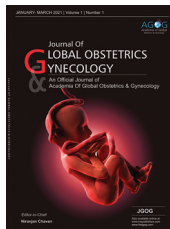


## Case Report



# An Interesting Case Report of Pre-pregnancy Leiomyoma in Patient Undergoing Cesarean Myomectomy at 37 Weeks Period of Gestation

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### ABSTRACT

Uterine fibroids are the most common benign tumors of the female reproductive system, affecting 0.1–10.7% of pregnant women, with incidence increasing with maternal age. When fibroids are present during pregnancy, they are associated with complications in 10–40% of cases. These complications include abdominal pain, spontaneous abortion, fetal malposition, placental abruption, premature rupture of membranes, cesarean deliveries, postpartum hemorrhage, preterm delivery, and low birth weight infants. Here, we present a case of a 24-year-old female Primigravida with 15 weeks of gestation who complained of pain during the 2nd trimester. Most fibroids in pregnancy are asymptomatic but can cause complications based on size and location. Regular antenatal follow-up and ultrasonography improve detection and management, enhancing pregnancy outcomes.

**Keywords:** Benign tumor, Cesarean deliveries, Uterine fibroids

### INTRODUCTION

Uterine fibroids are the most common benign tumors of the female reproductive system, with an incidence in pregnancy ranging from 0.1 to 10.7% and increasing with maternal age.<sup>[1,2]</sup> The incidence of fibroids during pregnancy is expected to rise in the coming years due to delayed childbearing.<sup>[3]</sup> Key factors influencing morbidity during pregnancy include the number, size, location of the fibroids, and their relationship to placenta implantation.<sup>[4]</sup> Fibroids can negatively impact fertility and pregnancy outcomes.<sup>[5]</sup> Since most fibroids are asymptomatic, their actual prevalence may be significantly higher.<sup>[6]</sup> Changes such as degeneration can complicate fibroids, leading to varying degrees of abdominal pain, from mild discomfort to acute abdomen. Fibroids are associated with antepartum, intrapartum, and postpartum complications, occurring in 10–40% of pregnant patients.<sup>[3]</sup> Potential complications include abdominal pain, miscarriage, abnormal fetal positioning, placental

detachment, early rupture of membranes, increased likelihood of cesarean sections, postpartum bleeding, premature birth, and infants with low birth weight.<sup>[7]</sup>

### CASE REPORT

A 24-year-old female had been experiencing primary infertility for 2 years. USG (Abdomen + Pelvis) scan suggestive of adenomyotic uterus with anterior wall intramural myoma of  $6.17 \times 4.7 \times 4.7$  cm size [Figure 1]. Her hysterosalpingography was suggestive of bilateral tubal patency, hormonal profile and husband's semen analysis were within normal limits.

She conceived spontaneously. First-trimester ultrasound was done s/o: Singleton pregnancy of 8 weeks with two hypoechoic mass lesions largest size approximately  $6.8 \times 6.0$  cm in the fundoanterior wall of the uterus [Figure 2] with normal fetal development.

At 15 weeks of gestation, she came to Sion Hospital complaining of severe abdominal pain and got admitted for the same. Her antenatal investigations were within normal limit and the USG scan was suggestive of a singleton pregnancy of 15.1 weeks, anterior placenta with a heterogenous hypoechoic lesion of  $9.5 \times 6.3 \times 7.1$  cm in an intramural plane on the fundoanterior wall of the uterus. She was started on injection hydroxyprogesterone caproate depot 250 mcg once a week and progesterone soft gelatin capsule of 200 mg BD support.

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An anomaly scan showed no evidence of congenital abnormalities and the myoma was stable in size [Table 1]. She followed up monthly until 32 weeks and biweekly until 36 weeks. Serial fetal monitoring used to be done with routine obstetric scans, showing no growth restriction.

She was admitted at 37 weeks for safe confinement. USG obstetric scan was suggestive of "Singleton pregnancy of 36.4 weeks, Anterior Placenta with a heterogenous hypoechoic lesion of  $5.2 \times 2.3 \times 3.3$  cm in the intramural plane on the right lateral wall of the uterus and  $6.7 \times 5.6 \times 6.1$  cm in the subserosal plane in fundic region of the uterus. Anesthesia evaluation and pre-operative investigations were done. Four PRC bags reserved. Well-informed and valid hand-written consent was taken from a patient and relative for elective lower-segment C-section SOS myomectomy SOS obstetric hysterectomy.

The patient underwent an elective lower-segment cesarean section with myomectomy at 37.6 weeks gestation and delivered a healthy male child of 3192 grams. Intraoperatively, a  $4 \times 4$  cm size pedunculated fibroid engulfed by omentum from all sides [Figure 3] and deriving its blood supply from omentum and a  $7 \times 7$  cm size intramural fibroid present on the right lateral wall. A myomectomy of the pedunculated fibroid was done along with partial omentectomy of the attached omentum. The right lateral wall intramural fibroid was left *in situ*. She was transfused with 1 unit of PRC intraoperatively. The maternal and fetal outcome was uneventful. The patient was discharged on day 5.

## DISCUSSION

Uterine fibroids, which are the most common benign tumors of the female reproductive system, often present significant challenges during pregnancy, especially for women with a history of infertility. This case highlights the complexities and considerations in managing such pregnancies, leading to a successful delivery despite the presence of fibroids.<sup>[8]</sup>

### Impact on fertility and pregnancy outcomes

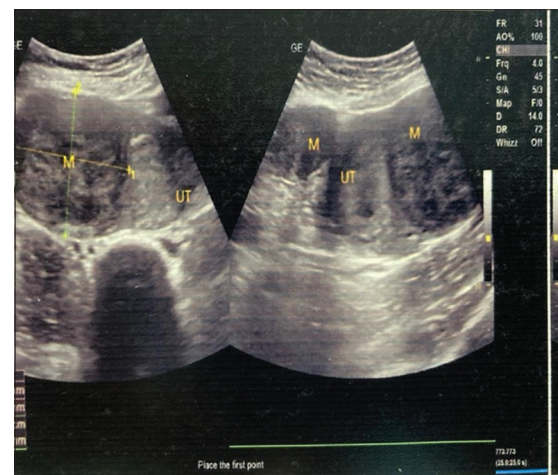
Fibroids can impair fertility by distorting the uterine cavity, altering the endometrial lining, and affecting embryo implantation. In women experiencing infertility, fibroids add another layer of complexity to achieving and maintaining a pregnancy. However, this case demonstrates that successful conception and delivery are possible with fibroids, indicating the importance of individualized treatment plans and careful monitoring.<sup>[9]</sup>

### Growth and symptoms during pregnancy

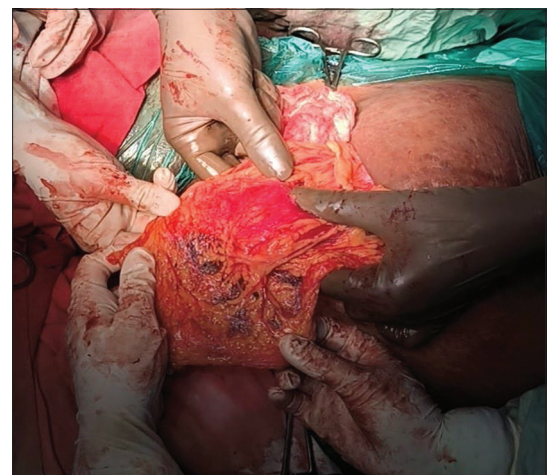
Most fibroids do not grow during pregnancy, but about 30% may enlarge during the 1<sup>st</sup> trimester. Typically, fibroids are asymptomatic, but pain is the most common complication, particularly in large fibroids ( $>5$  cm) during the 2<sup>nd</sup> and 3<sup>rd</sup> trimesters. Pain can be due to red degeneration, torsion, or impaction. In this case, localized abdominal pain was managed



**Figure 1:** Ultrasonography images show anterior wall intramural fibroid



**Figure 2:** Ultrasonography images show Singleton pregnancy with two hypoechoic mass



**Figure 3:** Pedunculated fibroid engulfed by omentum

**Table 1:** Serial ultrasonographic findings

S. No.	Weeks of gestation	USG Findings
1.	Before pregnancy	Anterior wall intramural fibroid of 6.17 × 4.7 × 4.7 cm
2.	8 weeks of gestation	Two hypoechoic mass lesions with the largest size approximately (6.87 × 6.04 cm) in the fundoanterior wall of the uterus.
3.	15 weeks of gestation	Two hypoechoic mass lesions with the largest size approximately (9.5 × 6.3 × 7.1 cm) in the fundoanterior wall of the uterus.
4.	21 weeks of gestation	Two heterogenous hypoechoic lesions of: 1. 7.7×8.7×8.6 cm size intramural fibroid in the right lateral wall. 2. 4.5×5.7×4.6 cm size subserosal fibroid in fundic region.
5.	36 weeks of gestation	Two heterogenous hypoechoic lesions of: 1. 5.2×2.3×3.3 cm size intramural fibroid in the right lateral wall. 2. 6.7×5.6×6.1 cm size subserosal fibroid in fundic region.

conservatively, highlighting the need for effective symptom management strategies.

#### First-trimester screening and diagnosis

Most diagnoses of large uterine fibroids during pregnancy are made in the 1<sup>st</sup> trimester, as many women begin antenatal care early. This early detection is crucial for establishing a comprehensive management plan. However, as the pregnancy progresses, changes in uterine anatomy and the presence of the fetus and placenta can make the examination challenging. This case underscores the importance of performing necessary imaging studies in the 1<sup>st</sup> trimester to aid in planning antenatal, intrapartum, and postpartum care.

#### Theories explaining pain and risks

Severe abdominal pain associated with fibroids can result from red degeneration or torsion. Three theories explain the pain from red degeneration: changes in vascular supply due to the growing uterus, rapid fibroid growth outpacing blood supply leading to anoxia and infarction, and prostaglandin release from cell destruction within the fibroid. The main effect of fibroids on pregnancy is related to their size, which can increase the risk of early pregnancy loss, placental abruption, preterm labor, and labor complications such as fetal malpresentation and retained placenta.<sup>[10]</sup>

#### Complications associated with fibroids

Fibroids are linked to a higher incidence of spontaneous miscarriage, preterm labor, fetal malpresentation, labor dystocia, cesarean section, postpartum hemorrhage, and hysterectomy.

This case required close monitoring to detect and manage these potential complications. Regular antenatal follow-up using ultrasonography plays a crucial role in the early detection and ongoing evaluation of fibroids, which is vital for developing a multidisciplinary management plan.<sup>[10]</sup>

#### Delivery considerations

The presence of fibroids can complicate labor and delivery, often necessitating a cesarean section, especially for those who have previously undergone a myomectomy involving the uterine cavity. In this case, careful planning was essential to manage potential risks such as uterine atony and postpartum hemorrhage.

### CONCLUSION

Most fibroids during pregnancy are asymptomatic, but their size and location can lead to complications affecting the course of pregnancy and labor. Therefore, careful screening during the antenatal period, with regular follow-up, is essential to detect any adverse obstetric complications and improve outcomes. This case demonstrates that with regular monitoring, conservative symptom management, and strategic delivery planning, successful pregnancy outcomes are achievable despite the presence of fibroids. Early detection through 1<sup>st</sup> trimester screening and the use of ultrasonography are critical in establishing effective management plans. Ultimately, individualized care and comprehensive strategies are key to navigating the complexities of fibroids during pregnancy and achieving positive outcomes for both mother and child.

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