cell nest was also noted. Histological diagnosis was confirmed with immunohistochemical marker CD 31 and CD 34 [Figure 4]. These vascular endothelial markers highlighted the capillaries in the lesion of the ovary and the tube.

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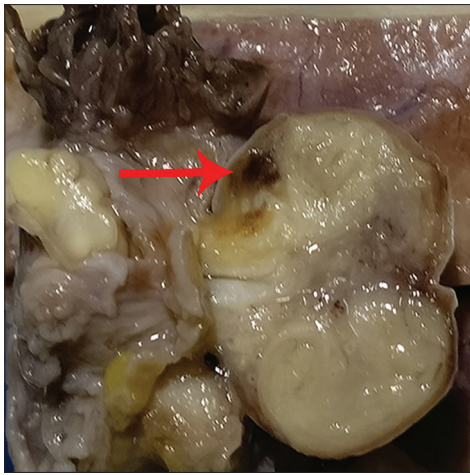


Figure 1: Cut section of the right ovary showing a tiny brown area (red arrow) measuring 0.1 cm in diameter

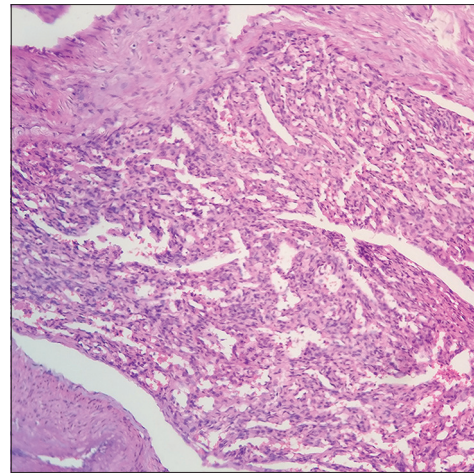


Figure 2: Microscopic picture of the right ovary showing lobular proliferation of closely packed capillaries with scant intervening stroma (H and E, $\times 200$)

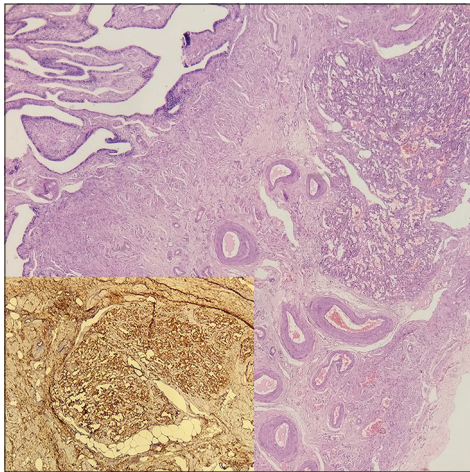


Figure 3: Microscopic picture of the right fallopian tubal wall showing proliferation of closely packed capillaries (H and E, $\times 100$). Inset shows immunohistochemistry CD31 (membranous positivity) in the tuft of capillaries seen in the tubal wall ($\times 100$)

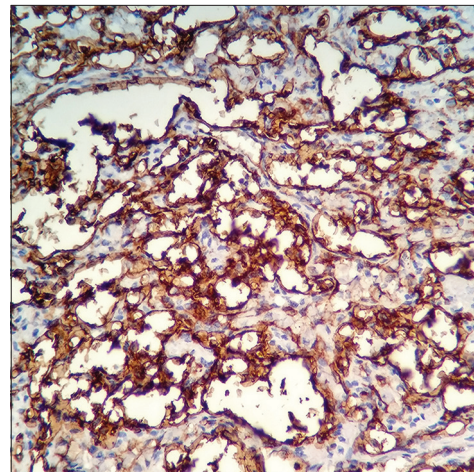


Figure 4: Microscopic picture of immunohistochemistry CD 34 (right ovary) showing membranous positivity in the tuft of capillaries ($\times 400$)

DISCUSSION

Hemangioma of the fallopian tube or ovary is an extremely rare benign tumor. The hemangioma of ovary is a mass of vascular channels of variable sizes, circumscribed and distinct from the remaining normal parenchyma, or can be seen involving the entire tissue.

The etiology of such hemangioma is unknown. These lesions can be a true neoplasm occurring due to endothelial cellular proliferation with mitoses or can be vascular malformations without true proliferation but shows cellular turnover. Karpithiou *et al.* has stated such lesions showing lobules of capillary pattern can be nonskin form of pyogenic granuloma (lobular capillary hemangioma) which is considered as true tumor by ISSVA classification.^[2] The growth of genital tract hemangioma is also being implicated

with hormonal effects, like estrogens having growth stimulatory effects on vasculature, which has been confirmed by demonstration of estrogen receptors by immunohistochemistry (IHC).^[3] There is one other implication, where ovarian hemangioma is known to cause mass effect on ovary causing stromal luteinization which produces androgen. This androgen is converted into estrogen peripherally, which can have further effect on endometrium and myometrium.^[4] This could be one of the reasons for adenomyosis occurring in our case.

The histopathological features of hemangioma should be differentiated from lymphangioma, vascular leiomyoma, and adenomatoid tumor.^[5] The lymphangioma, histologically, is distinguished by the presence of pale eosinophilic homogenous material within the vascular channels and by positive expression of D2-40 IHC marker. Whereas, adenomatoid tumor are solid aggregates of cells forming cleft-like spaces surrounded

by dense to edematous stroma, with tumor cells showing calretinin positivity. Similarly, vascular leiomyoma is histologically characterized by thick-walled vessels with concentric arrangement of intersecting smooth muscles. They will be positive for smooth muscle actin and desmin and negative for endothelial markers.^[6]

In most cases, hemangiomas are clinically small, asymptomatic, and are incidentally identified. Large lesions can present with torsion of the ovary, acute abdomen, and/or rupture of the hemangioma leading on to hemoperitoneum. Our case was an incidental finding and produced no specific signs or symptoms due to the size and location of the lesion.

CONCLUSION

To conclude, vascular lesions especially capillary hemangioma are rare presentation of female genital tract. Since these lesions have the potency to present as surgical emergency, the surgeons should be aware to include these differentials to treat the patients appropriately.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and

other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

REFERENCES

1. Merrow AC, Gupta A, Patel MN, Adams DM. 2014 revised classification of vascular lesions from the international society for the study of vascular anomalies: Radiologic-pathologic update. *Radiographics* 2016;36:1494-516.
2. Karpathiou G, Chauleur C, Da Cruz V, Forest F, Peoc'h M. Vascular lesions of the female genital tract: Clinicopathologic findings and application of the ISSVA classification. *Pathophysiology* 2017;24:161-7.
3. DiOrio J Jr., Lowe LC. Hemangioma of the ovary in pregnancy: A case report. *J Reprod Med* 1980;24:232-4.
4. Ziari K, Alizadeh K. Ovarian hemangioma: A Rare case report and review of the literature. *Iran J Pathol* 2016;11:61-5.
5. Wojnar A, Drożdż K, Dziegieł P. Cavernous haemangioma of the oviduct. *Pol J Pathol* 2010;61:103-4.
6. Katiyar R, Patne SC, Bharti S, Jain M. Capillary hemangioma of the fallopian tube. *J Clin Diagn Res* 2016;10:QD01-2.