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Case Report

Emaciation and immobility due to enormously growing degenerating subserosal fibroid up to mid-thorax during pregnancy and following childbirth-an unusual presentation managed by multidisciplinary approach

Avishek Bhadra[1], Arunima Mukhopadhyay[2], Ramprasad Dey[3], Rumela Biswas[3]*

[1]Department of Gynaecology and Obstetrics, R. G. Kar Medical College and Hospital, Kolkata, West Bengal, India
[2]Department of General Surgery, Medical College Kolkata, West Bengal, India
[3]Department of Gynaecology and Obstetrics, Medical College Kolkata, West Bengal, India

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***Correspondence:**
Dr. Rumela Biswas,
E-mail: rumela1@gmail.com

ABSTRACT

Uterine fibroids (leiomyomas) are common neoplasms in women of childbearing age, with prevalence of approximately 10.7% in pregnancy. Subserosal fibroids are typically less symptomatic but can lead to significant complications during pregnancy, such as degeneration and hemorrhage. Large, rapidly growing fibroids, particularly those causing compression and degeneration, present challenges in clinical management, requiring careful consideration of delivery routes, timing, and the preservation of fertility. This case report addresses the complex management of a patient with enormously growing degenerating subserosal fibroids during pregnancy and postpartum. A 32-year-old nulliparous woman presented at 8 weeks gestation with large subserosal fibroids. Despite adequate fetal growth, the fibroids grew substantially during pregnancy, resulting in cachexia, immobility, and dyspnoea by the third trimester. The patient required multiple blood transfusions and frequent monitoring. At 32 weeks, after delivery via category 3 cesarean section, complications arose including postpartum hemorrhage, which was managed with uterotonics. Postpartum, the patient experienced a significant increase in fibroid size, causing further complications such as respiratory distress and abdominal distension. This required a laparotomy followed by myomectomy. The patient underwent successful laparotomy for the removal of the degenerated fibroid cyst, with along with drainage of 38 litres of cystic fluid. Postoperative care involved intensive monitoring, including respiratory management and fluid replacement. Histopathological analysis confirmed the presence of a benign degenerated leiomyoma. The patient's postoperative recovery was gradual, with significant improvement in her symptoms. This case highlights the rare and challenging scenario of rapidly growing subserosal fibroids in pregnancy and postpartum. The multidisciplinary approach was crucial for managing both phases of the patient's care during pregnancy to ensure fetal well-being and manage complications, and postpartum to address the growing fibroids. Though uterine subserosal fibroids generally do not impact pregnancy significantly, in rare cases, such as this, they can lead to severe complications requiring surgical intervention.

Keywords: Uterine subserosal fibroids, Pregnancy complications, Postpartum myomectomy, Emaciation

INTRODUCTION

Uterine fibroids (leiomyomas) are the most common solid and symptomatic neoplasm in women occurring in up to 20% of women in childbearing age.[1] The estimated prevalence in pregnancy is 10.7%, depending on ethnicity.[2] During pregnancy, the potential complications of fibroids like degeneration, haemorrhage, although rare, are of frequent clinical concern in about 20% of cases. Out of these subserosal fibroids are the least symptomatic.

Morbidity in pregnancy appears to be related to fibroid number, size, location and relationship to placenta implantation.[3] There is paucity of case studies of enormously growing subserous fibroids in pregnancy and postpartum to the extent of causing generalized emaciation and immobility. In these patients, some dilemmas might be present, such as clinical follow-up, route and time of delivery, and whether to preserve the uterus.[4] Moreover, the clinical features of large degenerating subserosal fibroids can mimic other chronic intra-abdominal pathology as well, the most common being ovarian neoplasm on clinical examination and radiological investigations.

Main highlighting points in this care report are judicious antenatal care, timing and delivery route, minimizing intrapartum and postpartum complications, postnatal follow-up, role of blood and blood products, decision for readmission and workup for completion laparotomy in the form of myomectomy for the enormously growing degenerating subserosal fibroids, at the same time preserving the uterus and preventing other visceral injuries.

CASE REPORT

A 32-year-old nulliparous Indian woman, HbE trait, with regular menstrual cycles and gestational hypothyroidism requiring thyroxine replacements of 25 micrograms per day, presented at 8 weeks gestation for antenatal booking. On examination, patient's weight was 99.5 kg (BMI=33.4) and at that time her fundal height corresponded to 24 weeks uterine size. She was reviewed at 12 weeks gestation in the antenatal clinic, when she presented with early cachectic changes and at that time the fundal height corresponded to 30 weeks gestation.

First trimester ultrasound scan revealed two large subserous fibroids along fundic region (18.5×10.5×16.2 cm and 14.0×10.4×12.3 cm), with fibroid on the right-side showing areas of degeneration.

From the beginning, the treating obstetrician was apprehensive that the size of the fibroids would prevent development of a healthy pregnancy and it would be hazardous to the woman because of anaemia and compression to adjacent structures and risk of postpartum haemorrhage. Patient needed admission twice during her antenatal period, once at around 24 weeks and another at around 28 weeks for two units PRBC transfusion as her Hb level fell to 7 gm% on both occasions despite oral iron administration throughout and intravenous iron infusion twice over 2 weeks, after 20 completed weeks and a normal anatomy scan.

Pregnancy surveillance was carried out with antenatal visits about twice per month. Fetal growth scan and Doppler studies were within normal limits. Ultrasound at 32 weeks gestation revealed an increase in size of the fibroids (34×23 cm and 19×18 cm) with complete cystic degeneration in the larger fibroid. However, in spite of the exuberant growth of the uterine leiomyomas, there was adequate fetal development and growth, with an estimated fetal weight of about 2100 g at 32 weeks gestation on ultrasound.

At this time, the uterine size corresponded with that of a twin pregnancy. Remarkably, despite the progressive growth of the fibroids, the patient had only pelvic pain during mobility, to start with, particularly in the early second trimester, which was well-managed with paracetamol. However, anorexia restriction of mobility and moderate dyspnoea started in the third trimester with the out of proportion growth of the gravid uterus. Bowel and bladder function was normal throughout.

The primary goal was to deliver after 34 weeks to avoid complications of prematurity especially when the growth of the foetus was not affected. However, the onset of dyspnoea and restricted mobility with cachexia of the patient owing to the huge abdominal size led to the decision to terminate the pregnancy after 32 weeks. At admission at 32 weeks 5 days gestation, the patient weighed 104 kg.

A multidisciplinary team comprising of two obstetricians, anaesthesiologist, chest physician, neonatologist and haematologist was involved and decided to perform category 3 caesarean section after a course of antenatal corticosteroids and further two units of PRBC transfusion. At birth the baby was healthy and weighed 2500 grams and was admitted in NICU for observation.

The surgery was performed under spinal anaesthesia, through a low transverse Pfannenstiel skin incision. After opening the abdomen, anatomy was found to be distorted and Lower Segment of the uterus was not well defined (Figure 1). Adequate judgement was taken to identify the lower segment and incision given to deliver the baby.

Uterine incision given was low transverse, after carefully noticing the urinary bladder and avoiding any inadvertent injury due to the lack of space caused by the overgrown uterus and technical difficulty to mobilize the same.

But origin of the subserous fibroids could not be assessed as a result of the overgrown 'near term' uterus even after delivery of the baby, but it was felt that it was from the fundus, especially upper anterior wall, extrapolating the

ultrasound findings of early trimester pregnancy. Postpartum haemorrhage, due to uterine atony as a result of the fibroids, was anticipated and prevented with prompt use of uterotonics (oxytocin 5 IU slow intravenous + 10 IU in each bottle of IV fluid+0.2 mg Methergin intramuscular+two Prostaglandin F2alpha 250 mcg intramuscular injection).

Due to the thinned out fibroid wall consequent to cystic degeneration, one small area ruptured near the base during uterine massage and profuse clear straw-coloured cystic fluid started coming out which was sucked out by 2 simultaneous sucker machines and the approximate amount was at least 10 l, which deficit was judiciously managed by intra-operative fluid replacement by anaesthetist.

The rent was repaired by no. 1 vicryl (2347, Round bodied polyglactin) stitches and multiple absorbable gelatine sponge and Surgicel (resorbable oxidized cellulose) applied to achieve haemostasis and pack the region where it was impossible to find out a space between the gravid uterus with fibroid and the parietal peritoneum.

Blood loss was estimated to be about 600 ml and PPH was prevented efficiently. PRBC was transfused one unit intraoperatively and three units postoperatively and the stormy postoperative period was managed through continuous monitoring of all vitals, appropriate fluid replacement, lower limb compression stockings and prophylactic low molecular weight heparin to prevent deep vein thrombosis and early mobilization though it was extremely difficult for her consequent to the persistent increased abdominal size. The hospital stay after caesarean was one week and at the time of her discharge, the abdominal size corresponded to that of 28 weeks gestation.

She was followed up monthly with a conservative approach as it was anticipated that size of the fibroids would reduce post-delivery. But, after 3 months postpartum, she presented with generalised emaciation especially upper extremities and immobility with bilateral pedal edema and an enormously growing fibroids up to mid-thorax to the extent that it caused dyspnoea.

On examination a huge, mildly tender, abdomino-pelvic mass, cystic in consistency with prominent veins was palpated extending up to the xiphisternum with restricted mobility. On per vaginal examination, it was difficult to assess the uterus separately.

Patient's weight now was 105 kg and she had a grossly emaciated appearance (Figure 2). Haemoglobin level was again dropped down to 7 gm% and albumin levels were also low. Pelvic ultrasound scan showed a large cystic lesion (41.3×30.8×42.5 cm) along the uterus with low-level echoes in the huge cyst.

There was an associated multiseptate cystic lesion (6.5×5.6 cm) in left adnexa without any solid nodule or calcification. Chest X-ray showed elevated diaphragm bilaterally upto mid thorax and shift of trachea. Lung fields and heart shadow was however normal. MRI showed a normal sized uterus with normal contour and cavity but deviated to the right side of the pelvis.

A large thick walled multilocular abdomino-pelvic cystic SOL (41.7×30.5×38.1 cm) with thin peripheral septation was noted arising from the pelvis and extending up to epigastric region, occupying both sides over midline pelvis and abdomen.

No obvious solid component was seen. Gut loops were displaced around the SOL. Right ovary appeared normal, left ovary was not visualised separately. Though the provisional diagnosis was huge degenerated subserous fibroid, the relevant differential diagnosis was malignancy (particularly leiomyosarcoma).

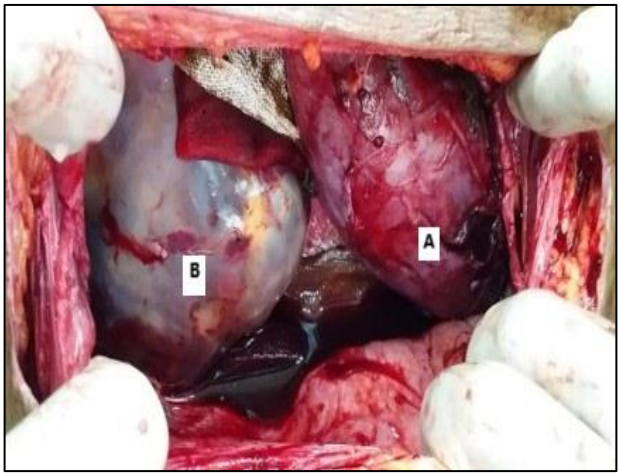

Figure 1: Intraoperative findings during Lower Segment Caesarean Section showing (A) uterus and (B) degenerated fibroid.

Figure 2: Patient with gross emaciated appearance (A) frontal view and (B) lateral view.

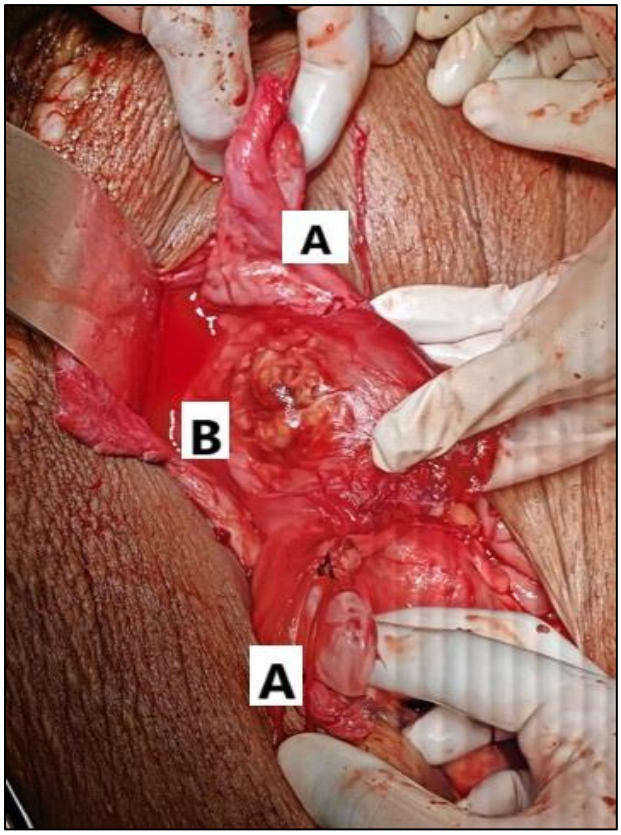

Figure 3: Post myomectomy showing (A) healthy tubes and ovaries and (B) pedicle of fibroid.

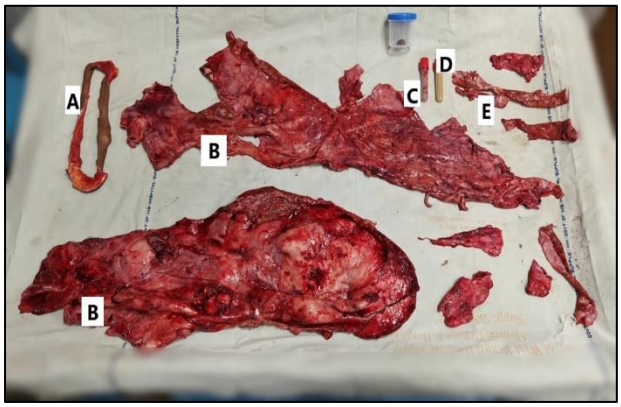

Figure 4: Histopathological sample (A) skin, (B) degenerated fibroid wall, (C) peritoneal sample, (D) cystic fluid and (E) omental sample.

DISCUSSION

In summary, our patient had two phases in her treatment. The first was her pregnancy where the fibroid degenerated and grew along with the gravid uterus necessitating an early delivery and the second phase was complicated by enormously growing degenerating subserosal fibroids up to mid-thorax causing emaciation and immobility and needing laparotomy for myomectomy by an MDT and preserving her future fertility. the extensive compression of the fibroid to the stomach and small gut was the cause of her emaciation and the compromised lung function caused dyspnoea.

While the majority of women with fibroids experience uncomplicated pregnancies, studies indicate that uterine fibroids are linked to a higher incidence of complications, including spontaneous miscarriage, preterm labor, fibroid degeneration, abnormal fetal presentations, increased likelihood of caesarean delivery, and both antepartum and postpartum hemorrhage.[5] Most fibroids remain stable in size throughout pregnancy. However, a small proportion may enlarge during the first trimester, only to decrease in size during the third trimester and postpartum period.[6] However, our case did not follow this particular pattern rather increased in size postpartum. Ultimately the situation could only be resolved by surgically resecting the mass after stabilizing her.

CONCLUSION

There remains uncertainty regarding the growth patterns of uterine leiomyomas during and after pregnancy, as their behaviour is difficult to predict. Given the lack of clear guidelines, one of the most challenging aspects of this case was determining the ideal timing for delivery and managing the postpartum phase to optimize patient outcomes and minimize complications. We relied on local protocols and a multidisciplinary team approach to address both the initial caesarean section and subsequent laparotomy. This involved careful planning of surgical incisions, fetal extraction methods, bleeding control strategies, and minimizing the risk of intraoperative myomectomy or hysterectomy, as well as employing safe surgical techniques to avoid injury to vital structures. Although fibroids that significantly affect pregnancy are rare, such complex cases require a careful, collaborative approach to ensure the best possible care.

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