

## A CASE REPORT: PRESERVATION OF FERTILITY AMONG A PREGNANT WOMAN DELIVERED BY RECURRENT LAPAROTOMY WITH UTERINE SMOOTH MUSCLE OF UNCERTAIN MALIGNANT POTENTIAL.

### Obstetrics & Gynaecology

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### ABSTRACT

Uterine smooth muscle tumors of uncertain malignant potential (STUMP), a subcategory of uterine smooth muscle tumors is difficult to diagnose. 1 Uterine leiomyoma, a smooth muscle tumor of uncertain malignant potential (STUMP) is mainly diagnosed among female in their 30s and 40s. 3 Around 3-12 % of pregnant women are reported to have uterine leiomyoma. 4 The purpose of this study was to evaluate the clinical and reproductive outcomes of a pregnant patient who was histologically diagnosed with uterine smooth muscle tumor of uncertain malignant potential (STUMP), and were treated with cesarean section then conservatively. **Case Discussion:** 24 years old female, a prime gravida, conceived spontaneously after 6 years of myomectomy due to STUMP with recurrent STUMP. The pregnancy went uncomplicated and the woman delivered by classical cesarean section without complication with preservation of fertility. **Conclusion:** This case will help shape future guidelines for surveillance and management. Future studies should aim to identify biomarkers and histological or immune-histochemical markers to aid in diagnosing tumors with the potential for malignant transformation.

### KEYWORDS

#### INTRODUCTION:

Uterine smooth muscle tumors of uncertain malignant potential (STUMP) a subcategory of uterine smooth muscle and the most common mesenchymal tumor in the gynecologic tract tumors is difficult to diagnose. 1

Langley (1973) was the pioneer in identifying and describing what is now known as "smooth muscle tumor of uncertain malignant potential" (STUMP). It was in 1994 when Stanford proposed informal histopathologic characteristics such as cytologic atypia, mitotic count, and tumor cell necrosis. While these tumors do not have a high malignant potential, there have been reports of recurrence and metastasis. 2 Uterine leiomyoma is mainly diagnosed among female in their 30s and 40s. 3 Around 3-12 % of pregnant women have been reported as suffering with uterine leiomyoma. 4 The diagnosis is usually confirmed by histological examination. Study suggest that about 0.01% of women are diagnosed with STUMP after myomectomy or hysterectomy. 5

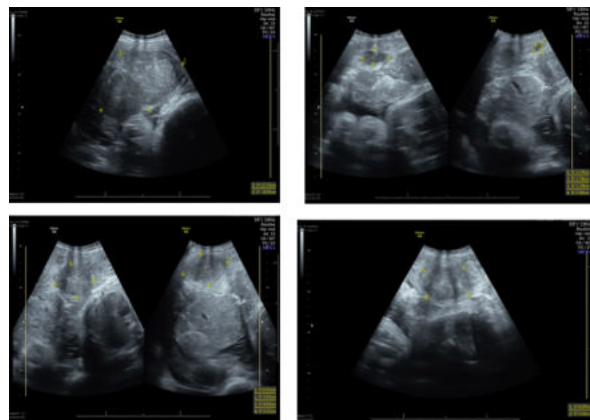
There is limited choices of treatment as compared to other female reproductive system diseases and at the same time preservation of fertility is a challenge. 5

This study provided insights from a case involving a 24-year-old female who underwent laparotomy myomectomy and was confirmed histopathology as having STUMP in 2017. In 2023, she was found to have large uterine fibroid with intrauterine viable pregnancy. The purpose of this study was to evaluate the clinical and reproductive outcomes of pregnant with STUMP who were treated with cesarean section then conservatively and also desires the preservation of fertility.

#### Description Of Case Report

A 24 years old, Saudi prime gravida female attended the gynecology clinic for follow up for uterine smooth muscle tumor of uncertain malignancy. She was a known case of epilepsy on levetiracetam 1000mg three times per day and rheumatoid arthritis on hydroxychloroquine 200mg and azathioprine 50mg since 6 years when she was unmarried and was admitted to our hospital's gynecology ward with a history of heavy menstrual bleeding. She had undergone an abdominal myomectomy and histopathology diagnosed as suffering from leiomyosarcoma. She was on follow up at King Fahad specialist hospital in Dammam (KFSH). She missed her follow up in KFSH and was not on contraception medication. In the year 2022 she

underwent pelvic ultrasound which showed bulky non-gravid uterus containing multiple intramural fibroid masses with cystic and calcific changes, the largest one was posteriorly placed measuring about (6.3 x 5.7 cm). The endometrium was anteriorly displaced. During her follow up she was discovered having pregnancy of 11 weeks. Her vital signs was stable. Complete Blood Count Test showed a hemoglobin level of 9.3gm/dl. Her blood group was 'O' positive. Physical examination revealed enlarged abdomen within 14 weeks. Bed side ultrasound showed single viable intrauterine CRL 11 weeks. At 21 weeks of pregnancy, an anatomy scan showed a Single intrauterine pregnancy with normal amniotic fluid level, anatomy and growth with two anterior uterine fibroids near the fundus, the largest was intramural 10.4 x 7.9 cm and another smaller subserous about 5 x 2.8 cm.



**Figure 1:** Pelvic ultra sound at 39 weeks gestational age showed Bulky uterine wall by multiple variable sized, echogenicity masses, likely fibroids.

The mode of delivery was planned by multidisciplinary team with gynecology team from KFSH-DAMMAM. At 39 weeks of pregnancy, she was admitted for elective cesarean section. Pelvic ultrasound revealed normal growth fetal with normal amniotic fluid level. Fetal birth weight was 3658 gms +/- 534 gm. Placenta was located fundal anterior. Bulky uterine wall with multiple variable sized, echogenicity masses (likely fibroids) were found. Largest mass ( 12.55 x 8.2 cm ) was seen near fundus while two others retroplacental mass measuring 6.2 x 3.9cm, and 5.1 x 4 cm were found (Figure1). Patient prepared for operation with 4unit blood, 4 unit fresh frozen plasma, 4unit platelets

prepared, cefazolin 2g intra venues before operation. investigation results before operation showed the hemoglobin 10.6 and the liver profile, renal profile and the coagulation profile were all normal.

Spinal anesthesia couldn't be conducted as patient was a known case of rheumatoid arthritis. Under general anesthesia the abdominal wall was opened by Pfannenstiel incision. A severe ant everted uterus with adhesion at the fundal level obstructing the gut. It was a difficult procedure to reach lower segment. By a classical longitudinal uterine incision a baby with weight 3.5kg was delivered with good Apgar score.

After 3 days Patient discharge to home after she is well recovered, she continuous her follow up in king Fahad specialist hospital in Dammam with gyn oncology department.

#### DISCUSSION:

STUMP is a rare class of smooth muscle tumor that shows diagnostic challenges, as it lies between benign and malignant categories. It differs from typical leiomyomas (benign) and leiomyosarcomas (malignant) by showing indeterminate or borderline features in terms of malignancy.<sup>6</sup>

This condition affects women of reproductive age as well as postmenopausal women. Studies have shown that the average age at diagnosis is 46 years. Additionally, other research suggests that being diagnosed at a younger age is associated with a higher risk of disease recurrence.<sup>7</sup>

The clinical features of STUMP are non-typical and do not vary from those of benign leiomyomas or leiomyosarcoma.<sup>3</sup> Usually women presented complaints of pelvic mass, pain, pressure symptoms in the pelvic region, dysmenorrhea, abnormal uterine bleeding and infertility.<sup>6</sup> 82.5% of patients presented with a large uterine mass more than 5.0 cm of diameter.<sup>2</sup>

The preoperative diagnosis is relatively challenging and only the histological analysis is diriment. In more than half of the cases, the diagnosis is incidental and is often postoperative, because MRI and pelvic ultrasounds are techniques not able to pre-operatively distinguish benign from malignant tumors.<sup>2</sup> There are ultrasound features commonly in STUMP including multiple tumors, hypoechoic nodules, high resistance index values, non-cystic appearance, and no free fluid. CA-125 is a biomarker not helpful for STUMP prognosis and diagnosis, moreover many studies found that serum CA-125 levels in most STUMP patients were at the normal level.<sup>8</sup>

In the present case the patient was known to have a history of the STUMP since the age of which is 25 younger than usual average age of getting STUMP. During her follow up she did not complain of any symptoms of the uterine leiomyoma. However pelvic ultrasound feature increased the suspicion of having recurrent STUMP, so the level of ca 125 not done for her.

Factors must be considered before defining the treatment and postoperative plan including age of the patient and reproductive status. Surgery is the primary treatment for STUMP. While no formal treatment guidelines exist, the current standard practice is to perform a hysterectomy with bilateral salpingo-oophorectomy for patients not seeking to preserve fertility and myomectomy should be considered if with fertility desire. There have been multiple documented cases of successful pregnancies following myomectomy for STUMP.<sup>10</sup> A literature review showed that within interval follow-up from 0.1- 18 years there are 5 of 76 (6.6%) patients who experienced myomectomy relapsed and one of the five patients died of recurrent STUMP one year after the primary operation.<sup>9</sup>

Our case was at young age and wanted to preserve her fertility, primarily only a myomectomy was done for her with regular follow-up. As she was less than the average age, therefore relapse occurred within 6 years after primary surgery. The patient conceived spontaneously after 6 years of myomectomy. Her pregnancy was uncomplicated. The decision of delivery taken by multidisciplinary team, classical cesarean section with preserving fertility hardly done.

#### CONCLUSION:

We reported a case of recurrent STUMPs in a pregnant woman who had a classical cesarean delivery with preserving the uterus. So far, this

remains one of rare cases where get a success pregnancy after myomectomy for STUMP with recurrent STUMP of such a significant size underwent a classical cesarean section with preserving fertility. This case will help shape future guidelines for surveillance and management. Future studies should aim to identify biomarkers and histological or immune-histochemical markers to aid in diagnosing tumors with the potential for malignant transformation.

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