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Case Report

An Unusual Benign Vascular Ovarian Tumor

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Abstract

Ovarian hemangiomas are very rare benign tumors of the female genital tract. Most cases are small lesions that are discovered by chance. Although they are often an incidental finding at surgery, these lesions may sporadically be associated with systemic manifestations. Here, we describe a 63 year-old woman with a right ovary benign hemangioma who presented with a clinically suspicious left ovarian torsion.

Keywords: Ovarian hemangiomas; Hamartomatous malformation; Ovarian torsion; Cavernous hemangioma

1. Introduction

Ovarian hemangiomas are very rare benign tumors of the female genital tract, usually found incidentally and with an unknown and controversial etiology [1]. Hemangiomas can be of different types: i) the cavernous type is composed of a non-lobular, proliferation of numerous dilated vessels with flattened endothelium; ii) the capillary type usually lobulated made up of numerous small capillaries often radiating from larger, more central vessels set; iii) the anatomizing type consists of a non-lobular vascular proliferation of capillary sized vessels which are usually intermixed with a larger vessel [2]. Hemangiomas, cavernous type, capillary type and anastomosing type, are found

only occasionally in the ovary, with less than 100 cases reported in the literature [3, 4]. The origin of ovarian hemangiomas, as well as hemangioma in general, is a matter of debate and it is considered either a hamartomatous malformation or a true neoplasm. Most cases are small lesions but some lesions could be large with abdominal enlargement due of the presence of an ovarian mass [1]. However, most ovarian hemangiomas are of the cavernous type and consist of multiple, dilated, blood-filled vascular channels lined by a single layer of endothelium. Occasionally, OHs are associated with hemangioma of the genital tract or other sites. Here, we report a case of ovarian cavernous hemangioma found accidentally for clinical suspicion of contralateral ovarian torsion.

2. Case Presentation

A 63-year-old caucasian woman was admitted to our Hospital with acute abdominal pain. The medical history pointed out no significant medical or surgical events. The patient had no previous gynecological problems and had a physiological menopause transition at 50 years old. Blood biochemical tests and serum tumor markers were normal. Physical gynecological examination revealed a very painful palpable mass in the lower abdomen and left iliac fossa. Ultrasound transvaginal examination revealed left ovarian cyst measured approximately 8 cm while the uterus and the right ovary seemingly were normal. Because of a clinical suspicion of left ovarian torsion, a doppler US evaluation was done during ultrasound transvaginal examination. The appraisal showed abnormal (very reduced) ovarian blood flow compared to the contralateral ovary.

Due to worsening of symptoms and suspected left ovarian torsion, the patient immediately underwent laparoscopy, confirming the presence of a left ovarian torsion. The left ovary showed up with a 8 cm necrotic cystic mass and twisted three times over. A bilateral salpingo-oophorectomy was performed and the specimen was sent for histopathology examination. The postoperative recovery was uneventful, and the patient was discharged 3 days after surgery.

The specimen was an ovary measuring cm 4.5 cm × 2.0 cm × 0.5 cm. A hemorrhagic mass of 2.5 cm occupied a part of the ovary. Macroscopically, the ovary cut surface was spongy and had a honeycomb appearance. The lesion was small, red or purple with round nodules. Microscopic examination revealed a cavernous hemangioma, consisting of multiple collections of vascular spaces, dilated, blood-filled vascular channels separated by loose connective tissue, lined by a single layer of endothelium cells, containing red blood cells and without the presence of necrosis. Mitotic activity was not noted and no atypical cells were seen (Figure 1 A-B). In IHC staining strong immunoreactivity for CD34 (Figure 1C) and CD31 (Figure 1D) were seen, leading to the diagnosis of a primary ovarian hemangioma, cavernous-type [5].

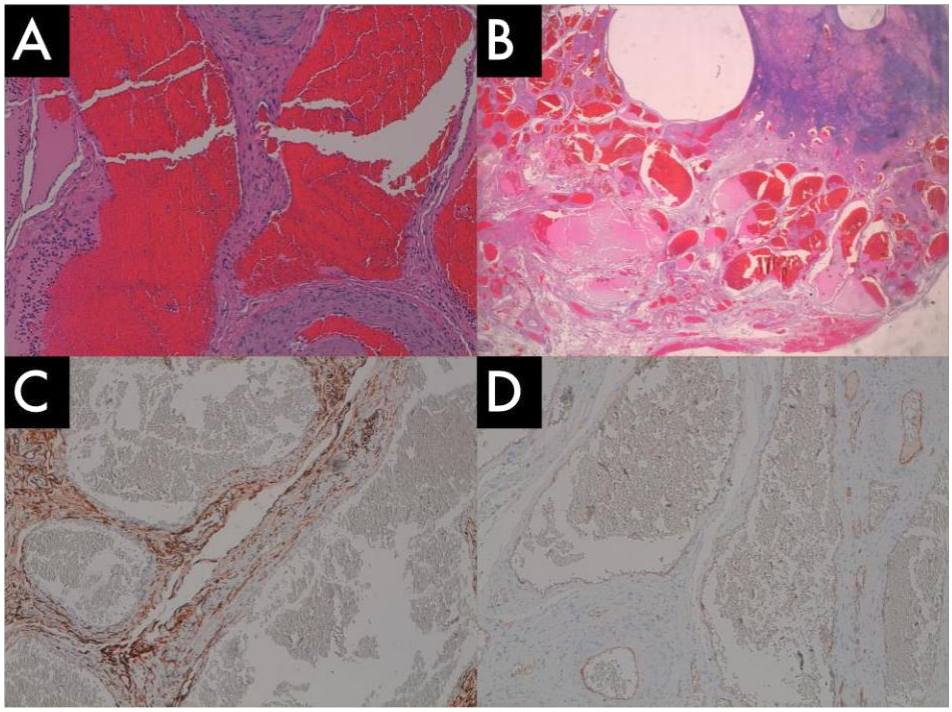

Figure 1: (A) The tumor is composed of numerous blood vessels, some of which contain red blood cells in the dilated lumens. (Hematoxylin & Eosin; magnification 20X); (B) The mass is well defined but not encapsulated with numerous, dilated vascular spaces adjacent to remnant ovarian tissue on the left side, vascular spaces were lined by flattened endothelial cells without cytologic atypia (H&E; magnification 4X); (C-D) IHC: CD34 and CD31 slides showing positive vascular endothelial cells (C: CD34, magnification 20X; D: CD31, magnification 20X).

3. Discussion

Ovarian hemangioma is a benign and very rare neo-formation often small and asymptomatic usually unilateral lesion, although bilateral ovarian hemangioma have been reported [5, 6]. When this kind of neo-formation is larger, it could appear with abdominal pain derived from the torsion of the ovary. The main risk factor for ovarian torsion is not the ovarian hemangioma itself but the dimension of the ovarian mass (diameter of > 5 cm). In fact, a large ovarian mass increases the possibility that the ovary could rotate on the axis reducing venous outflow and arterial inflow [7]. Some authors described an association between ovarian hemangioma, massive ascites and elevated CA-125 marker [8] or non-ovarian tumors (cervical carcinoma, endometrial or tubal carcinoma) [9]. Ovarian hemangioma have been considered hematoma-like malformations or neoplasm by itself, generally located in the medulla and hilar regions with a controversial etiology [1, 10]. Pregnancy, hormonal stimulation and infections have been considered potential important factors for its growth [11]. In the case reported, the patient presented to the

hospital with acute abdominal pain and the hemangioma was discovered incidentally during histopathological examination. Similar to other cases in literature, abdominal pain was due to ovarian torsion. The precise site of the hemangioma could not be localized because the large tumor (about 8 cm) and consequent ovarian torsion leaded to ovarian architecture destruction. Contralateral ovary appeared normal and this was confirmed by microscopical examination. We did not find ascites, and serum tumor markers were normal.

In conclusion, ovarian hemangioma may manifest itself as an ovarian mass with a sudden increase. Clinicians should consider this rare event in their diagnostic work-up.

Conflict of Interest Statement

The authors have no personal, financial, or institutional interest concerning the authorship and/or publication of this manuscript.

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