CASE REPORT

# Uterine leiomyosarcoma: A case report

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## ABSTRACT

Uterine leiomyosarcoma is a rare uterine malignancy that arises from the smooth muscles of uterine wall. It accounts for only 1-2% of uterine malignancies. We report a case of a 60-year-old female who presented with postmenopausal bleeding and was diagnosed later to be a case of leiomyosarcoma of uterus. The diagnosis of leiomyosarcoma is made by histopathological examination, and surgery is the only treatment. The prognosis for female with uterine sarcoma primarily depends on the extent of disease at the time of diagnosis and the mitotic index.

**Key Words:** Leiomyosarcoma, postmenopausal bleeding, uterine sarcoma

## INTRODUCTION

Uterine leiomyosarcoma is a rare uterine malignancy that arises from the smooth muscle of uterine wall. It accounts for only 1-2 % of uterine malignancies and occurs mainly after menopause. They are notorious for their aggressive nature and poor prognosis. The relative rarity of uterine leiomyosarcomas, as well as their pathological diversity, hinders studies aimed at improving understanding of the disease and makes it difficult to define the optimum management. We report a case of 60yr old female who presented with postmenopausal bleeding and was diagnosed later to be a case of leiomyosarcoma of uterus.

## CASE REPORT

A 60-year-old female of north Indian origin, reported to the OPD of GMC, Patiala, on 2 April 2013 with the complaint of postmenopausal bleeding since six months. Bleeding was off and on and irregular in nature. She also had lower abdominal pain, which was mild in intensity, non-radiating and having no variability with change of posture or respiration. There was also a history of weight loss and decreased appetite over the last two months. There were no associated bowel or bladder complaints. There was no history of any long-term illness or any chronic disease or any prior hospitalization.

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### On examination

Patient was moderately built. Vitals were stable with blood pressure 136/88mm Hg, pulse rate 76/min and respiratory rate 18/min; no pallor was present.

On per abdominal examination, a soft to firm midline mass was palpable, which was about 20 weeks as compared to a pregnant uterus and had smooth surface. The mass was mobile from side to side, with no tenderness or any changes in the overlying skin.

On per vaginal examination, the cervix was directed backward, uterus was anteverted, around 20 weeks size and mobile, B/L fornices were clear, and no tenderness was observed.

### Investigations

Patient had already undergone an endometrial biopsy and cervical biopsy on 8 March 2013 at a private nursing home, which showed malignant mesenchymal lesion and features suggestive of chronic cervicitis. On computed tomography dated 22 March 2013, there was a large, well-defined heterogeneous enhancing mass of approximately 14 × 12 cm size seen arising from uterus with thinned out peripheral rim of normal myometrial tissue with possible

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DOI: 10.4103/0976-7800.145175

infiltration into myometrial wall anteriorly with few nodular calcifications seen in the peripheral and central regions. Both the ovaries were normal looking. The pelvic fat planes were well maintained and appeared normal. Muscular and bony walls had normal outline. There was no lymphadenopathy.

Probable diagnosis of endometrial growth was made and the patient was advised surgery. All necessary investigation was done.

## Operative findings

Without much delay, the patient was taken up for surgery on 3 April 2013. Intraoperatively, the peritoneal sampling was taken and sent for cytology. The uterus was enlarged and about 20 weeks size and there were dense adhesions of omentum at the uterine fundus with anterior abdominal wall. Uterus along with bilateral ovaries and fallopian tubes was removed. Incidentally, plastic tip of Karman's cannula was found lying in the anterior uterine wall. [Figure 1] Intraoperatively, the patient was transfused two units of packed cells.

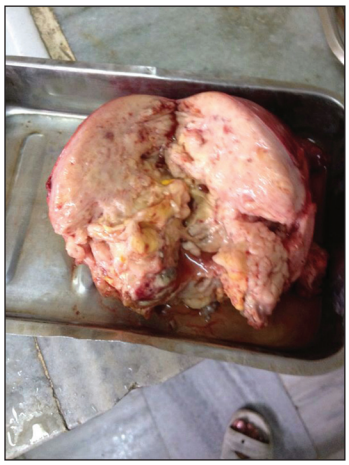

**Figure 1:** Gross specimen showing necrotic endometrial growth

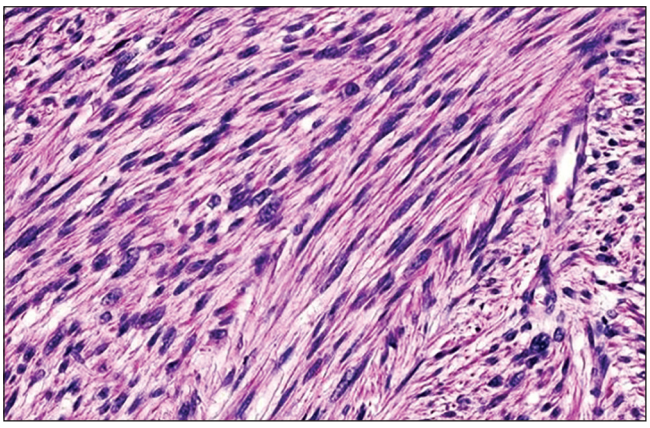

**Figure 3:** (100×, H and E) Showing fascicles of smooth muscle cells exhibiting atypia

## On gross examination

Uterus was uniformly enlarged and surface was smooth apart from irregularity because of removal of adhesions. On cut section, the anterior wall of myometrium was thickened and showed degenerative changes. Whole of uterine cavity was filled with necrotic growth [Figure 2].

## On histopathological examination

There was richly cellular, neoplastic growth of elongated cells exhibiting pleomorphism, and many mitotic figures, bizarre cells, multinucleated giant cells and nuclear hyperchromatism were observed [Figures 3 and 4]. The growth was not circumscribed and was extending through the endometrium into the cavity. At most places, nuclei had rounded ends (cigar-shaped nuclei). Areas of hyaline change, necrosis and fibrosis were also present. It was diagnosed to be a case of leiomyosarcoma grade II. The peritoneal washings were found to be negative for malignant cells.

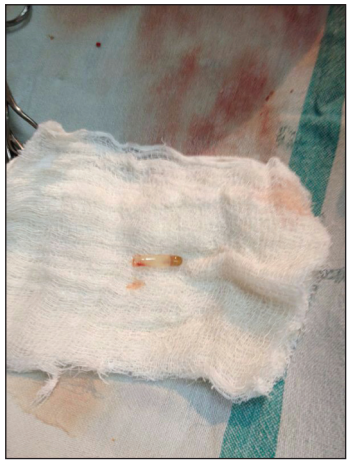

**Figure 2:** Tip of Karman's cannula removed during surgery

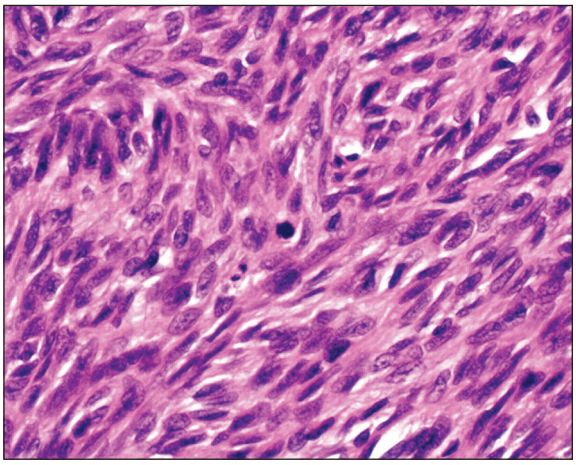

**Figure 4:** (400×, H and E) Showing cells having enlarged irregular nuclei with dispersed chromatin, prominent nucleoli, and having prominent mitotic activity

The postoperative period was uneventful and the patient was discharged in satisfactory condition after a hospital stay of seven days. Patient was asked to follow up in OPD but patient didn't turn up. Patient was contacted telephonically and counseled. Two months postoperatively the patient came for follow up and was admitted for chemotherapy on 7 June 2013. Patient underwent all routine investigations and was given six cycles of chemotherapy in the form of:

- Injection Gemcitabine 1 g IV on day 1 and day 8
- Injection Docetaxal 120 mg IV on day 1.
- Injection Emgrastin subcutaneously on day 4 and day 5.

Each cycle of chemotherapy was given after an interval of three weeks. After two cycles of chemotherapy in the month of July, patient developed drug-induced pruritis but was managed conservatively. Patient successfully completed six cycles of chemotherapy on 17 October 2013. Patient was called upon for follow up in the month of November; all routine investigations were done and found to be normal. No abnormality was detected on per vaginal examination and chest X-ray was also normal. Patient was found to be in stable condition. Patient again visited the hospital for follow up in January and April 2014 and was found to be in stable condition and on per vaginal examination vault was healthy and no abnormality was detected. Repeat chest X-ray was done and was found to be normal. After one year of follow up, patient is found to be in good health.

## DISCUSSION

Uterine leiomyosarcoma is an uncommon malignancy accounting for approximately 1% of uterine cancer with an estimated annual incidence of 0.64 per 100,000 women. Although leiomyosarcoma can occur elsewhere in the pelvis, including the cervix and urinary bladder, it is more commonly found in the uterus, as seen in our case.[1] Most occur in women over 40 years of age who usually present with abnormal vaginal bleeding (56%), palpable pelvic mass (54%) and pelvic pain (22%). Signs and symptoms resemble those of the far more common leiomyoma and preoperative distinction between the two tumors may be difficult.[2] Our patient presented with complaints of postmenopausal bleeding since six months.

Uterine fibroids are not generally thought to develop into malignant leiomyomas but leiomyosarcomas frequently coexist within a fibroid uterus and approximately 0.5% of women who have hysterectomies for uterine fibroids are found to have leiomyosarcomas.[3] It is difficult to accurately diagnose leiomyosarcoma before surgery because most women with leiomyosarcoma will have multiple fibroids making it difficult to know which ones should be biopsied. The incidence of leiomyosarcomas being found in women operated on for presumed uterine fibroids is about 0.5%.[3] Magnetic resonance imaging (MRI) might offer some information, but is not entirely accurate. Uterine leiomyosarcomas are aggressive tumors with high rates of recurrence. They originate from the myometrium or myometrial vessels. The diagnosis of uterine sarcoma is made from histologic examination of entire uterus as seen in our case. Local therapy consists of total hysterectomy. Bilateral salpingo-oophorectomy and dissection of pelvic and para-aortal lymph nodes are not recommended since lymph node involvement is seen in <3%.[4] Prognostic factors include tumor size >5 cm and a high mitotic index, although they are highly aggressive even with a mitotic count of less than 2/mm$^2$.[5] The most common mode of spread is hematogenous, with lymphatic spread being rare. Recurrences of up to 70% are reported in stage I and II disease with the site of recurrence being distal, most commonly the lungs or the upper abdomen.[6-8] Survival rates are dependent on the stage of disease at diagnosis. The five-year survival rate is 50-55% for stage I and 8-12% for stage II-IV.[7] Overall, the five-year survival rate, for all stages, ranges from about 30% to 50%. Local recurrences are salvageable with surgery. Isolated pulmonary metastasis can also be resected, with overall survival of 45% and 35% at five and 10 years, respectively.[9]

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**How to cite this article:** Kaur K, Kaur P, Kaur A, Singla A. Uterine leiomyosarcoma: A case report. J Mid-life Health 2014;5:202-4.

**Source of Support:** Nil, **Conflict of Interest:** None declared.