CASE REPORT

Uterine Smooth Muscle Tumor of Uncertain Malignant Potential in a Young Woman: A Rare Case Scenario

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Abstract

Background: Smooth muscle tumor of uncertain malignant potential (STUMP) of uterus indicates a group of uterine smooth muscle tumors that are not diagnosed unequivocally as either benign or malignant. It is a rare tumor in young women. It is considered as a "transition" tumor between leiomyoma and leiomyosarcoma or possibly undiagnosed leiomyosarcoma.

Case description: We herein report a case of uterine STUMP in a 28-year young nulliparous woman who presented with a symptom of continuous dull aching lower abdomen pain. MRI pelvis shows large transmural vascular mass. Underwent radical hysterectomy, histopathology report, and immunohistochemistry showed STUMP with ki67 <10%.

Conclusion: STUMP is a rare tumor with inconsistent diagnostic criteria and has no definitive treatment protocols especially in young women who desire for fertility.

Keywords: Leiomyosarcoma, Radical hysterectomy, STUMP, Tumor.

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Background

Smooth muscle tumor of uncertain malignant potential (STUMP) of the uterus is a group of smooth muscle tumors, which are difficult to diagnose as benign or malignant, i.e., they lie as "transition" between leiomyoma and leiomyosarcoma or undiagnosed leiomyosarcoma. About 0.01% of cases are diagnosed as STUMP in women who undergo myomectomy or hysterectomy.[1]

The rarity of the disease, inconsistent diagnostic criteria, less data available on STUMP's malignant potential create difficulty in management, especially in young women.

Case Description

A nulliparous woman of 28 years presented to the outpatient department with a complaint of lower abdominal pain for 1 month. Her menstrual cycles were regular. Examination showed abdominal mass arising from the pelvis of around 20 cm, firm, smooth, mobile, nontender occupying suprapubic region and right iliac fossa. On vaginal examination, uterus was enlarged to 16 weeks size, firm, mobile, nontender, no mass felt in both the fornices.

Ultrasonography showed enlarged and bulky uterus (14 × 7 cm) with degenerating fibroid (9.8 × 5 × 6 cm) in anterior and right lateral wall extending to right parametrium with increased vascularity. MRI pelvis showed uterus (12.5 × 8.2 × 10.3 cm) with large transmural vascular mass in anterior and right lateral wall extending into right parametrium with multiple dilated vessels. The patient was explained about the possibility of malignancy because of high vascularity. After counseling and informed written consent, the case was posted for myomectomy/hysterectomy.

Intraoperative findings—A highly vascular subserosal fibroid of 10 × 5cm (International Federation of Gynecology and Obstetrics-6) was noted in the right anterolateral wall of the uterus extending onto the right parametrium with no definitive cleavage line. Frozen section was done, which showed malignancy. Myomectomy was done and sent for histopathological examination (HPE). Blood loss was 800 mL, she was transfused with1unit of packed RBC.

The case was referred to the oncology unit for further management. Positron emission tomography-computed tomography was done which showed bulky uterus with a large heterogenous lesion (7.5 × 5.8 cm) in anterior myometrium extending to right parametrium indenting urinary bladder with multiple dilated venous channels in both adnexa with few nonavid bilateral external iliac lymph nodes. She underwent a radical hysterectomy, bilateral pelvic lymph node was removed and sent for HPE. Postoperative period uneventful. Histopathological report (Fig. 1) showed spindle cell lesion (intramural and subserosal). STUMP with lymph nodes showing reactive hyperplasia.

Immunohistochemistry—(Vimentin, SMA, Desmin) shows diffuse strong positive; ki67—nuclear positivity in 15% of lesional cells (Fig. 2).

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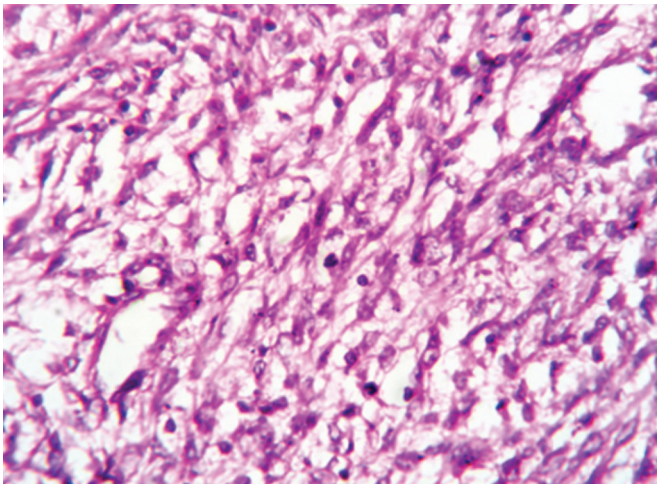

Fig. 1: STUMP showing mitosis

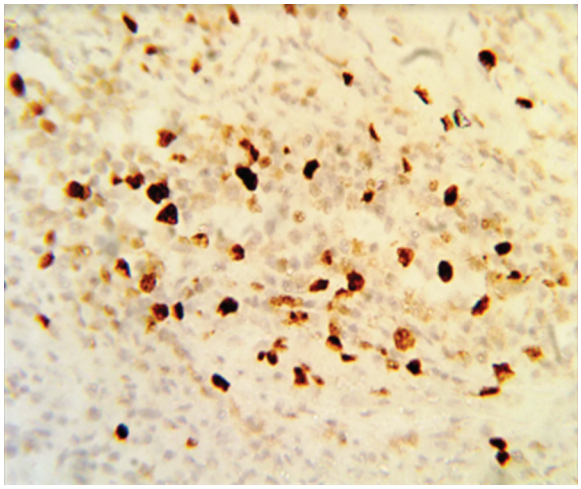

Fig. 2: Immunohistochemistry ki67—<10%

Discussion

The mean age of STUMP diagnosis is around 43 years, which may be due to less demographic data available and the condition being rare.[2] Often STUMP and benign leiomyoma both present with the same symptoms, it is difficult to diagnose even on MRI.[3] Fast-growing fibroids are also mostly benign on HPE, and MRI is not reliable in excluding the malignancy.[4] "STUMP" diagnosis should be made only by thorough HPE.[5]

Stanford criteria is used for histopathological classification which is based on the presence of abundant mitosis (≥10 per HPFs), presence of atypical, and areas of coagulative tumor cell necrosis.[6,7] STUMP shows these features but does not fulfill the diagnostic criteria of leiomyosarcoma.[6]

Generally, these tumors are slow-growing tumors and metastasize later when compared to leiomyosarcoma.[6] Clinical behavior of "STUMP" and the fact that the malignant potential of some of them is substantial; patients should receive close and long-term follow-up.[8]

Conclusion

STUMP usually presents like that of benign leiomyoma. No definitive preoperative diagnostic method for STUMP. Because of its extreme rarity, it should not be missed.

Definitive treatment is surgery (hysterectomy ± Bilateral Salpingo-oophorectctomy depending upon age and other prognostic factors). Prognosis depends upon the extent of disease and mitotic index.

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