

## UTERINE LEIOMYOSARCOMA MADE BY HISTOPATHOLOGICAL EXAMINATION AFTER HYSTERECTOMY – A RARE CASE REPORT

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### ABSTRACT

#### Introduction

Uterine leiomyosarcoma is a rare uterine malignancy that arises from the smooth muscles of uterine wall accounting for 1-2% of uterine malignancies. They differ from endometrial cancers in view of diagnosis, clinical behavior, pattern of spread, and management. The incidence of sarcomatous change in uterine leiomyomas is between 0.13% and 0.81%.<sup>[1, 2]</sup> We report a case of a 52 year-old female who presented with menorrhagia and metrorrhagia and was diagnosed later as a case of leiomyosarcoma of uterus. The diagnosis of leiomyosarcoma is made by histopathological examination after hysterectomy.

**KEYWORDS:** Uterine Leiomyomas, Uterine Leiomyosarcoma.

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**INTRODUCTION** Uterine leiomyosarcoma (ULMS) are rare smooth muscle tumours and have high metastatic potential. Preoperative diagnosis of leiomyosarcoma is a challenge for the gynaecologist as signs and symptoms are non-specific and imaging methods are not able

to differentiate it from other benign conditions. A history of prior pelvic irradiation can be elicited in about 4% of patients with leiomyosarcoma. We report a case of a 52 year old lady who presented with heavy menstrual bleeding and was later diagnosed to be having leiomyosarcoma.

### **CASE REPORT**

A 52-year-old woman, P2L2 reported to our OPD with complaints of heavy menstrual bleeding since six months. There was also history of weight loss and decreased appetite since four months. There were no associated bowel or bladder complaints. There was no history of any chronic illness or any prior hospitalization.

#### **On examination**

She was moderately built. Her blood pressure was 100/70 mm of Hg, pulse rate 86/min and respiratory rate 18/min. she was very pale and looking grossly anemic.

**On per abdominal examination,** a firm midline mass was present corresponding to 16 weeks of gestation. The mass was non tender and mobile from side to side.

**On per speculum examination,** mass of about 3×4 cms was seen coming through os with a thick pedicle. Altered and foul smelling vaginal discharge was present.

**On per vaginal examination,** cervix was pointing backwards. Firm mass of about 3×4 cms was present coming through OS with a thick pedicle. Uterus was anteverted, corresponding to 16 weeks size and mobile, B/L fornices were free.

**On per rectal examination,** per vaginal findings were confirmed. Rectal mucosa was free.

#### **Investigations**

Her Hb% was 6gm% and all other routine investigations were within normal limits. Ultrasound report showed – fibroid uterus. Her provisional diagnosis was fibroid uterus with infected fibroid polyp. After three points of packed cell transfusion, she was posted for polypectomy & endometrial biopsy. Polypectomy was done and on dilatation & curettage, moderate amount of scrapings were obtained and were sent to histopathological examination. Patient was advised to review with HPE report as soon as possible.

One and half month later, same patient came to gynaecology OPD with complaints of metrorrhagia. Her HPE report came as necrotizing fibroid polyp. she was very pale and her

Hb% was 6 gm%. On per speculum examination 7×8 cms cauliflower like friable debritic mass was present filling the vagina mimicking infected fibroid polyp. Cervix was not visible. Foul smelling vaginal discharge was present. On per vaginal examination, cervix was not felt. Uterus size could not be made out. Clinically leiomyosarcoma was suspected in view of rapid growth associated with fibroid uterus. Biopsy was taken from multiple sites of mass present in vagina and was sent to HPE. HPE report came as fibroid polyp with necrotic debris.



**Fig 1 - Per speculum – Friable debritic mass filling vagina.**

CT scan report showed degenerating fibroid.

High risk of malignancy was explained to patient attenders and she was posted for total abdominal hysterectomy.

### **Operative findings**

During surgery, after clamping bilateral uterine vessels, hemi-section of uterus was done at the level of isthmus. Firm mass of about 6×5 cms was arising from the anterior wall of uterus extending down into the vagina through cervix. The mass extending down into vagina was very friable and was removed in piece meal. Total abdominal hysterectomy with bilateral salpingo-oophorectomy was done.

On cut section 6×7cms mass was present with fatty degeneration. Specimen was sent to HPE.



**Fig 2 - Intraoperative picture showing hemi-section of uterus.**



**Fig. 3: Cut section of uterus showing Degeneration.**

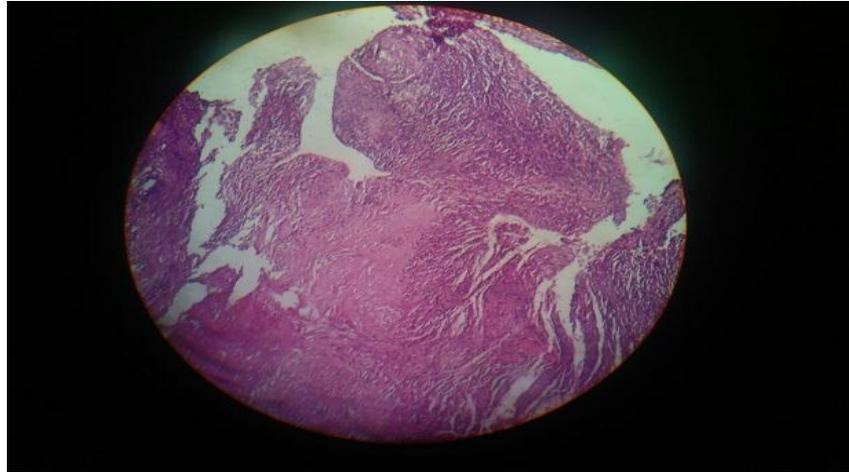


**Fig. 4: Mass removed from vagina in piece meal.**

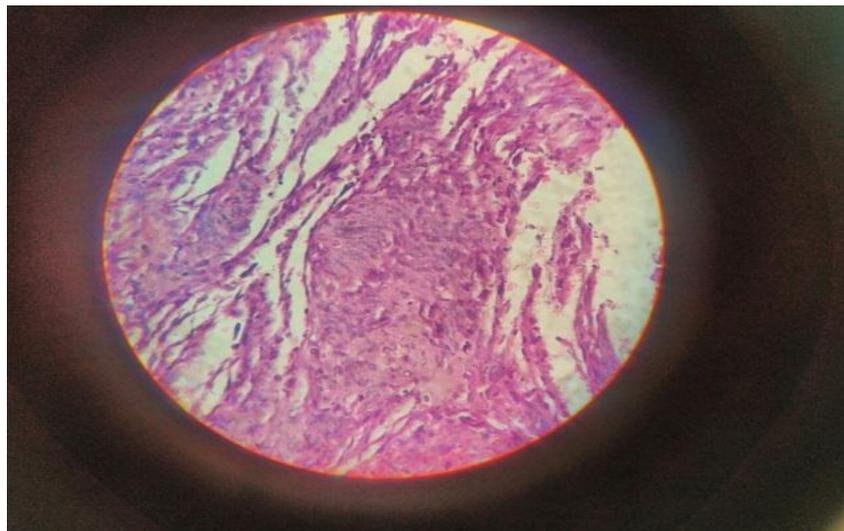
### **Histopathology**

Histopathologic examination showed a cellular tumor arranged in interlacing bundles of spindle cells with elongated hyperchromatic nuclei. The tumor cells were exhibiting moderate

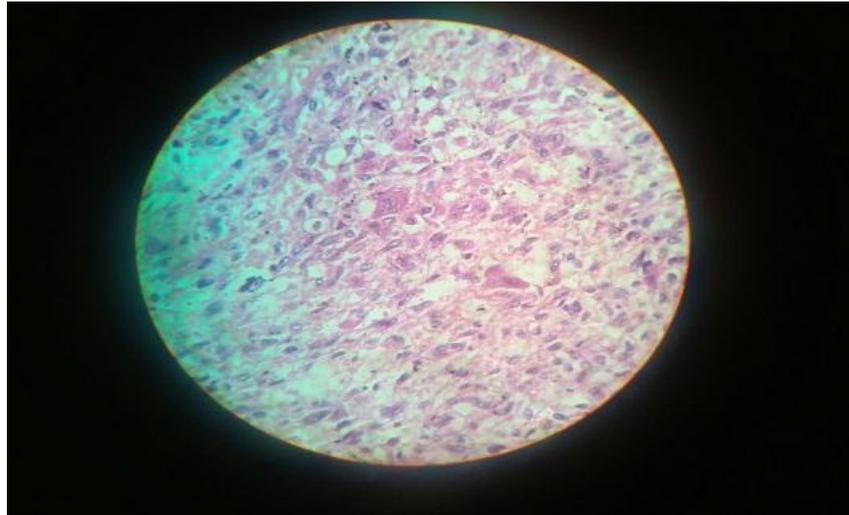
pleomorphism and bizarre nuclei with multinucleate tumor giant cells. There were scattered areas and normal and abnormal mitotic figures ( $> 5/\text{HPF}$ ) with marked nuclear atypia suggestive of uterine leiomyosarcoma.



**Fig. 5 Normal Histopathologic examination.**



**Fig 6: Changes Histopathologic examination.**



**Fig. 7: Changes Histopathologic examination.**

## DISCUSSION

Leiomyosarcomas are notorious for their aggressive nature and poor prognosis. The median age at presentation is between 47 and 56 years of age. Pelvic irradiation and Tamoxifen therapy are associated risk factors.<sup>[3]</sup> Patients presents with varied clinical presentation. Symptoms include abnormal uterine bleeding, pelvic pain, rapidly growing fibroid and postmenopausal bleeding. Pre-operative diagnosis is very difficult as routine ultrasound cannot diagnose uterine leiomyosarcoma. MRI and CT scan cannot distinguish between leiomyosarcoma and degenerating fibroid. The conditions that mimic sarcomas on CT or MRI are Adenomyosis, IV leiomyomatosis, lymphoma and endometrial carcinoma.<sup>[4]</sup> Histopathological examination of hysterectomy specimen gives definitive diagnosis and surgery is the only treatment. The prognosis primarily depends on the extent of disease at the time of diagnosis and the mitotic index.

Tumors with less than 5 MF/10 HPF are benign in nature and tumors with more than 10 MF/10 HPF are frankly malignant with a poor prognosis. Tumors with 5 to 10 MF/10 HPF are termed as cellular leiomyomas or smooth muscle tumors of uncertain malignant potential (STUMP) and are less predictable. Other histologic indicators used to classify uterine smooth muscle tumors as malignant are severe cytologic atypia and coagulative tumor cell necrosis.<sup>[5]</sup> Uterine smooth muscle tumors with any two of these three features are associated with poor prognosis.

Survival rates for patients with uterine leiomyosarcoma range from 20% to 63% (mean 47%). The pattern of spread is to the myometrium, pelvic blood vessels and lymphatics, contiguous

pelvic structures, abdomen, and then distantly, most often to the lungs and rarely to brain. Adjuvant chemotherapy has some value in the treatment of uterine leiomyosarcomas with or without radiotherapy. Doxorubicin is the single most active agent for treatment producing a 25% response rate. Gemcitabine has a role in persistent or recurrent uterine leiomyomas and, in combination with docetaxel, the overall response rate is 53%.<sup>[6,7]</sup> In our case clinically leiomyosarcoma was suspected. Patient underwent total abdominal hysterectomy with bilateral salpingo-oophorectomy and was referred to higher centers for further management.

## CONCLUSION

Leiomyosarcoma are most aggressive uterine smooth muscle tumors. They are diagnosed incidentally on histopathology after hysterectomy. Early diagnosis with complete surgical clearance gives promising chance of improved survival. The prognosis depends on the stage of the disease and the mitotic index.<sup>[8]</sup> Women with tumor size more than 5 cm in maximum diameter have a poor prognosis.<sup>[9]</sup> Literature shows improved survival after adjuvant chemotherapy with or without radiation therapy. The value of pelvic radiation therapy has not been established. Current studies consist primarily of phase II chemotherapy trials for patients with advanced disease.<sup>[10]</sup> To avoid diagnostic pitfalls, long-term follow-up studies of women with uterine fibroids is required to find radiological or biochemical features associated with early stage disease.

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