Original Research Paper

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UTERINE SMOOTH MUSCLE TUMOR OF UNCERTAIN MALIGNANT POTENTIAL(STUMP).

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KEYWORDS :

INTRODUCTION:

Uterine smooth muscle tumor of uncertain malignant potential (STUMP) is a rare tumor. Uterine smooth muscle tumors are classified as benign leiomyoma and malignant leiomyosarcoma regarding presence of tumor cell necrosis, cytological atypia and mitotic activity. STUMP is regarded in World Health Organization (WHO) classification as smooth muscle tumors between benign and malignant criteria. STUMP is seen mostly in age of mid-forties, who has been operated with preoperative leiomyoma diagnosis. Risk factors and prognosis are not fully understood, but in long-term follow-up, there is a potential of recurrence or metastasis.

Uterine smooth muscle tumors have historically been distinct in benign leiomyomas and malignant leiomyosarcomas on the basis of cytological atypia, mitotic rate and presence or absence of tumor cell necrosis (CTCN). The Stanford criteria for the histologic diagnosis of leiomyosarcoma reported by Bell et al include at least two of the following criteria: diffuse moderate-to-severe atypia, a mitotic count of at least 10 mitotic figures/10 HPF and tumor cell necrosis criteria; absence of necrosis and atypia, ≤ 4 mitosis indicating benign leiomyoma.

PAST HISTORY-

No history of HTN/DM/Thyroid/BA
On admission,
She had Hb-8.2gms, for which INJ.FCM 1gm was given

On Examination-

Patient is consious, coherent, comfortable
BP-120/80MMHG,
PR-108BPM
PALLOR-+

Per Abdomen-ut-16-18weeks size, mobile, non-tender

Per Vaginal Examination-

cervix anteriorly displaced
large, mobile mass of 8x10cm present in pelvis
Right lateral walls separate mass +

On Usg (ABDOMEN+PELVIS)

was showing bulky uterus with changes of adenomyosis and multiple fibroids.

Uterus-Anteverted, Bulky in size and measures 9.8x4.8X6.8cm with heterogenous echotexture.

Multiple fibroids seen in cervix and uterus largest intramural fibroid in anterior wall of cervix measures 5.1x3.9cm and largest intramural fibroid in anterior wall of lower uterine segment measures 3.9x3.7cm with subserosal extension. There is 6.1x5.1cm sub serosal fibroid seen along left lateral wall. ET-12mm.

She was advised admission, routine pre-op investigations like cbc, rbs, blood group, LFT, RFT, serology, chest xray and ECG were advised.

Her blood investigations were within normal limits, serology was negative.

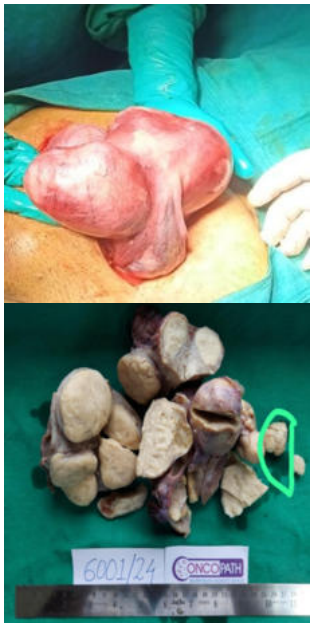
Patient had persistent tachycardia for which **2D ECHO** was done it showed- **normal LV systolic and diastolic function, LVEF=60% & normal cardiac colour doppler study**. And ECG, CHEST XRAY-NAD

Patient was taken for **total abdominal hysterectomy** with B/L salpingectomy. Patient vitals were hemodynamically stable intraop and post op.

INTRA OPERATIVE FINDINGS-

Multiple fibroids noted
-one small fibroid of 2x3cm noted at posterior wall of vagina, enucleation done
-vault closure done

Patient was hemodynamically stable throughout the procedure.



Separate Cervical Fibroid That Was Also Positive For STUMP.

One pcv was transfused post op,
she was discharged on post op day 5.

Then the patient presented to the hospital c/o-frank leak from vagina, fluid was clear, non-foul smelling, copious in amount. (20-30ml in 5minutes)

3 to 4 adult diapers were changed per day.

She was admitted **and methylene blue test for vesico-vaginal fistula was done which was Negative.**

CT UROGRAPHY-WNL
FLUID FOR CYTOLOGY-S/O ASCITIC FLUID
Patient had leak from POD5-D9 then leak subsided.

Histopathology report of the specimen showed-
Endometrium- Secretary phase

Myometrium- smooth muscle tumor of undetermined malignant potential
Cervix-moderate chronic cervicitis.

ETIOLOGY & RISK FACTORS

AGE- 20 TO 45YRS, Perimenopausal > menopausal

STUMP- Relatively more common in blacks (80%) > whites (70%).

Differentiation of various types of uterine smooth muscle tumors can be made based on three main histopathologic features including cytologic atypia, mitotic count, and tumor cell necrosis

Presence of ambiguous tumor necrosis with difficult diferentiation, difuse atypia and/or mitotic count is not compatible with a benign or malignant category.

As the definition of STUMP is variable, the exact recurrence rate of STUMP, means patients underwent operation for the second time due to uterine tumor and pathologic fndings showed STUMP again, is not clear, but based on diferent studies the recurrence rate is almost 7.3 to 26.7%

RESULTS

PREOPERATIVE DIAGNOSIS- Multiple uterine fibroids and adenomyosis

POSTOPERATIVE DIAGNOSIS- 34 Yyear old P2L2, post tubectomised with multiple uterine fibroids and adenomyosis with uterine smooth muscle tumor of uncertain malignant potential confirmed by histopathology.

Anatomo-pathological Features

Macroscopically, STUMPs resemble fibroids and, thus, have a well-circumscribed and non-encapsulated appearance however, sometimes the borders can be pushing or even focally permeative The cut surface is usually tan-white, firm, and whorled

Areas of infarction, hemorrhage, and myxoid change can be apparent. The median size is 6.7 cm (range: 2.5–12.2 cm) Extensive sampling of these tumors is needed, specifically if myxoid areas are present.

Microscopically, STUMPs are characterized by interlacing fascicles of spindle cells with cigar-shaped nuclei; however, the morphological features can vary widely.

MANAGEMENT & TREATMENT

Preoperative diagnosis of STUMP is quite difficult.

There are no specific ultrasound characteristics for STUMP compared with leiomyoma or leiomyosarcoma, However, ultrasound features of malignancy like highly vascularized mass, irregular outline, irregular pattern due to necrotic areas, can be present that they are indistinguishable from leiomyosarcoma.

The use of ultrasound and diffusion-weighted (DW)-magnetic resonance imaging (MRI) to accurately diagnose STUMP is limited too. For accurate differentiation between leiomyoma and STUMP, contrast-enhanced (CE) magnetic resonance imaging (MRI) seems to be more specific compared with DW.

No practical guidelines are currently available for STUMP management, treatment, and follow-up. Surgery is the standard therapy, however, the role of hormonal therapy or chemotherapy is still unclear. since there are limited data on whether STUMPs are hormone sensitive or not.

If the STUMP is diagnosed at preoperative histological examination (hysteroscopy or myomectomy specimen), hysterectomy is the gold standard treatment for women with children The fertility-sparing approach reserved to women wishing pregnancy needs an accurate follow-up protocol, with a multidisciplinary team.

It can be a myomectomy followed by hysterectomy, after the completion of fertility desire. Hence, it is essential to consider the patient's age and the desire of future pregnancy.

The laparoscopic (Total laproscopic hysterectomy) approach, is considered the best choice.

In young patients who desire to preserve childbearing, myomectomy alone should be considered, followed by hysterectomy after childbearing.

No comparative studies are currently available between laparoscopic or laparotomic myomectomy approach for women affected by STUMP. In the case of myomectomy, close surveillance should be mandatory

STUMPs' Follow Up and Recurrence

Annual surveillance with imaging (chest, abdomen and pelvic CT) and has been suggested after hysterectomy. A follow-up visits every 6 months for the first 5 years followed by annual control for additional 5 years.

The risk of recurrence of these tumors exists, despite the low malignant potential. Guntupalli et al. in a retrospective review assessed that recurrence-rate during the followup interval was 7.3%.

The uterus is the most affected site of recurrence, followed by lung, bone, liver, and peritoneum.

STUMPs are complex uterine smooth muscle tumors, with a rare but reasoned clinical–diagnostic management.

Moreover, the numbers of cases of assessed STUMPs reported are limited in the scientific panorama.

There are no National Comprehensive Cancer Network Clinical Practice Guidelines established for STUMP. If the diagnosis of STUMP is confirmed by histological examination, hysterectomy is the gold standard treatment for those women who have completed their childbearing planning.

For women who want to preserve their fertility, a conservative approach with an accurate surveillance protocol is recommended.

Considering the high clinical and histological complexity of these tumors, diagnosing and active management & treatment is mandatory.

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