

Case Report

Leiomyosarcoma of the cervix

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Introduction

Leiomyosarcomas arising in the uterine cervix are exceedingly rare tumors. Only 20 cases have been previously reported in the world literature¹. No case has been reported from India so far. Though older literature indicates that leiomyosarcoma is the most common sarcoma of the uterus. GOG (Gynecology Oncology Group) in 1993 found that the incidence of leiomyosarcoma was only 16% upon evaluation of 447 cases of uterine sarcomas².

Case Summary

A 38 years old lady married for 19 years P₀₊₁ - a case of infertility (she had an abortion 16 years back) - presented to the out patient clinic on 30th October 2004 with recurrent retention of urine for 4 months, requiring intermittent catheterization. The patient was a known diabetic for four years; was on oral hypoglycemics, but two weeks prior to admission, she was switched over to insulin. She was also on treatment for hypothyroidism

for the past 6 years. On examination, her general condition was good and vitals were within normal limits. There was no thyroid enlargement and systemic examination revealed no abnormality. A suprapubic mass of 12-14 weeks size was abdominally palpable. On speculum examination, the cervix appeared to be fully effaced and thinned out anteriorly; the posterior lip was replaced by a large pinkish colored mass which was smooth and was bleeding on touch. Bimanual examination revealed a large firm growth arising from the posterior lip of the cervix. The uterus along with this mass was approximately 14 weeks size, its mobility was restricted, and both fornices were free. A clinical diagnosis of cervical fibroid was made and the patient was admitted on 1st November 2004. Her hemoglobin was 10.8 g/dL, and blood group was B negative. In view of her high blood sugar, her insulin injections were stepped up till glycemic control was achieved. MRI (Figures 1a and 1b) showed a well encapsulated mass in the posterior lip of the cervix.

Though a myomectomy was planned the patient opted for hysterectomy which was done on 4th November, 2004. Pre-operatively intravenous antibiotics (augmentin 1.2 g x 8 hourly, amikacin 500 mg x 12 hourly and metrogyl 500 mg x 8 hourly) were started and continued till 4 days after surgery. Intraoperative findings were a normal size uterus sitting atop a large ballooned up cervix of around 10-12 cm diameter. The left tube was dilated and its fimbrial end was buried in

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the mesosalpinx. The left ovary, right tube and ovary appeared normal. There was no evidence of ascites, retroperitoneal lymphadenopathy or metastatic spread in the abdomen or pelvis. The fibroid appeared to arise from the cervix from 2 o'clock to 9 o'clock position. We planned to enucleate the fibroid in order to facilitate the hysterectomy. An incision was given in the posterior aspect of cervix till the plane of tumor was reached. It could be easily enucleated except at the base where it was adherent to cervical tissue. After myomectomy, hysterectomy was performed and the abdomen closed. The cut section of the uterus revealed no abnormality in the uterine walls or in the cavity. The cervical fibroid which was enucleated from the posterior lip of the cervix was about 10x11 cm with a smooth surface except at the base. Intraoperative blood loss was around 600mL and she received one unit blood transfusion.

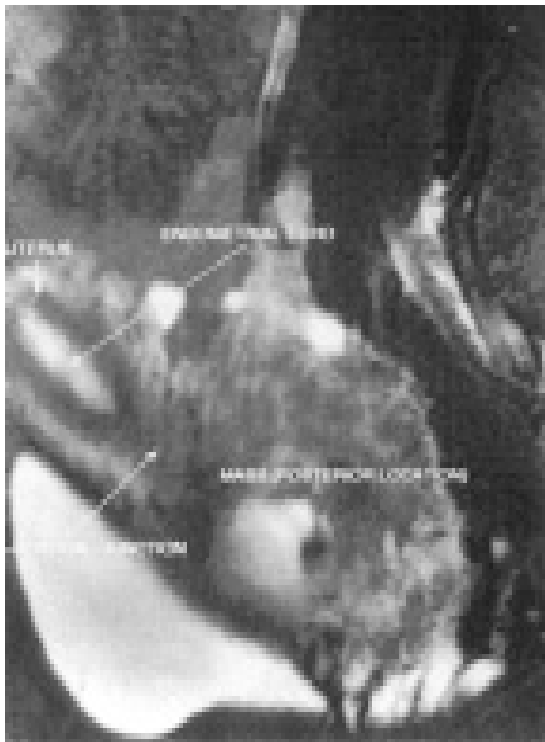


Figure 1a. MRI showing mass in the posterior lip of the cervix

Post-operatively the patient was restarted on insulin injections after 24 hours and her intravenous antibiotics were continued for 4 days. There were no post-operative complications and sutures were removed on 8th post operative on 11th November, 2004. Histopathology (Figure 2) of the fibroid revealed a cellular tissue

comprised of oval to spindle shaped to round cells with pleomorphic hyperchromatic nuclei, showing nuclear atypia and frequent bizarre mitosis (ranging between 17-20/10 HPF). A similar tumor was seen in the section taken from cervical region. A section from the left fallopian tube revealed granulomatous salpingitis consistent with tuberculosis along with salpingitis isthmica nodosa. Sections from the endometrium showed secretory endometrium and that from the cervix revealed chronic cervicitis with squamous metaplasia. Immunohistochemical tests were performed which found the tumor to be positive for desmin and actin. The diagnosis of cervical leiomyosarcoma was thus confirmed.

The patient received EBRT to the pelvis in a dose of 50Gy/25F/5 wks. She was also advised vault radiation and chemotherapy.

After completing the course of EBRT on 30/12/04 the patient did not come for follow up for a long time. She

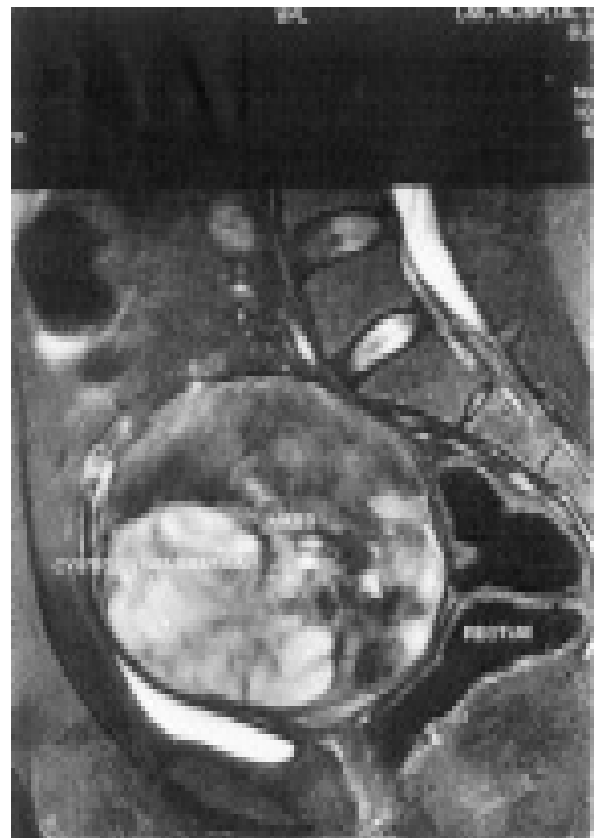


Figure 1b. MRI showing mass in the posterior lip of the cervix

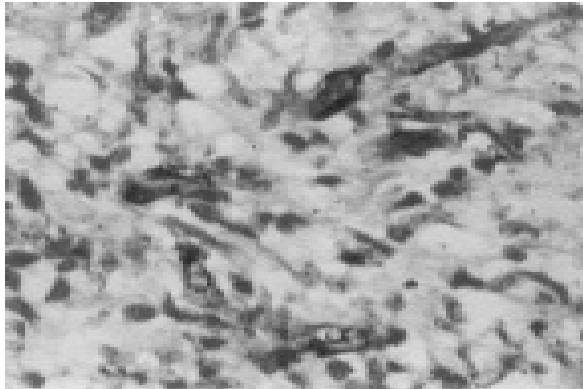


Figure 2. Histomicrophotograph showing actin positive cytoplasm in atypical spindle cells of the leiomyosarcoma. Actin immunostain with hematoxylin counterstain 400x

neither received any vault radiation nor any chemotherapy at our hospital. After a gap of 5 months she presented at the Radiotherapy department on 20/05/2005 with a history of pain in the right hip joint and a feeling of uneasiness on being questioned about her failure to complete her treatment. Her relatives said that she refused to believe that she had any malignancy and therefore failed to comply. Her findings on pelvic examination revealed a central recurrence of the tumor. MRI done also showed central recurrence which was suggestive of bilateral parametrial and adnexal infiltration. There was loss of clear planes of cleavage with the posterior right lateral aspect of urinary bladder. There was significant lymphadenopathy - retroperitoneal, as well as pelvic. There was no bony infiltration. She was advised to undergo chemotherapy but she chose to get it from Oswal Hospital.

The chemotherapy received was injection Heloxan 3gm, injection Mesna 600 mg, injection Adriamycin 30mg for 3 days in each cycle.

1st cycle from 23/5/05 to 26/5/05.

2nd cycle from 15/6/05 to 17/6/05 - she developed neutropenia.

3rd cycle from 5/7/05 to 15/7/05.

After discharge from Oswal Hospital she had no further follow up in the hospital or elsewhere. At home her condition gradually deteriorated; she developed abdominal distention and anorexia. It is reported that she expired on 20th August, 2005

Discussion

Cervical leiomyosarcomas are extremely rare tumors occurring in the perimenopausal period. The most common presenting symptom is abnormal vaginal bleeding ¹ but our patient presented with urinary retention. Leiomyosarcomas of the cervix are usually bulky tumors; in the present case the size of the tumor was 10 x 9 cms and it weighed 560g.

The most favorable prognostic factor for patients with uterine leiomyosarcoma is a premenopausal status. Low mitotic figures (Less than 10 per HPF) and lower grades of the tumor (grade 1 and 2) are also associated with a significantly higher 5 year survival³. Some important factors which reduce the survival are older age (>51 years) and larger tumor size (>5 cms). The first step in the treatment of uterine sarcoma should be exploratory laparotomy. Total abdominal hysterectomy is the standard procedure and bilateral salpingo oophorectomy should also be performed in all patients except premenopausal women with leiomyosarcoma. Random biopsies or retroperitoneal lymph node sampling of normal appearing structures rarely yield clinically useful information ¹. Adjuvant radiotherapy brings about a significant decrease in local recurrences of the tumor. It is therefore prudent to use it in patients at high risk for local failure (tumors >5cm. high mitotic count, high grade) ⁴. Adjuvant chemotherapy may be given for the management of metastatic uterine leiomyosarcoma; the combination of doxorubicin and ifosfamide has been employed more commonly as first line therapy for women with advanced or recurrent leiomyosarcoma ¹.

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