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HEMANGIOMA OF THE OVARY

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The rarity of hemangioma of the ovary is attested by the paucity of case reports in the literature as well as by the failure of most standard textbooks to mention them. Most of the reported cases have been small and discovered incidentally and it is possible that many have been missed. On the other hand, the authenticity of some of the reported cases may be doubted because of inadequate anatomical description. In the files of the Department of Pathology of Henry Ford Hospital, which include 13,000 autopsies and 140,000 surgical specimens over a 12-year period, we encountered only two cases of what we regard as true hemangiomas of the ovary. These cases are the subject of this report.

CASE REPORTS

Case 1 was that of a 49-year-old Negro woman who had a right radical mastoidectomy in 1952 for epidermoid carcinoma of the external auditory canal. Hepatic metastases developed in 1954 but she survived until 1958 when she died with septicemia. At autopsy she was found to have extensive local disease as well as liver metastases. The pelvic organs were grossly unremarkable except for a darkened area approximately 2.5 cm in length within the substance of the right ovary (Fig. 1).

A microscopic examination revealed a tumor composed of blood vessels, most of them of capillary size (Fig. 3). They were lined with a single layer of endothelial cells and surrounded by a few delicate reticulin fibers (Fig. 4). The tumor had an irregular peripheral margin, suggesting lobulation, simulating the lobulation so frequently seen in hemangiomas elsewhere in the body, as for example in the skin. Silver impregnation accentuated this feature and emphasized the difference in the pattern of the tumor stroma from that of the neighboring normal ovarian stroma (Fig. 5).

Case 2 was that of a white, single female who at the age of 19 had an aneurysm excised from the left middle cerebral artery. Over the next 12 years her right residual hemiparesis became increasingly disabling. She died in 1962 at the age of 31 with an extensive bilateral bronchopneumonia, superimposed upon her generalized debilitated state. An incidental finding in an otherwise normal left ovary was a well-localized reddish discolored area measuring 1.5 x 0.5 x 0.5 cm within the cortex, in a position of maximal distance from the ovarian hilus (Fig. 2). The entire ovary measured 3 x 2 x 1.2 cm. The opposite ovary was of similar size but showed no abnormality.

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Microscopic examination showed the lesion to be a mass of intertwining vascular channels. The latter varied in size from capillary caliber to cavernous spaces (Fig. 6). They were filled with blood and lined by a single layer of normal endothelium. The walls contained a few delicate reticulin fibers but no apparent smooth muscle. In the central part of the lesion the stroma was scanty but became more abundant peripherally.

**DISCUSSION**

It is perhaps surprising that hemangiomas are uncommonly found in the ovary when the extremely abundant and complex vasculature of this organ is considered. Indeed the numerous vessels may be mistaken for hemangiomas, especially when they are dilated. Geist in his review of the subject in 1942 suggested that most of the reported cases were actually varices of the hilar vessels or dilatations of the ovarian vessels due to interference with venous circulation. He expressed the opinion that only a discrete nodule, situated in an otherwise normal ovary, should be considered a true hemangioma. Sternberg called attention to the vascular proliferation in the medulla often seen in association with stromal hyperplasia, and indicated that this might be mistaken for hemangioma.

The earliest apparently well-documented case reports of ovarian hemangiomas are those of Markwald in 1894 and Payne in 1869. In Payne's case both ovaries were involved. In 1942 Ackermann reported 2 cases, both incidental findings, and collected 5 others from the literature including those of Markwald and Payne. One of the reports he included, that of Braithwaite, contained no description of an ovarian hemangioma. In 1955 McBurney and Trumbull reported another case which was associated with ascites (Meig's Syndrome). In the same year Gerbie, Hersch and Greene reported an incidental hemangioma in the hilus of an ovary and in 1961 Mann and Metrick reported an instance associated with a large serous cyst which underwent torsion and infarction. Finally, Sternberg, in his 1963 monograph, made mention of 2 bona fide hemangiomas associated with stromal hyperplasia. Including our 2 cases the total number of ovarian hemangiomas reported is estimated at 20.

In order to be regarded as true hemangioma, a mass of vascular channels, large as well as small, and usually with relatively small amounts of stroma, should form a well-defined although not necessarily encapsulated nodule quite distinct from the remainder of the ovary. In both our cases there were large cavernous spaces, and among them, small capillary vessels, all lined with a single layer of endothelium and surrounded by a thin coat of reticulin fibers. This is not the appearance of simple varicosities.

Hemangiomas of the ovary, as is generally true of hemangiomas elsewhere, may be isolated as in our first case or may represent one of several vascular anomalies as suggested by our second case. Many hemangiomas, if not most, are asymptomatic and apparently remain stationary, suggesting that they may well be hematomas rather than true neoplasms.

**SUMMARY**

Two ovarian hemangiomas, both incidental findings at autopsy, are reported, bringing to approximately 20 the number of ovarian hemangiomas in the literature.
HEMANGIOMA OF THE OVARY

Figure 1
Gross appearance of ovary in case 1. The darkened central area represents the hemangioma.

Figure 2
Gross appearance of ovary in case 2. The darkened area within the cortex represents the hemangioma and is seen to be well away from the hilus.
Case 1. The tumor is well defined but not encapsulated. It has a lobulated margin, and is formed by blood vessels of capillary size. H & E x 17.
HEMANGIOMA OF THE OVARY

Case 1. The vascular channels are lined with a single layer of endothelial cells and are surrounded by a few reticulin fibers. Wilder’s Reticulin x 150.

Case 1. The stroma of the tumor is contrasted with normal ovarian stroma seen on the right side of the photomicrograph. Wilder’s Reticulin x 45.
REFERENCE


