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Leiomyosarcoma of uterus - A rare case presentation

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ABSTRACT

A leiomyoma or uterine fibroid can develop into leiomyosarcoma, a malignant change. Two to five percent of all uterine tumors are caused by this uncommon tumor, which grows from the smooth muscle of the uterus. Rarely have cases in the past been described. Genital bleeding, a common sign of uterine sarcoma, had never happened to our patient (US). We offer a unique case study of a rare tumor that sprang from the uterus and manifested unusually. A 55-year-old woman with stomach pain that started out mildly and worsened was sent to the hospital. The discomfort was non-radiating, dull and agonizing, and it came and went. The patient also discovered a lump in his abdomen that appeared out of nowhere and grew larger. Using CECT, a mass that was protruding from the pelvic was found. The results of the histology study supported the diagnosis of uterine leiomyosarcoma. Due to their scarcity, the US is not acceptable for screening. The sole available form of treatment is surgery, and the diagnosis is made by histopathologic testing. The prognosis for women with uterine sarcoma is mostly influenced by the severity of the disease at the time of diagnosis and the mitotic index.

Keywords: Case report, Leiomyosarcoma, Rare tumor, Uterus

1. INTRODUCTION

Leiomyosarcoma (LMS) of the uterus is an occasional mesenchymal tumor having an incidence of 0.67/1lakh women (Christopherson et al., 1972). It is responsible for 3% to 8% of all uterine corpus malignancies (Major et al., 1993) and a large portion of uterine cancer deaths (Ricci et al., 2017). The tumors are deadly while being uncommon, having a dismal prognosis and aggressive biology that promotes early metastatic spread both locally and internationally. There is a lack of consensus on prognosis and care (Gockley et al., 2014). Effective treatments to achieve sustained survival or cure in those with both early and advanced-stage cancer have been elusive due to active tumor biology and relatively chemoresistant disease. Surgery is also the gold standard for treating all soft tissue sarcomas, including uterine LMS (Ricci et al., 2017). Despite this, preoperative diagnosis of uterine LMS can be difficult because it can resemble benign uterine leiomyomas. In this report, we discuss the case of a 55-year-old woman who had uterine leiomyosarcoma.

2. CASE PRESENTATION

A 55-year-old woman presented to the hospital with a report of abdominal pain that began slowly and progressed. The pain was dull and aching in nature, non-radiating, and sporadic. The patient also found a lump in his abdomen that appeared suddenly and grew in size. The lump began small, measuring 3x3 cm, and eventually grew to its current size of 20 x 20 cm. The mass started in the lower abdomen and expanded upwards, covering the entire region up to the umbilicus. There are no aggravating or relieving causes connected to it. PV bleeding and constipation were also present. Fever, cough, cold, nausea, vomiting, or bladder problems were not present. Menarche occurred when the woman was 15 years old, and menopause occurred when she was 45 years old. Her menstrual cycles were normal. Her obstetrics experience was common up to full term. Her previous medical records indicated that she had a complete abdominal hysterectomy with bilateral salpingo oophorectomy 6 months prior for dysfunctional uterine bleeding.

On her general examination, it was found that her pulse rate was 78 bpm, respiratory rate was 16 cycles per minute, BP was 126/72mmHg, afebrile temperature, and no pallor/icterus /cyanosis/clubbing/lymphadenopathy. On systemic examination there was no abnormality seen in the Respiratory, cardiovascular, CNS systems. A diffuse lump of abdomen measuring about 15 x 15 cm encircled the hypogastrium, umbilical, left and right lumbar regions is seen upon local examination. The umbilicus is moved upwards and inverted, a safe scar line of around 8 cm in length with no gape or discharge. There was no redness and no noticeable pulsations or engorged veins. Approximately 15 x 20 cm masses measuring up to the umbilicus were palpable in the lower right and left quadrants. The left quadrant had a solid consistency, while the right quadrant had a cystic consistency. There has been no increase in local temperature or tenderness. Expansile coughing was not present.

Ultrasonography (USG) is a technique that scans the internal organs of the body using high-frequency sound waves. A USG of the abdomen and pelvis revealed only minor ascites. Multiple echogenic septae were found inside a large solid cystic mass posterior to the bladder in the infraumbilical area of the pelvis. The lesion is 16.2 x 10.4 x 9.6 cm in size (vol.-840ml). It was a sign of ascites and b/lhydronephrosis, indicating metastasis.

A CT scan with contrast content is called contrast-enhanced computed tomography (CECT). Contrast material is used during the CT scan, as the name suggests. CECT of the abdomen and pelvis revealed a well-defined round to oval solid cystic mass lesion in the pelvis, with heterogeneous contrast enhancement in the solid portion (figure 1). The lesion, which is abutting the post, is approximately 15 x 12 x 10 cm in dimension. Superiorly, the mass is seen extending the abdominal cavity, displacing the bowel loops superior and laterally, compressing the rectum posteriorly, sigmoid colon laterally to the left, and superiorly the mass is seen extending into the abdominal cavity and displacing the bowel loops superior and laterally. The fat plane between the mass, bladder, and rectum, on the other hand, tends to be intact. The lesion is causing proximal dilation of the right ureter and pelvicalyceal system by pushing the right middle ureter laterally and compressing it against the right psoas muscle (grade II hydronephrosis). The uterus and ovaries cannot be seen apart from the mass, meaning that it is recurrent.

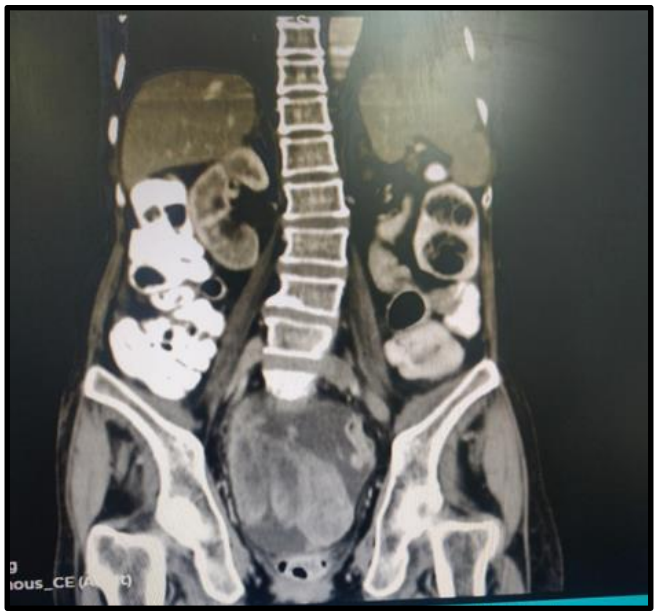

Figure 1 CT Scan

To extract the mass, a large local excision with b/l DJ stenting was performed under general anaesthesia. Tumor cells adherent to small and large intestine, sigmoid colon, and urinary bladder were discovered intraoperatively (figure 2). The tissue that was sent for analysis and the features of what the cancer looks like under the microscope are described in the histopathological examination (HPE) study. The HPE report indicated Leiomyosarcoma of uterus (figure 3). 20/1123A, 20/1123B- It shows spindle cells with atypical mitosis at places, epithelial-like shape arranged in fascicles and enclosed within a capsule on histopathology (figure 4). 20/1129A- It shows spindle cells with moderate degree of hyperchromasia. Abnormal mitosis, tumor giant cell formation with epithelial-like shape arranged into fascicles, foci of hemorrhages, foci of necrosis seen on histopathology (figure 5).

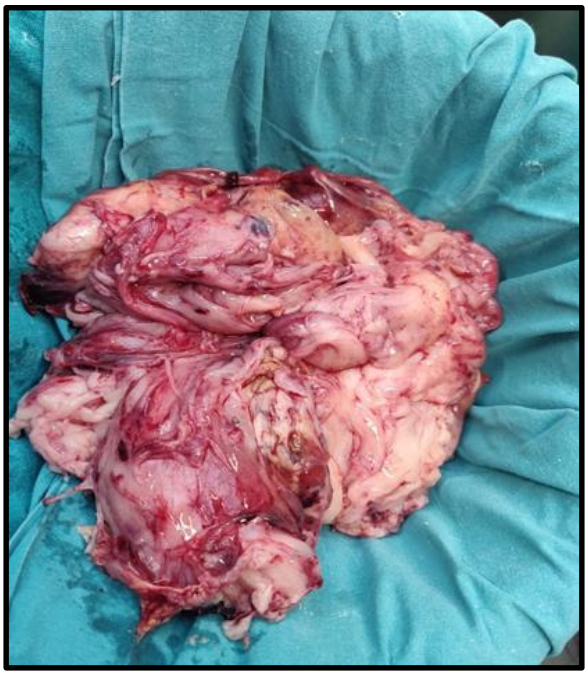

Figure 2 Excavated Mass

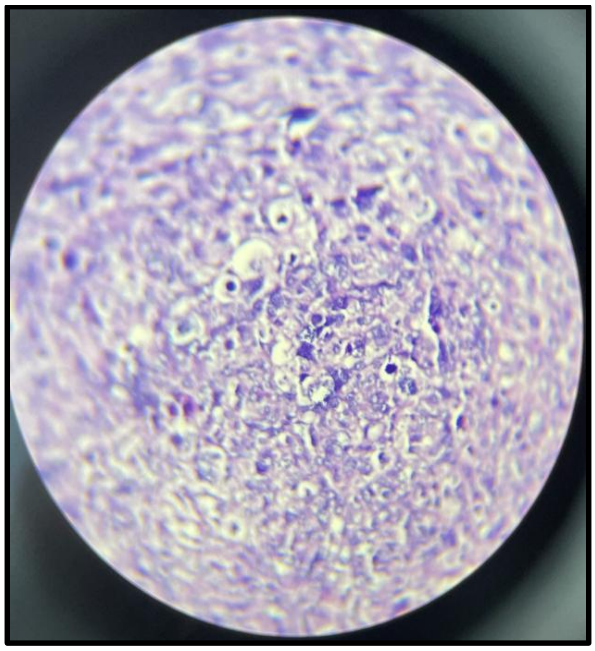

Figure 3 Histopathology (Leiomyosarcoma of uterus)

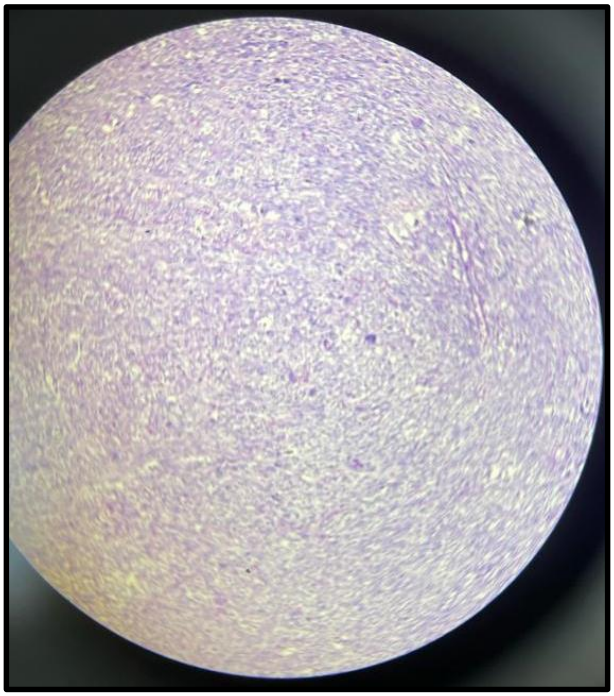

Figure 4 Histopathology 20/1123A, 20/1123B

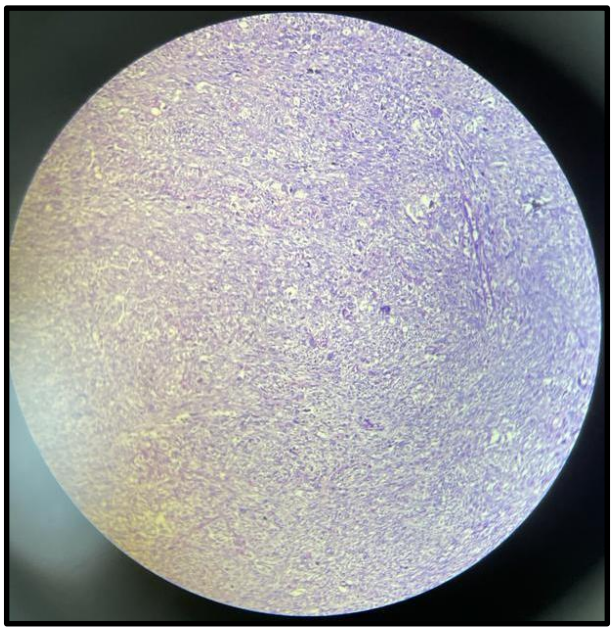

Figure 5 Histopathology 20/1129A

20/1129E- Part of ovary noted, no fallopian tube identified. On histopathological analysis, a 15 x 13 x 9 cm irregular mass with attached parametrium was discovered. The external surface is irregularly bosselated and greyish brown in color. Grey white areas with focal hemorrhagic and focal cystic areas can be seen on the cut part. Histopathological characteristics indicative of sarcomatous tumor suspected of leiomyosarcoma in a section from the tumor mass (epithelioid type).

3. DISCUSSION

Uterine sarcomas (US) are extremely rare, leading to two-five percent of all uterine tumors (Forney et al., 1981). Prior pelvic radiation, which happened in 10% to 25% of cases, was considered to be a risk factor. Parity, the length of the menarche, and menopause as risk factors have conflicting evidence. The use of long-term adjuvant tamoxifen in women with breast cancer

appears to increase the risk of uterine sarcomas (Bergman et al., 2000). Sarcoma affects one percent to two percent of postmenopausal women. The majority of these patients have irregular uterine bleeding (Wickerham et al., 2002). There were no menstrual irregularities in our patient. It's a fast-growing tumor with a four-week doubling period. Mixed Müllerian sarcomas have a 50% incidence, leiomyosarcoma has a 30% incidence, endometrial stromal sarcoma has a 15% incidence, and adenosarcoma has a 5% incidence. Although several writers believe that the number of mitoses is the most accurate histologic criteria for diagnosing leiomyosarcoma of the uterus, others disagree. It is clear from published cases that this function has not been used as the primary criteria in all cases. It came as a surprise to us that even the most cellular and bizarre leiomyomas turned out to be benign and non-aggressive.

A histologic analysis of the entire uterus is used to diagnose uterine sarcomas. Following hormone treatment, bizarre cellular modifications have been observed in leiomyomas. Giant cells, pleomorphism, and other alterations have been discovered in leiomyomas removed during cesarean section. We were unable to locate information on true occurrence rates of uterine leiomyosarcoma. The published frequency data are typically calculated as a percentage of uterine smooth muscle tumors and the data is very scarce. As this lesion is rare, there are difficulties in diagnosing it, the series published in the literature are typically limited and not comparable.

4. CONCLUSION

US are not appropriate for screening due to their rarity. The only option is surgery. The prognosis for women with uterine sarcoma is mostly influenced by the severity of the disease at the time of diagnosis and the mitotic index. Women with tumors with a median diameter of more than 5 cm have a poor prognosis. Adjuvant chemotherapy with or without radiation therapy has been shown to increase survival in nonrandomized trials. It is yet unknown whether pelvic radiation therapy is effective. The majority of current research is phase II chemotherapy trials for patients with advanced cancer.

Informed consent

Written & Oral informed consent was obtained.

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Conflicts of interest

The authors declare that there are no conflicts of interests.

Data and materials availability

All data associated with this study are present in the paper.

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