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Case Report

Perilous myoma in the puerperium: A case report

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ABSTRACT

Background: Leiomyoma, a benign solid tumour found in the female genital tract, affects 3%-13% of pregnancies. These growths occur as sub serosal, intramural, or submucosal tumours. Approximately 10%–30% of pregnant women experience fibroid-related complications, such as spontaneous abortion, preterm labour, soft tissue dystocia, uterine inertia, fetopelvic disproportion, fetal malposition, and postpartum hemorrhage and a higher risk of caesarean delivery.

Purpose: This case report aims to shed light on the complexities arising in the postpartum period for women previously diagnosed with large fibroids during pregnancy. By exploring a specific case, this report emphasizes the importance of understanding and addressing these complications comprehensively.

Case Report: A 27-year-old primigravida sought antenatal care at 8 weeks of gestation with a 6cm intramural fibroid. Her pregnancy progressed smoothly, leading to a healthy vaginal delivery. However, at 7 weeks postpartum, she experienced pelvic discomfort, heavy lochia, and bleeding. Imaging revealed a submucosal fibroid protruding into the endometrial cavity with degenerating component Myomectomy performed.

Conclusion: This case underscores the necessity of a comprehensive understanding of complications associated with large fibroids, spanning both the antenatal and postpartum periods. Heightened awareness and timely intervention are crucial to ensuring optimal outcomes for both maternal and foetal health.

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1. Introduction

Uterine leiomyomas present significant challenges during pregnancy, labour, and delivery.^{1–4} These benign tumours, prevalent in 15–30% of women, often lead to functional disturbances within the uterus.⁵ While their growth is unpredictable, distinguishing fibroids from physiological myometrial thickening poses diagnostic challenges.⁶ Pain, especially in the second and third trimesters, is a common complication, particularly in cases involving large fibroids exceeding 5 cm in diameter.^{7,8} This case report delves into the intricate presentation and management of an intramural fibroid transitioning into a submucosal fibroid, resulting

in postpartum haemorrhage and degeneration during both immediate and delayed postpartum periods. Understanding these complexities is vital for effective clinical intervention and improved maternal outcomes.

2. Case Report

A 27-year-old nulliparous woman sought prenatal care at 8 weeks' gestational age without any identifiable risk factors. Ultrasonography revealed a FIGO-5 myoma measuring 6 cm in the anterior fundal location. Her antenatal care was uneventful. NT scan and first trimester screening was found to be normal. Target scan done and anomalies ruled out. Serial Growth scans done and growth was maintained around the same centiles. During her pregnancy, she

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experienced pressure symptoms and incomplete voiding of urine at 26 weeks of gestational age. Abdominal ultrasound was done which revealed no significant abnormality. Urine routine and culture showed signs of Urinary tract infection and same treated with antibiotics. She was reassured regarding the same. The leiomyoma grew significantly, reaching 15 cm at 38 weeks' gestational age. The patient was informed about associated risks during labour, and delivery. At 38.4 weeks' gestational age, she presented at the labour and delivery department with leaking per vagina, delivering a healthy male baby weighing 2.7 kg vaginally. The placenta was manually delivered with no complications, and the estimated blood loss was 400 ml. Postnatally, 11 cm fundal intramural fibroid was observed via ultrasound.

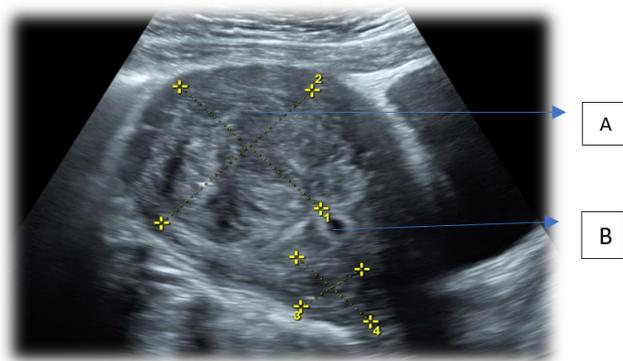


Figure 1: Antenatal USG- Intramural uterine fibroids diagnosed at 8 weeks. **A):** Fundal intramural uterine fibroid of 6.0 cm diameter (arrow). **B):** Gestation Sac

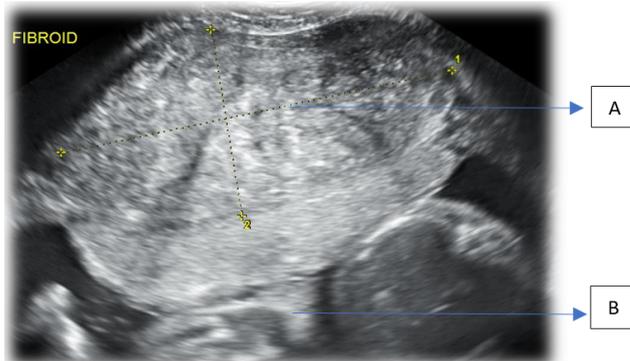


Figure 2: **A):** Antenatal USG- A. Intramural uterine fibroids imaged at 38 weeks measuring 15 cm; **B):** Fetus

2.1. Postpartum presentation

At 7 weeks postpartum, the patient complained of pelvic discomfort, low back pain resembling labour contractions, heavy bleeding, and lochia. Physical examination indicated a uterus measuring 16 weeks, with per vaginal bleeding.

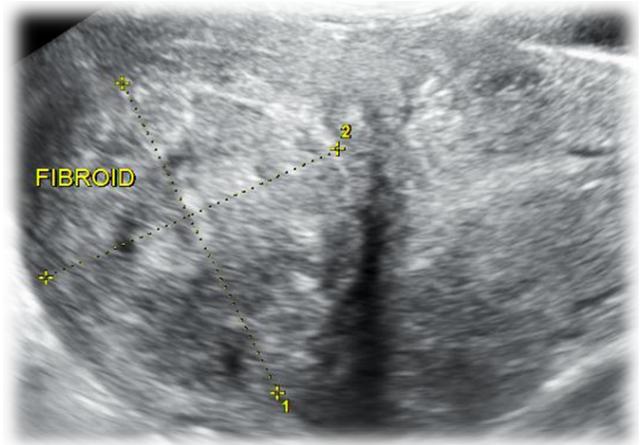


Figure 3: USG image in the immediate post partum – Fundal uterine fibroids measuring 11 cm

High vaginal swab, culture, and sensitivity tests were conducted. Ultrasound revealed 9.4 x 7.3 cm fundal intramural fibroid with submucosal component showing signs of degeneration. Blood investigations displayed normal levels, ruling out infection or retained products of conception. Empirical oral antibiotics were administered due to suspected endometritis. MRI confirmed a large degenerating fibroid in the anterior wall near the fundus, measuring 13.5 x 8.5 x 8 cm, with a submucosal component distorting the endometrial cavity, extending to the cervical canal.



Figure 4: Scan at 7 weeks postpartum- USG revealed uterus measuring 16 x 6 x 5cm, Fibroid with intramural and submucosal component protruding into the cavity

2.2. Management approach

Patient was explained regarding the findings and explained about the need for Laparoscopic myomectomy. Given the urgency but non-emergent nature of the situation, the patient chose laparoscopic myomectomy. During the procedure, hysteroscopy attempted to assess the submucosal component, due to the degenerating component of the



Figure 5: Gross picture of the intramural component of the myoma

fibroid there was no clear visualisation. Laparoscopy proceeded. A intramural fibroid of size 8 cm x 5 cm with extension into the submucosa was identified. Myomectomy proceeded, and the defect, myometrium, and serosa were meticulously closed using V-LOC sutures through a baseball technique in three layers. Postoperatively, follow up ultrasound revealed a normal uterine cavity. Histopathology confirmed leiomyoma with haemorrhagic necrosis.



Figure 6: Intra op picture demonstrating the degenerated sub mucous myoma

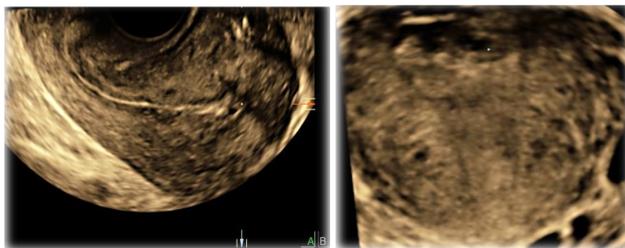


Figure 7: 3D PELVIS done 6 weeks after myomectomy- Cavity appears normal. Endometrial thickness appears thin

3. Discussion

Fibroids are common, hormone-dependent, benign uterine tumours. It is estimated that they occur in 20% to 40% of women during their reproductive years.⁹ The location and size of uterine myomas play a significant role in morbidity.^{10,11} The pregnancy related fibroid regression may account for the inverse association between parity and fibroid risk seen in many epidemiologic studies.¹² The complex mechanical and cellular mechanisms related to birth and uterine involution may play a role in fibroid elimination and shrinking.^{8–10} The timing of fibroid regression (during pregnancy, at birth, or during the postpartum period) and the mechanisms involved are not known. Fibroid shrinkage during pregnancy is difficult to study. As the foetus develops, it is more difficult to measure fibroids. Burbank suggested that birth and placental delivery, with its associated hypoxia, would induce regression.^{9,10} In our case, the absence of complications during delivery was attributed to the intramural nature of the fibroids. During the puerperium, the intramural fibroid partially transitioned to a submucosal position. The probable mechanism proposed here is that during the uterine involution process, the intramural fibroid was expelled through the myometrium layer (probably thinner and therefore easily breakable) lining between the endometrium and the intramural fibroid and after through the endometrium.¹³ We hypothesize that this transformation occurred during uterine involution, possibly due to uterine contractions, as evidenced by the patient's constant pelvic pain resembling labour contractions in the postpartum period. This case illuminates the intricate management of postpartum patients with complex fibroid conditions. Swift and precise surgical interventions, meticulously tailored to the individual patient's situation, facilitated the successful resolution of complications.¹⁴ This underscores the pivotal role of personalized treatment strategies in navigating such cases, emphasizing the importance of individualised care.

Timely recognition and management of degenerated myomas are pivotal for favourable clinical outcomes. Submucosal myomas can become pedunculated, leading to complications such as prolapse, necrosis, pyomyoma, non-puerperal inversion of the uterus, and subsequent endometritis and synechiae formation.¹⁵ Early diagnosis through MRI plays a crucial role in guiding surgical procedures.

3.1. Challenges in treatment approaches

Due to the rarity of submucosal myomas during pregnancy or postpartum, standardized clinical guidelines are currently lacking. Each case demands individual evaluation. Prompt surgical intervention, coupled with appropriate antibiotic therapy, is imperative. The choice of a surgical approach whether vaginal or abdominal should be in prioritizing

the preservation of the uterus especially when the patient desires future pregnancies. The twisting off of a prolapsed pedunculated submucosal uterine fibroid by means of vaginal route is a simple treatment option, which can be done even in a low resource setting. The surgery duration and hospital stay are shorter when compared to laparotomy. Patients should be put on broad spectrum antibiotics as we did for our patient.¹³ Pyo myoma, which has been described as a life-threatening infection of fibroids with an incidence of approximately 0.5% before the application of antibiotics.^{15,16} In our patient in view of the degenerating component and large intramural component, vaginal approach was not feasible.

4. Conclusion

A high clinical suspicion and meticulous follow-up are indispensable for postpartum women presenting with pain, heavy bleeding, and a confirmed leiomyoma diagnosis. Following anti-infective treatment, considering laparoscopic or vaginal myomectomy is judicious. The ultimate choice of the surgical approach should be tailored to the patient's age, reproductive requirements, and preference for retaining the uterus. Individualized care, complemented by timely intervention and comprehensive follow-up, assures optimal outcomes for women grappling with postpartum complications related to leiomyomas.

5. Source of Funding

None.

6. Conflict of Interest

None.

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