Research Paper

Volume : 2 | Issue : 4 | Apr 2013 • ISSN No 2277 - 8179

# Leiomyosarcoma of the Uterine Cervix

Medical Science

**KEYWORDS :** Leiomyosarcoma, Cervix

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## ABSTRACT

*We present a case of leiomyosarcoma of the cervix. Leiomyosarcoma of the uterine cervix presenting as cervical polyp are known to occur. Sarcomas are extremely rare, incidence being 0.5%.1, 2 Only 30 cases have been described in literature.*

**INTRODUCTION**

Cervical tumors are seen usually in adult patients. Prognosis is usually worse.

**CASE REPORT:**

A lady of 66 years presented with vaginal bleeding along with dyspareunia, low back pain and bleeding per vagina. A vaginal hysterectomy was done 5 months before for the mass following which complains persisted for which she was re-operated. Per abdomen examination - was soft to tender. Per vagina and per speculum showed an irregular growth which was firm and fleshy with intervening soft areas. Microscopy showed hypercellular and hypo cellular interlacing fascicles of large spindle cells with moderate to marked nuclear atypia, high mitotic rate, atypical mitosis, single or multiple prominent nucleoli, tumor cell necrosis and vascular invasion.

**DISCUSSION:**

Leiomyosarcoma of cervix are extremely rare. Only 30 cases have been described in literature. The incidence being just 0.5%.1, 2. It is important to recognize them because they have great accessibility to blood stream and hematogenous dissemination.

The ectocervix show a lining of squamous epithelium, the endocervix and the glands have a tall columnar lining while the stroma is made of fibroblasts, muscle fibers ,vessels and nerves. Usually the epithelial proliferation takes an upper hand as compared to the mesenchymal proliferation. Traditionally the most significant indicator of malignant behavior has been the mitotic index...4 The presence of coagulative necrosis in a moderately atypical tumor justifies the diagnosis of leiomyosarcoma regardless of the mitotic count.5 The tumor is composed of bipolar fibroblasts with bizarre nuclei and light basophilic cytoplasm in myxoid stroma. The atypical mitotic figures more than 10/10 hpf determine its behaviour.6 Immunohistochemistry with smooth muscle actin and desmin demonstrates smooth muscle differentiation. Myxoid stroma is responsible for its recurrence. The trigger factor for this abnormal proliferation of myofibroblasts is a preexisting chronic inflammation with liberation of TNF α and IL-1 which stimulates fibroblast producing growth factor, this in turn causes smooth muscle proliferation. The use of indium 111-antimyosin, which is taken up by neoplastic muscle cells, has been suggested as a means of identifying these tumors preoperatively. At surgery these masses are usually large and unresectable. Compared the cells of leiomyosarcoma with those of fibrosarcoma the cells tend to be tapered, and those of a malignant peripheral nerve sheath tumor are wavy, buckled and distinctly asymmetrical. Clonal (EBV) DNA has been demonstrated in these tumors along with EBV surface receptor protein(CD 21).Smooth muscle specific actin (HHF35) can be detected in most leiomyosarcomas. Aggressive surgical treatment is the treatment of choice as these tumors have low metastatic potential. Complete surgical resection with a tumor free margin of 1cm is the treatment of choice. Neoadjuvant therapy may be given to reduce the size preoperatively and ensure complete surgical resection. Therefore accurate imaging and follow-up is essential for improving the patients survival.

**Figure 1: Tumor present in subepithelial location (H&E,100 X)**

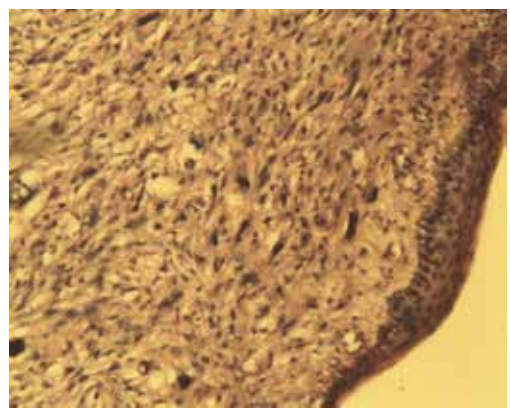


**Figure 2 High power view showing smooth muscle cell proliferation(H&E,40X)**

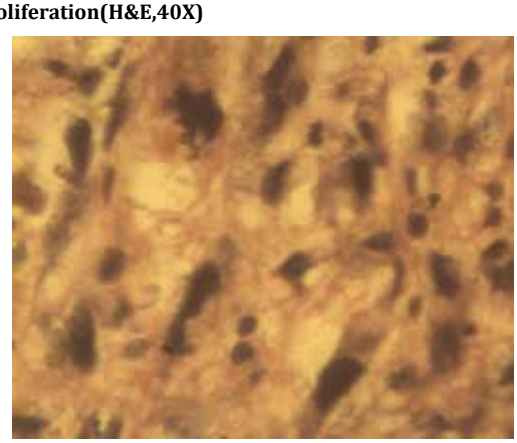


**Figure 3 Immunohistochemistry showing desmin negativity.**

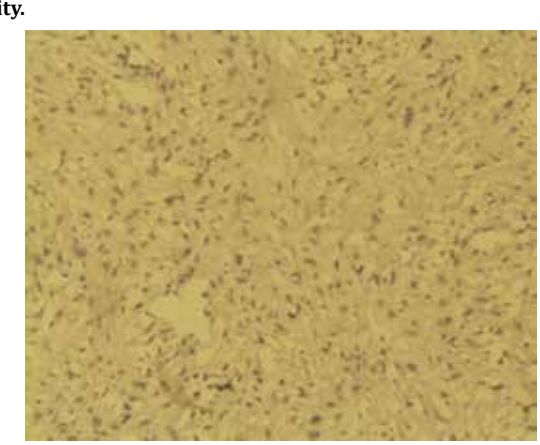
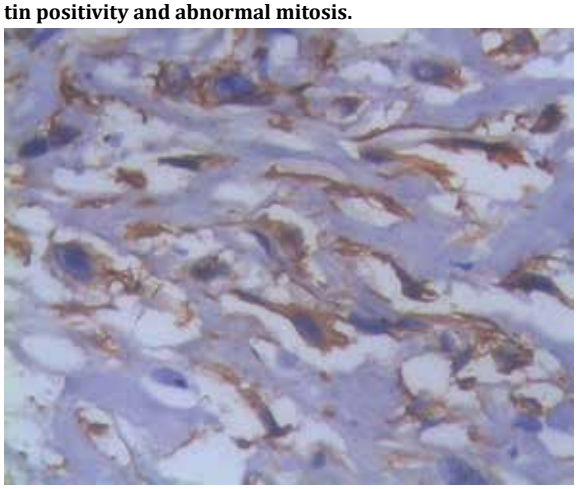


**Figure 4 Immunohistochemistry shows smooth muscle actin positivity and abnormal mitosis.**



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