RESEARCH PAPER

Cesarean Myomectomy Can Be Safely Performed In Selected Cases With Appropriate Surgical Expertise And Adequate Hemostatic Precautions.

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Abstract
Background:Uterine fibroids are benign smooth muscle tumors of the uterus and may occasionally complicate pregnancy. Large fibroids during pregnancy can lead to abdominal pain, malpresentation, preterm labor, and increased cesarean delivery rates. Myomectomy during cesarean section has traditionally been avoided because of the risk of excessive hemorrhage.
Case presentation: We report the case of a 27-year-old primigravida at 35 weeks of gestation who presented with abdominal pain and a large uterine fibroid. Clinical examination revealed a large abdominal mass along with a term pregnancy. The patient underwent elective lower segment cesarean section, during which a large subserosal fibroid measuring approximately 20×23 cm was identified and removed successfully. A healthy male baby weighing 2.7 kg was delivered. The postoperative period was uneventful.

Keywords:Pregnancy, uterine fibroid, leiomyoma, cesarean section, myomectomy

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INTRODUCTION

Uterine leiomyomas, commonly referred to as fibroids, are the most prevalent benign tumors of the female reproductive system, arising from the smooth muscle cells of the myometrium[1]. These monoclonal tumors consist of varying proportions of smooth muscle cells and extracellular matrix components such as collagen and fibronectin[2]. Fibroids are hormonally responsive neoplasms, with their growth primarily influenced by estrogen and progesterone, making them particularly significant during the reproductive years[3].

The prevalence of uterine fibroids is estimated to affect up to 20–40% of women of reproductive age, although many cases remain asymptomatic[4]. The incidence increases with age and varies across ethnic groups, with a higher prevalence reported among women of African origin[5]. In pregnancy, fibroids are identified in approximately 1–4% of cases, though the true incidence may be underestimated due to asymptomatic presentations and limitations in early detection[6].

The pathogenesis of fibroids is multifactorial, involving genetic, hormonal, and local growth factor influences. Estrogen promotes cellular proliferation, while progesterone contributes to fibroid growth by enhancing extracellular matrix deposition and inhibiting apoptosis[7]. During pregnancy, elevated levels of these hormones, along with increased uterine vascularity, can influence fibroid size; however, their growth remains unpredictable, with some fibroids enlarging, regressing, or undergoing degeneration[8].

Fibroids in pregnancy pose unique clinical challenges due to their association with adverse maternal and fetal outcomes. Although many pregnancies remain uncomplicated, fibroids have been linked to complications such as pain due to red degeneration, miscarriage, preterm labor, malpresentation, placental abruption, fetal growth restriction, and postpartum hemorrhage[9][10]. Large fibroids, particularly those located in the lower uterine segment, may obstruct labor and increase the likelihood of cesarean delivery[11].

Clinical presentation depends on the size, number, and location of fibroids. Many cases are asymptomatic and detected incidentally during routine antenatal ultrasonography. Symptomatic cases commonly present with abdominal pain, often due to degeneration or pressure effects, as seen in the present case [OBJ].

Management of fibroids during pregnancy is predominantly conservative, focusing on symptomatic relief and careful antenatal surveillance. Surgical intervention is generally avoided due to the risk of hemorrhage; however, myomectomy may be considered in selected cases, especially for pedunculated or symptomatic fibroids[12]. Recent evidence suggests that cesarean myomectomy can be safely performed in carefully selected patients in well-equipped centers[13].

With increasing maternal age at conception and improved imaging techniques, fibroids in pregnancy are being encountered more frequently in clinical practice. A comprehensive understanding of their behavior and management is essential for optimizing maternal and perinatal outcomes

CASE DESCRIPTION

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A 27-year-old primigravida (G2A1) at 35 weeks of gestation, hailing from Belagavi, presented with complaints of intermittent abdominal pain for 10 days. The pain was localized predominantly to the left side of the abdomen, gradually progressive in nature, not associated with fever, vomiting, or altered bowel habits, and not relieved by rest. There was no history of per vaginal bleeding, leaking, or reduced fetal movements. The patient had been compliant with regular antenatal check-ups.Her antenatal period was largely uneventful. The pregnancy was spontaneously conceived and confirmed at 6 weeks of gestation. First trimester was unremarkable, with appropriate supplementation and normal dating and nuchal translucency scans. Second trimester anomaly scan did not reveal any fetal structural abnormalities. Growth scan in the third trimester showed a live fetus with adequate growth, normal liquor, and Doppler parameters.

The patient had a previous history of missed abortion at 2 months of gestation, managed medically. She had no significant past medical or surgical history and was not a known case of diabetes, hypertension, or thyroid disorder.

Notably, during the current pregnancy, the patient had two prior hospital admissions for similar complaints of abdominal pain. On both occasions, she was evaluated thoroughly and managed conservatively with analgesics, hydration, and close monitoring. No signs of preterm labor or acute complications were noted during those admissions, and she was discharged in a stable condition.

On examination during the current admission, the patient was moderately built and nourished with pallor and bilateral pedal edema. Her vital parameters were stable. Per abdominal examination revealed a term-sized uterus with a large palpable mass occupying the upper abdomen, extending into the epigastric and hypochondriac regions, suggestive of a uterine fibroid. The fetus was in cephalic presentation with a reassuring fetal heart rate.

Based on clinical findings and imaging, a provisional diagnosis of G2A1 at 35 weeks gestation with a large uterine fibroid, fetal macrosomia, and polyhydramnios was made.

During the course of hospitalization, the patient developed progressive maternal respiratory distress, likely secondary to the mass effect of the large fibroid along with the gravid uterus causing diaphragmatic splinting. In view of worsening maternal condition and term gestation nearing completion, the decision for emergency lower segment cesarean section (LSCS) was taken.

Figure 1 : Gross specimen of the excised uterine fibroid after cesarean myomectomy placed on the surgical drape with a surgical instrument alongside for size comparison.

Figure 2: Intraoperative photograph demonstrating a large pedunculated subserosal uterine fibroid arising from the uterine surface during cesarean section.

Figure 3 : Excised uterine fibroid specimen placed on a digital weighing scale showing a weight of approximately 2.99 kg

Figure 4 : Measurement of the empty surgical bowl (0.26 kg) used during weighing to calculate the net weight of the fibroid specimen

The patient underwent LSCS under regional anesthesia. A live male baby weighing 2.7 kg was delivered with good Apgar scores. Intraoperatively, a large subserosal fibroid measuring approximately 20 × 23 cm, predominantly pedunculated and arising from the left side of the uterus, was identified. Considering the size and accessibility of the fibroid, a concurrent myomectomy was performed. Hemostasis was meticulously achieved, and the uterus was closed in layers.

The postoperative period was uneventful. The patient received appropriate antibiotics, analgesics, and supportive care. She showed satisfactory recovery with stable vital parameters, good wound healing, and adequate uterine involution. Both mother and baby were discharged in stable condition with advice for follow-up.

DISCUSSION

Uterine fibroids are the most common benign tumors encountered in women of reproductive age and are increasingly being identified during pregnancy due to widespread use of antenatal ultrasonography[11]. Their impact on pregnancy is variable and depends on factors such as size, number, and location of the fibroid[1],[6].

Effect of Fibroids on Pregnancy (Trimester-wise)

The influence of fibroids on pregnancy varies across trimesters. In the first trimester, fibroids have been associated with an increased risk of miscarriage, especially when submucosal or large intramural fibroids distort the uterine cavity[9]. In the second trimester, complications such as pain due to red (carneous) degeneration are commonly encountered due to rapid fibroid growth and ischemia[8]. The third trimester is particularly significant, as large fibroids may lead to malpresentation, preterm labor, placental abruption, and increased risk of cesarean delivery[10].

Table 1: Management of Uterine Fibroids in Pregnancy

Stage	Management
Antenatal period	Conservative management, analgesics for pain, regular antenatal monitoring
Symptomatic degeneration	Bed rest, hydration, analgesics, observation
Large fibroids causing complications	Close monitoring and planned delivery
During labor	Vaginal delivery if no obstruction
Cesarean delivery	Indicated for malpresentation, obstruction, or large fibroids
Myomectomy	Usually avoided during pregnancy but may be performed during cesarean section in selected cases

Maternal and Fetal Complications

Fibroids in pregnancy can result in several maternal complications including recurrent abdominal pain, degeneration, preterm labor, obstructed labor, and postpartum hemorrhage[6,9]. In the present case, the patient had recurrent admissions for abdominal pain, which were managed conservatively, consistent with fibroid degeneration.

Fetal complications include intrauterine growth restriction, malpresentation, and adverse perinatal outcomes[10]. In this case, the coexistence of fetal macrosomia and polyhydramnios added complexity to management, although fibroids are more commonly associated with growth restriction than macrosomia.

Table 2: Complications of Uterine Fibroids in Pregnancy

Maternal Complications	Fetal Complications
Pain abdomen due to red degeneration	Preterm birth
Malpresentation	Intrauterine growth restriction (IUGR)
Preterm labor	Low birth weight
Placental abruption	Fetal distress
Obstructed labor	Increased perinatal morbidity
Postpartum hemorrhage	Increased cesarean delivery rate

Challenges in Management

Management of fibroids in pregnancy poses significant clinical challenges. Conservative management remains the mainstay, focusing on symptomatic relief and antenatal surveillance[6]. This patient was managed conservatively during two prior admissions, highlighting the importance of expectant management.

Another major challenge is deciding the timing and mode of delivery. Large fibroids may cause mechanical obstruction or pressure effects, leading to increased cesarean section rates[9,10]. In this case, the indication for delivery was maternal respiratory distress, likely due to diaphragmatic splinting from the combined mass of the gravid uterus and large fibroid—an uncommon but clinically significant scenario.Timing of Surgical Intervention

The timing of myomectomy in pregnancy remains controversial. Myomectomy during pregnancy is generally avoided due to risk of hemorrhage[12]. However, selected cases, particularly those with pedunculated or subserosal fibroids, may benefit from surgical intervention.

Recent literature supports the safety of cesarean myomectomy in selected patients when performed by experienced surgeons with adequate preparation[13]. In the present case, the fibroid was large, subserosal, and pedunculated, making it suitable for removal during cesarean section, thereby avoiding a second surgery.

Comparison with Literature

Studies have consistently shown that while most fibroids can be managed conservatively, large fibroids are associated with increased maternal and perinatal complications[9,10]. Recent evidence also indicates that cesarean myomectomy, once considered contraindicated, is now a safe and feasible option in tertiary care settings[13–15].

Uniqueness and Learning Points from the Case

This case highlights several important clinical insights:

- Recurrent hospital admissions with conservative management emphasize the role of expectant treatment in stable patients[6].
- Maternal respiratory distress as an indication for delivery is rare but important in cases of massive fibroids.
- Successful cesarean myomectomy demonstrates its safety in selected patients when performed in appropriate settings[13,14].

CONCLUSION

Fibroids in pregnancy require individualized management based on clinical presentation and complications. Conservative management remains the cornerstone; however, timely intervention is crucial in cases with maternal or fetal compromise. Cesarean myomectomy can be safely performed in selected cases, avoiding future morbidity associated with untreated fibroids.

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