



Unmasking the myoma: Successful myomectomy of a giant subserosal fibroid in preterm caesarean section

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Abstract

Although subserosal leiomyomas are known to cause fewer obstetrical complications than submucosal or intramural fibroids during pregnancy, but large subserosal fibroids can distort uterine anatomy and complicate labour. Preterm labor associated with fibroids pose risk of obstructed labor and increased rates of caesarean section, risk of postpartum haemorrhage and thus an overall increase in maternal morbidity. Surgical management, particularly myomectomy is avoided in pregnancy due to the risk of haemorrhage but is necessitated in a few cases, as in this one. This case reports highlights the challenges and the surgical decision making in the management of a giant subserosal fibroid in the setting of preterm labor.

Keywords: fibroid, myomectomy, caesarean, preterm

Introduction

Uterine leiomyomas, or fibroids, are benign monoclonal tumors arising from the smooth muscle cells of the myometrium and are among the most common gynecological tumors affecting women of reproductive age^(1,2). The reported incidence of fibroids during pregnancy ranges between 0.1% and 10.7%^(3,4). These tumors respond to hormonal influences, often demonstrating growth patterns modulated by increased levels of estrogen and progesterone in pregnancy^(5,6). However, not all fibroids enlarge during gestation; around two-thirds show no significant change in size, and some may even shrink, likely due to uterine stretching and vascular remodeling^(7,8).

The presence of fibroids during pregnancy can lead to diverse maternal and fetal complications. These include a higher risk of first-trimester miscarriage, pain secondary to red degeneration, and preterm labor^(9,10). Larger or multiple fibroids can distort the uterine cavity, predisposing to abnormal placentation, malpresentation, and elevated cesarean section rates^(11,12). Submucosal and large intramural fibroids have also been associated with intrauterine growth restriction (IUGR) and preterm premature rupture of membranes (PPROM)^(13,14). Fibroids in the lower uterine segment can contribute to obstructed labor and increase the risk of postpartum hemorrhage⁽¹⁵⁾.

Ultrasonography remains the primary imaging modality for diagnosing fibroids in pregnancy,

providing a safe and accurate assessment of fibroid size, number, and location⁽¹⁶⁾. In selected situations—such as severe, unexplained pain or suspected sarcomatous changes—magnetic resonance imaging (MRI) may be used, though malignant transformation during pregnancy is very uncommon^(17,18,19).

Management is typically conservative during pregnancy, as myomectomy carries a significant risk of hemorrhage and preterm labor⁽²⁰⁾. Nevertheless, in specific scenarios—such as when fibroids cause intractable pain, degeneration, or labor obstruction—cesarean myomectomy can be cautiously considered, provided it is performed by experienced surgeons^(21,22).

Despite these potential complications, many pregnancies complicated by fibroids can have good outcomes with individualized care and close antenatal monitoring^(23,24). Current research continues to enhance understanding and supports risk stratification to guide evidence-based practice⁽²⁵⁾.

Case Report

A 24 year old primigravida was referred to IGIMS OPD at 8 weeks 3 days period of gestation from a private hospital in Chhapra in view of fibroid complicating pregnancy. The patient came to know about the fibroid during her first scan at 6 weeks of pregnancy which documented a single live intrauterine gestation of 6 weeks 2 days along with a subserosal pedunculated fibroid of 12.5 X 9.5 cm. The patient was referred to IGIMS for further antenatal management. Routine antenatal care was provided. Scan for nuchal translucency -nasal bone at 12 weeks and Anomaly scan at 19 weeks 6 days revealed no abnormality in the fetus. On per abdominal examination, a lump was palpable in the suprapubic region which increased in size in the third trimester. She was diagnosed with mild intrahepatic cholestasis at 30 weeks gestation. The patient had complained of abdominal pain on and off for which acetaminophen was prescribed. On 15/02/2025, at 33 weeks 4 days period of gestation,

she complained of less fetal movements and labor pain. Ultrasound scan revealed an increase in the size of fibroid to 15x10 cms. On per abdominal examination, a smooth well rounded mass occupied the left iliac fossa and suprapubic region, which was impacted. The uterus was pushed to the right side and was palpated separate from the lump. Contractions were felt on the right side of abdomen. Patient was taken up for emergency caesarean section. Per-operatively, a subserosal fibroid of 20×20 cm was found attached to uterus with a narrow stalk of 2×3 cm on the left anterior wall pushing the uterus to the right side. Lower segment caesarean section was performed and an alive healthy male baby was delivered weighing 2.15 kg on 15/2/25. Placenta & membranes were delivered out completely.

While suturing the uterine scar, it was found that the left angle of uterine incision could not be sutured. So, the subserosal fibroid had to be mobilized. Apart from the stalk connecting the myoma to the uterus, it was also attached to omentum, sigmoid colon and to the peritoneal fold of bladder base. A huge feeding vessel was present with the omental attachment which was ligated.

The omental and bowel adhesions were transfixed and fibroid was separated gently by blunt dissection. The peritoneal fold of bladder was separated from fibroid by blunt and sharp dissection. Myoma was sent for histopathological examination. After securing haemostasis, the abdomen was closed in layers. Total blood loss in the surgery was 1000ml. The patient was transfused 2 units PRBC intraoperatively and 2 units PRBC, 2 units platelets and 4 units fresh frozen plasma postoperatively. She was shifted to surgical ICU after surgery for 2 days. Injectable Ceftriaxone and metronidazole was given for 5 days and low molecular weight heparin was prescribed for 10 days. Her post operative stay was uneventful and the patient was discharged on 9th postoperative day.

Discussion

Most fibroids do not require surgical treatment during pregnancy, and expectant management remains the standard approach^(26,27). Symptomatic fibroids can lead to pain, miscarriage, preterm labor, fetal malpresentation, and postpartum hemorrhage^(28,29).

Episodes of pain, often resulting from red degeneration, are generally managed conservatively with bed rest, adequate hydration, and analgesics such as acetaminophen or short-term opioids when needed⁽³⁰⁾. The use of non-steroidal anti-inflammatory drugs (NSAIDs) is generally avoided, especially in the third trimester, due to potential risks like premature closure of the ductus arteriosus⁽³¹⁾.

While myomectomy is usually postponed until after delivery, it may be performed during cesarean section in carefully chosen cases involving large, obstructive fibroids⁽³²⁾. According to a meta-analysis by Song et al., cesarean myomectomy does not significantly increase perioperative complications when done by experienced teams⁽³³⁾.

Antenatal care should include periodic ultrasound evaluations to monitor fibroid growth and its impact on fetal development and presentation⁽³⁴⁾. Fibroids that distort the uterine cavity can cause IUGR or malpresentation⁽³⁵⁾. Large fibroids, especially those in the lower uterine segment, may obstruct labor, making planned cesarean delivery necessary⁽³⁶⁾.

The choice of delivery method should be individualized, largely based on fibroid characteristics such as size, number, and location. While many women can deliver vaginally, cesarean section rates are higher in those with significant or obstructive fibroids⁽³⁷⁾. When cesarean myomectomy is planned, careful preoperative planning, including blood cross-matching, is essential to manage potential hemorrhage⁽³⁸⁾.

After childbirth, fibroid-related symptoms often decrease due to uterine involution and lower hormone levels⁽³⁹⁾. Patients should be counseled on

the possibility of symptom recurrence in future pregnancies and on definitive management options, including myomectomy or uterine artery embolization⁽⁴⁰⁾.

Conclusion

Optimal care for pregnant women with fibroids benefits from a multidisciplinary approach involving obstetricians, anesthesiologists, and interventional radiologists where necessary⁽⁴¹⁾. Regular antenatal surveillance is important, given the association of fibroids with complications such as preeclampsia, spontaneous abortion, placental abruption, and malpresentation. Further research is needed to refine risk stratification and provide clear guidance for surgical intervention during pregnancy.

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