Angioleiomyoma: A Rare Variant Of Uterine Leiomyoma

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Abstract: Leiomyoma is the common benign mesenchymal tumor of uterus. Angioleiomyoma is a rare variant, containing thick walled blood vessels. A 45-year-old female presented with lower abdominal pain and menorrrhagia. Ultrasonography revealed polypoidal intrauterine growth and a sessile nodule on the posterior surface of fundus. She underwent total abdominal hysterectectomy and bilateral salphingo-ophorectomy. On gross examination a polypoidal sessile spongy growth (6x4x3 cm) in the endometrial cavity was noted along with a nodule (2x 2 x 1 cm) on the fundus. Microscopical examination revealed the diagnosis of angioleiomyoma that was supported by findings of immunohistochemistry. [Bommanahalli et al 2014; 5(2) :131-132]

Key words: Leiomyoma, Angioleiomyoma, Uterus.

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Introduction: Angioleiomyoma or vascular leiomyoma is a benign mesenchymal neoplasm originating from smooth muscle cells, comprising of thick-walled blood vessels[1]. It is frequently seen on the skin of the lower extremities. A few cases of uterine angioleiomyoma are reported[2-4]. Herein we present a case of angioleiomyoma of uterus.

Case Report: A 45-year-old female presented with lower abdominal pain and menorrrhagia. Blood investigations revealed 6.5 g/dl of haemoglobin and microcytic hypochromic blood picture. Ultrasonography showed polypoidal intrauterine growth and a sessile nodule on the posterior surface of fundus. She underwent total abdominal hysterectectomy and bilateral salphingo-ophorectomy.

On gross examination, uterus (14x 11x 6 cm) on the external surface showed greyish brown sessile nodule measuring 2x 2 x 1 cm, on the fundus. Cut section of uterus showed 6x4x3 cm, polypoidal sessile spongy greyish brown growth in the endometrial cavity, with extension of growth into the myometrium.

Microscopical examination (Figure 1 & 2) of the sessile intrauterine growth and the nodule revealed interlacing bundles and fascicles of spindle cells with cigar shaped nuclei. Numerous dilated thick walled blood vessels were seen through out the growth. Bland spindle cells were seen around the blood vessels. Nuclear atypia, mitotic figures and necrosis were absent.

Figure 1. Growth with adjacent myometrium (H & E 40x)

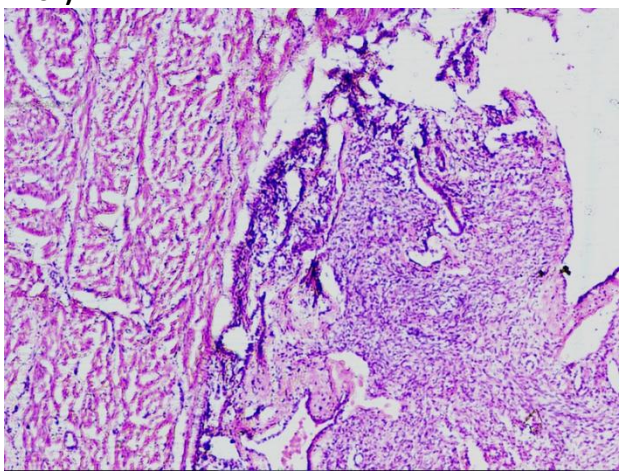
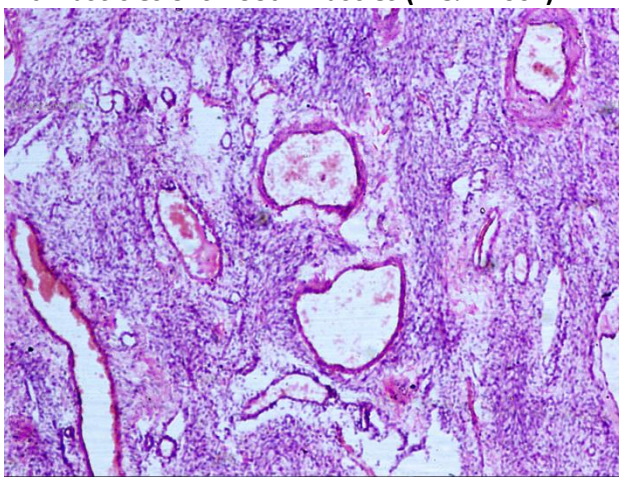


Figure 2. Numerous thick walled blood vessels with fascicles of smooth muscles (H & E 100x)



Histopathologically the case was diagnosed as angioleiomyoma of uterus and was supported by immunohistochemical findings. The tumor cells

were positive for SMA, CD 34 & CD 31, and were negative for HMB-45 and desmin. The ovaries, both tubes and endometrium were unremarkable. Post-operative life of the patient was uneventful.

Discussion: Leiomyoma are the most common uterine neoplasm, with many histopathological variants, originating from smooth muscle. Angioleiomyoma is a rare variant of leiomyoma that is composed of interlacing bundles of smooth muscle cells with interspersed thick blood vessels. Usual sites of occurrence are subcutis in the lower extremities, head and neck region and submandibular gland[1, 3]. Angioleiomyoma in the broad ligament, retroperitoneum and uterus are uncommon. Only 11 cases of uterine angioleiomyoma were reported from 1966 to 2007 [2-4]. Angioleiomyoma is a benign neoplasm, frequently seen in 4th and 5th decade of life. Severe menorrhagia is the common symptom reported in uterine angioleiomyoma[4, 5]. Local dysregulation of the vascular structures in the uterus, presence of venous plexuses and elaboration of certain growth factors by tumor cells are suggested to be the possible pathogenetic mechanisms to explain abnormal uterine bleeding[6].

Grossly, the tumor is grey white well circumscribed. Presence of abnormally dilated vessels in the angioleiomyoma may be mistaken for multiloculated and multiseptated ovarian tumor or adenomyosis[7]. Histopathologically tumor shows whorled, anastomosing fascicles of uniform, fusiform smooth muscle cells with interspersed thick-walled vessels. Areas of myxoid changes, hyalinization, calcification, and fat might be seen. Mitotic figures and necrosis are infrequent. Nuclear atypia along with raised CA-125 levels was reported by Thomas et al[8].

Angioleiomyomas are sub-classified into three histological types: capillary or solid, cavernous and venous. Because of degenerative changes, clinical diagnosis may be difficult. Immunohistochemical stains SMA, HMB-45, vimentin, desmin, CD34 and CD31 are necessary to differentiate angioleiomyoma from other neoplasms such as angiofibroma, fibroma, angiomyolipoma, angiomyofibroblastoma and perivascular epithelioid cell tumor (PEComa). Angiomyofibroblastoma is positive for vimentin, desmin, but negative for SMA. PEComas show positivity for HMB-45. Surgical excision is the treatment of choice. Complications like spontaneous rupture of the tumor, consumptive coagulopathy and Pseudo- Meigs syndrome might be seen[3, 5, & 8]. In conclusion, angioleiomyoma is the rare variant of uterine leiomyoma with benign nature.

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