Ovarian Capillary Hemangioma Mimicking Carcinoma

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ABSTRACT

INTRODUCTION - Vascular lesions of ovary are very rare, especially ovarian hemangiomas.

CASE REPORT – presenting a case of ovarian capillary hemangioma with massive ascites and elevated Ca 125 level.

DISCUSSION – Hemangiomas are common in other organs but ovarian hemangioma are very rare despite its rich vascular supply. Here presenting a case of ovarian capillary hemangioma with massive ascites and elevated Ca 125 level.

CONCLUSION - To avoid unnecessary radical surgery for a benign neoplasm and considering their rare occurrence haemangioma should be kept in mind as a differential diagnosis of an ovarian mass before surgery.

Key words: Ovary, capillary, hemangioma, ascites, carcinoma

INTRODUCTION

Vascular tumors of the female genital tract, especially those of the ovary, are very rare. [1-7] The number of well documented cases seems to be 50 or more but does not exceed 60. [1-5] Hemangiomas are benign vascular tumors arising from failure in vascular formation, particularly in the canalizing process, forming abnormal vascular channels. These were first described by Payne in 1869. [8] Cases are reported in a wide age range from infancy to 81 years. [5, 9] Here we report a case of ovarian hemangioma in a postmenopausal female presented with lower abdominal discomfort and distension.

Case report

A 60 yr female presented with lower abdominal discomfort of 2 weeks duration who gave a history of hysterectomy for dysfunctional uterine bleeding 12 years back. Her routine haematological and biochemical parameters were within normal limits. On bimanual pelvic examination, a right adnexal mass was palpated. Ultasonography revealed
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a right ovarian solid mass with massive ascites. Her serum Ca-125 level was 426 IU/ml. Cervical smear and ascitic fluid microscopy revealed normal cytological findings. With the suspicion of a malignant ovarian tumor, adnexal mass identified on ultra-sound, was explored through a lower midline incision which revealed a solid hemorrhagic mass in the right ovary along with 4000cc ascitic fluid. Right oophorectomy was performed and the ovary was sent for histopathologic examination. Ovary measured 8x6x4cm and contained a well circumscribed hemorrhagic mass. Microscopy showed most of the ovarian tissue replaced by numerous thin walled vascular channels of various size and configuration, some of which contained red blood cells and are separated by thin connective tissue septa. These vessels were lined by a single layer of flattened endothelium without atypical features. (Fig.1 & 2). Adjacent stroma showed lobules of luteinised cells. (Fig .3)

With this a diagnosis of primary ovarian hemangioma, a benign vascular tumor was made. Immunohistochemistry, revealed CD 31 & CD 34 positivity of the cells lining the lumina, confirming their vascular nature.(Fig. 4 & 5)

DISCUSSION

Hemangiomas are benign vascular tumors arising from failure in vascular formation, particularly in the canalisizing process, forming abnormal vascular channels. These are mainly of two types: cavernous and capillary. Ovarian hemangiomas are usually asymptomatic and present as incidental finding during operation or autopsy. Only a few of the ovarian hemangiomas have been reported to be associated with massive ascites and elevated serum CA-125 levels clinically mimicking an ovarian carcinoma like in our case. Ovarian hemangiomas are usually small with size ranging from 5 mm to 24 cm in its greatest diameter and are usually unilateral with a smooth glistening outer surface on gross examination. Although they may be encountered in any part of the ovary, the medulla and hilum appear to be the most common sites. In our case the tumor was located in the ovarian hilum.

Although the etiology remains unknown, it has been suggested that the hyperestrogenism caused by pre-existing stromal luteinization of ovaries may stimulate the development of an ovarian hemangioma due to the growth stimulatory effects of estrogens on vessels and expression of estrogen receptors by hemangiomas. Histologically, they demonstrate either a cavernous, capillary, or mixed type with the cavernous type predominating. 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 or display a roughly lobular arrangement in a variable amount of connective tissue stroma in which inflammation, hemorrhage, hemosiderin and calcium deposits.

Ovarian hemangiomas are rare and nonfunctional vascular neoplasms of the ovary. However some cases of ovarian hemangiomas are associated thrombocytopenia, ascites, stromal luteinization with or without ascites and endometrial hyperplasia or carcinoma. Stromal luteinization and stromal hyperplasia in relation to an ovarian hemangioma have been reported in three patients with endometrial hyperplasia, and one patient with endometrial adenocarcinoma. The clinical differential diagnoses of ovarian hemangiomas include tubo-ovarian mass, twisted ovarian cyst, and chocolate cyst. The main pathological differential diagnoses are those of vascular proliferations, lymphangioma, and monodermal teratoma composed of a prominent vascular component.
Hemangioma in the ovary must be differentiated from proliferations of dilated blood vessels of the ovarian hilar region. 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. Lymphangioma, which was considered in the differential diagnosis of this case because of a similar morphological appearance, was excluded due to the absence of pale eosinophilic homogeneous material within the vascular channels.

One of the controversial issues regarding the differential diagnosis involves distinguishing a monodermal teratoma having an angiomatous component from a pure hemangioma. Although vascular elements are not generally a component of ovarian teratomas, bilateral ovarian teratomas with a large hemangiomatous component have been reported in which the lesions were distinguished from a pure hemangioma by the presence of a focus of respiratory epithelium.  

CONCLUSION

Hemangiomas of the ovary are very rare neoplasms with a wide age range and incidental discovery during operation or autopsy. A few of them can be large and present with abdominal pain, ascites and elevated CA-125 levels mimicking a malignant neoplasm. Thus to avoid unnecessary radical surgery for a benign neoplasm, hemangioma should be kept in mind as a differential diagnosis of an ovarian mass before surgery.

CONFLICT OF INTEREST

There is no conflict of interest related to the work among the authors in this study.

REFERENCES

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Figures:

Fig. 1 Thin walled vascular channels and thrombosed vessels.

Fig. 2 Thin walled vascular channels

Fig. 3 Lutenised stromal cells

Fig. 4 CD31 positivity

Fig. 5 CD34 positivity