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Case Report

Postpartum expulsion of a massive degenerated intramural–submucosal fibroid following emergency caesarean section: a rare case report

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ABSTRACT

Large uterine fibroids complicating pregnancy may cause significant obstetric morbidity, including malpresentation, foetal growth restriction, and postpartum complications. Spontaneous fibroid expulsion following caesarean delivery is extremely uncommon, particularly when involving large intramural lesions. A 37-year-old primigravida with a rapidly enlarging intramural–submucosal fibroid presented with severe early-onset foetal growth restriction and abnormal Doppler studies. She underwent an emergency lower segment caesarean section at 31+ weeks, delivering a preterm male neonate. Postpartum recovery was initially uneventful; however, the patient developed persistent fever and subsequently presented on postoperative day 32 with severe abdominal pain and a large foul-smelling mass protruding through the vagina. Imaging revealed absence of the previously documented fibroid and presence of a large necrotic mass extending from the uterine cavity to the vaginal canal, consistent with spontaneous fibroid expulsion. Due to extensive necrosis and infection, a total abdominal hysterectomy was performed. Massive intramural fibroids in pregnancy require close surveillance even after caesarean delivery. Postpartum expulsion, though rare, may occur and prompt recognition is essential to prevent sepsis and maternal morbidity.

Keywords: Uterine fibroid, Fibroid expulsion, Pregnancy, Caesarean section, Foetal growth restriction, Degeneration, Hysterectomy

INTRODUCTION

Uterine fibroids complicate approximately 0.1–4% of pregnancies.[1,2] Intramural or submucosal fibroids may lead to several obstetric complications including malpresentation, growth restriction, preterm labour, and in rare cases, postpartum fibroid degeneration or expulsion. We present a case of a 37-year-old primigravida with a large intramural-submucosal fibroid who experienced spontaneous fibroid expulsion postpartum.

CASE REPORT

Patient profile

A 37-year-old primigravida woman presented to our antenatal department at 26 weeks gestation. She had been diagnosed at 8 weeks gestation with an intramural-submucosal fibroid located in the right lateral wall and body of the uterus measuring 7.3×6.4×9.9 cm.

Antenatal course

At 26 weeks, ultrasonography revealed a single live intrauterine foetus (SLIUF) at 25+3 weeks with a significantly enlarged fibroid now measuring 13.67×14.47×15.87 cm. Cervical length was 3.78 cm, and amniotic fluid index (AFI) was within normal limits. Maternal weight was 67 kg. At 28 weeks, the patient reported abdominal pain without bleeding or leaking per vaginum. Ultrasonography showed single live intrauterine foetus of 25 weeks 6 days in transverse lie with asymmetrical foetal growth restriction (FGR) with normal Doppler studies, enlarged fibroid (18.0×17.1×17.1 cm,

volume 2773 cc) pushing foetus to left upper quadrant and cervical length reduced to 1.11 cm with internal os funnelling and bulging membranes.

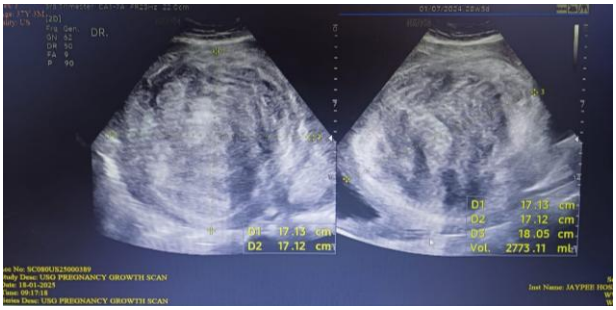

Figure 1: USG showing enlarged fibroid (18.0×17.1×17.1 cm, volume 2773 cc) filling the uterine cavity and pushing foetus to left upper quadrant.

Serial USGs revealed worsening findings

At 30 weeks, early onset asymmetrical FGR (EFW ~ 0.6th centile), high-resistance umbilical artery Dopplers, fibroid measuring 19.0×18.1×17.1 cm. At 31 weeks 3 days, ultrasound was suggestive of Persistent FGR, brain sparing effect, and fibroid now 20×18.1×18 cm. Given deranged Doppler studies and high foetal risk, the patient was admitted. A high-risk informed consent was taken, and arrangements were made for potential caesarean hysterectomy and blood product transfusion.

Intraoperative findings and delivery

An emergency LSCS was performed under spinal anaesthesia. A massive fibroid occupied the entire right lateral uterine wall, displacing the fetus.

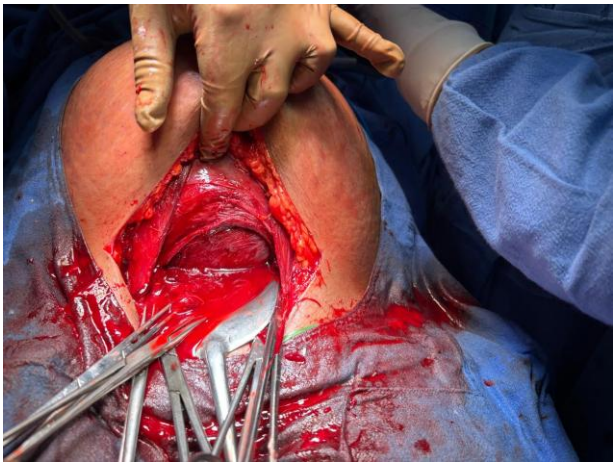

Figure 2: Entire right lateral wall and body of uterus was occupied by fibroid.

Breech extraction was carried out through a carefully placed Kerr's incision below the lower fibroid margin. A preterm male neonate weighing 1.47 kg was delivered. Although the uterus was significantly distorted, haemorrhage remained controlled and hysterectomy was avoided.

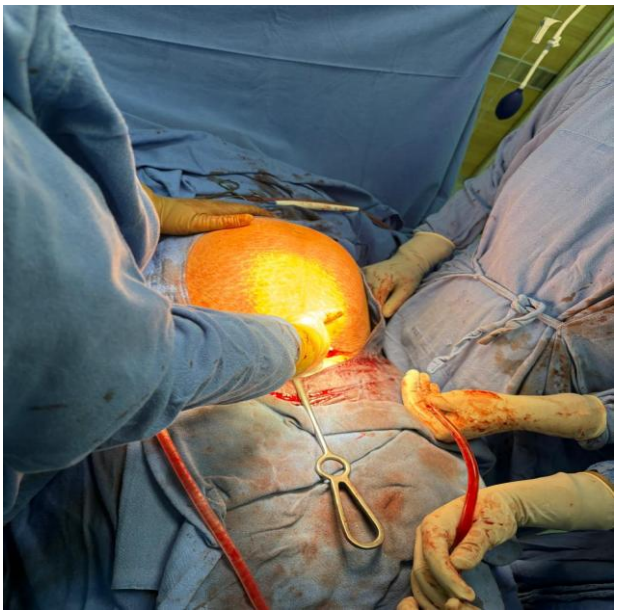

Figure 3: After delivery of baby, uterus was still of 34-36 weeks size.

Neonatal outcome

The baby was ventilated at birth, weaned off by day 8, and discharged on day 13 on IV antibiotics and RT feeds.

Postoperative course

The initial postoperative period was uneventful, and the patient was discharged on day 3. On day 10, she presented with fever; however, investigations including urine culture and fever profile were normal. Ultrasound revealed a bulky uterus with a fibroid measuring 14.5×13.8 cm. She was managed with antipyretics and later received intravenous antibiotics due to persistent fever.

Subsequent complications

On post-operative day 32, patient presented to emergency with severe abdominal and vaginal pain and bleeding per vaginum. Local examination revealed large, foul-smelling, fleshy, reddish mass protruding through introitus with clots which the patient had pulled out in an attempt to clean the area. On per vaginal examination, cervix effaced, posterior lip of cervix intact, anterior lip could not be made out separately from the mass.

Imaging and diagnosis

Pelvic ultrasound and contrast-enhanced MRI demonstrated absence of the previously documented fibroid in the uterine wall, a large necrotic mass extending from the fundus to the vaginal canal and peripheral rim enhancement suggestive of degeneration and infection.

Frozen section showed degenerated spindle smooth muscle cells confirming it as expelled fibroid.

Figure 4: Local examination revealed large, foul-smelling, reddish mass protruding through introitus with clots.

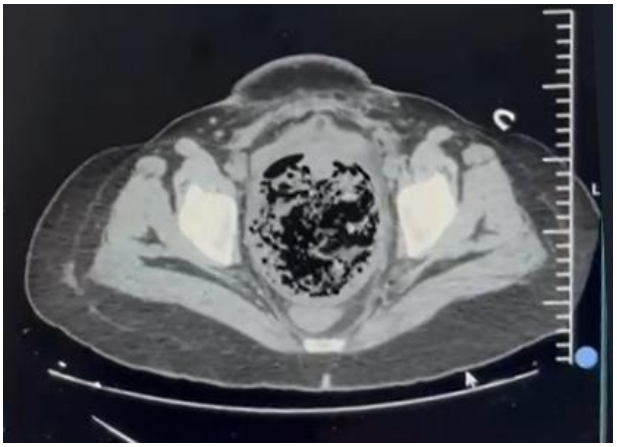

Figure 5: CEMRI was suggestive of large mass in uterine fundus with air filled areas in the cavity with peripheral enhancement; prior fibroid absent, suggesting expulsion.

Definitive management

Patient was admitted. Blood and blood products arranged.

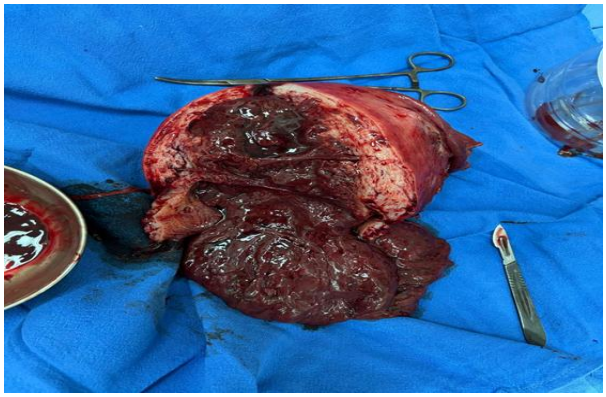

Figure 6: Specimen showing necrosed degenerated fibroid tissue filling the uterine cavity.

Ureteric catheterization followed by total abdominal hysterectomy done. Intra-operatively, on opening vaginal vault, there was foul smelling necrosed mass filling the uterine cavity. Patient was discharged on higher antibiotics but her postoperative recovery was prolonged by a surgical site infection that was treated with culture-guided antibiotics.

DISCUSSION

Fibroids are frequently asymptomatic during pregnancy; however, their size, location, and rate of growth significantly influence maternal and fetal outcomes.[3] The rapid enlargement of the fibroid in this patient—from 7.3 cm in early pregnancy to nearly 20 cm by 31 weeks—led to uterine distortion, fetal displacement, and severe early-onset asymmetrical FGR. Degeneration of fibroids arises from compromised vascularity during uterine expansion. Red degeneration, the most typical form in pregnancy, occurs when the fibroid outgrows its blood supply, resulting in haemorrhagic infarction, ischemia, and necrosis.[4] Although degeneration is fairly common, postpartum expulsion is rare and is usually described in submucosal fibroids.[5] Proposed mechanisms include ischemic necrosis following rapid postpartum uterine involution, mechanical migration toward the cervical canal, superimposed infection facilitating detachment, torsion of pedunculated fibroids.[6] In this patient, extensive intramural involvement and secondary necrosis caused complete detachment of the fibroid, resulting in spontaneous vaginal expulsion.

The patient's postoperative course highlights key warning signs of impending fibroid necrosis or expulsion—persistent fever, pelvic pain, foul-smelling discharge, and enlarging or prolapsing vaginal mass. These symptoms must not be misattributed to routine puerperal infection, as delayed recognition increases the risk of sepsis and haemorrhage. Cross-sectional imaging played a pivotal role in this case: MRI confirmed the absence of the previously documented fibroid in situ and demonstrated a large non-enhancing mass extending into the vaginal canal, consistent with expulsion of a necrotic fibroid. Although conservative management or vaginal removal is sometimes possible for pedunculated or easily accessible fibroids, large size, the extensive intramural involvement, risk of infection, distorted anatomy and unwillingness of the patient to continue with conservative management in this case necessitated total abdominal hysterectomy.

The need for hysterectomy, though rare, is reported in cases where necrosis or sepsis poses a threat to maternal health. This case also underscores the importance of detailed antenatal counselling and postpartum surveillance in women with large fibroids. Even after a seemingly stable caesarean recovery, such patients remain at risk for delayed complications including degeneration, infection, torsion, and expulsion. Furthermore, the significant foetal compromise seen here, including severe early-onset FGR and need for emergency delivery, reinforces the impact

that large fibroids can have on placental perfusion and uterine space dynamics. Overall, this case contributes to the limited literature on postpartum expulsion of large intramural–submucosal fibroids, particularly following caesarean section. It emphasizes the need for a high index of suspicion, early imaging, and timely multidisciplinary intervention to prevent morbidity.

CONCLUSION

A high index of suspicion, close monitoring, and prompt multidisciplinary management are critical in pregnancies complicated by large fibroids. Postpartum fibroid expulsion, though rare, can occur and may necessitate surgical intervention such as hysterectomy to resolve symptoms and prevent further complications.

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