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**WHEN CONCEPTION COMES WITH A HUGE PRICE: A CASE REPORT OF GIANT  
UTERINE LEIOMYOMA CO-EXISTING WITH PREGNANCY**

## WHEN CONCEPTION COMES WITH A HUGE PRICE: A CASE REPORT OF GIANT UTERINE LEIOMYOMA CO-EXISTING WITH PREGNANCY

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### ABSTRACT

**Introduction:** The management of huge intra-abdominal mass in pregnancy, a rare condition, involves careful evaluation and occasional surgical intervention. Low and middle-income countries are specifically faced with late and often-time, life-threatening presentations of this condition. The managing team should be equipped with the relevant clinical skills to care for this category of patients despite the limited resources at their disposal.

**Case report:** We report a case of a 38-year-old primigravida who presented with a history of progressive abdominal swelling and weight loss of 6 years, as well as severe respiratory distress of 4 months. She had a background history of primary infertility for 14 years and menstrual irregularity of 6 years. The patient had a positive serum pregnancy test and radiological findings in keeping with a giant intra-abdominal mass and a viable pregnancy. An assessment of huge intra-abdominal mass co-existing with pregnancy was made. She eventually had laparotomy with removal of the mass and preservation of the pregnancy after initial resuscitation. The histology of the mass revealed a uterine leiomyoma. The Pregnancy progressed to term and was delivered of a live male neonate via a caesarean section.

**Conclusion:** Huge uterine fibroid in pregnancy poses a great challenge because of the associated risks and complications during surgical intervention. However, early

detection and prompt decision-making processes reduce or prevent morbidity and mortality from the condition.

**Keywords:** Incidental conception; pregnancy; uterine leiomyoma

### INTRODUCTION

Uterine fibroid is common among women of reproductive age group but its occurrence in pregnancy has been documented to be between 0.3 % to 2.6 % with one-tenth of them resulting in complications.<sup>1</sup> Antenatal myomectomy is not advisable due to fear of complications and occasional mortality; however, decisions are sometimes taken to carry out the procedure when there are overwhelming life-threatening symptoms in the patient.<sup>2</sup>

Despite the series of controversial reports on the performance of myomectomy during pregnancy, there are several reports of it being performed in pregnancy when symptoms become unbearable and the overall survival of the mother and fetus is threatened.<sup>1,2</sup>

### CASE REPORT

A 38-year-old primigravida presented to our hospital on account of progressive abdominal swelling, weight loss, and menstrual irregularity of 6 years with associated difficulty in breathing of 4 months duration. There was associated general body weakness



and loss of appetite but no history of jaundice, vomiting, diarrhea, constipation or cough. There was associated progressive weight loss. She had a history of menstrual irregularity characterized by periods of oligo-amenorrhea with occasional heavy menstrual bleeding. She could not recall her last menstrual period. She was incapacitated from performing her daily routines. She had a history of primary infertility of 14 years and was using herbal concoctions and faith-based medicine for all the symptoms. There was no history of other chronic medical conditions or cigarette smoking.

Physical examination at presentation revealed an acute-on-chronically ill-looking woman in respiratory distress. She was pale, anicteric, afebrile, moderately dehydrated, centrally cyanosed, with bilateral pitting pedal edema. Her weight, height, and body mass index (BMI) were 79 kg, 1.65m, and 29.02 kg/m<sup>2</sup> respectively.

Respiratory system evaluation revealed a respiratory rate of 40 cycles per minute, nasal flaring and oxygen saturation (SPO<sub>2</sub>) in room air of 86 %. Cardiovascular examination showed a pulse of 110 beats per minute with heart sounds of S<sub>1</sub> and S<sub>2</sub> only. Her abdomen was massively distended with a mass occupying the whole abdomen making further assessment difficult (figure 1). The percussion note was generally dull. The vaginal examination revealed a normal vulva, vagina, and cervix.

The investigation results showed a packed cell volume of 25% with other parameters of full blood count being normal. The liver function test and renal function test were normal. The HBsAg, HCV, and HIV screening were negative. However, the serum pregnancy test was incidentally positive as the patient could not give a detailed coital history or any pregnancy symptoms. The serum CA-125 level was 25 U/ml. An abdominal ultrasound scan showed a viable fetus at 22 weeks gestation and a huge abdominopelvic mass about 35cm by 35cm by 35cm in size with suspicion of pedunculated fibroids to rule out ovarian tumor. Magnetic resonance imaging was not available in our environment but the

chest CT scan showed no chest lesion though the diaphragm was elevated and splinted while the abdominal CT scan revealed a huge solid intraabdominal mass of about 40cm by 35cm by 35cm in size with incidental finding of uterus containing a fetus raising a suspicion of subserous myoma or solid ovarian tumor with pregnancy.



**Figure 1:** The massive abdominal distension



**Figure 2:** The mass with the gravid uterus and the tortuous omental vessels

An assessment of a huge intraabdominal mass most likely pedunculated uterine fibroid to rule out ovarian tumour co-existing with pregnancy was made. She was nursed in a semi-recumbent position, and placed on intranasal oxygen at 6 liter/minute. Additionally, she was rehydrated with intravenous fluids and was transfused with 2 units of packed cells to correct the anaemia. She was optimized over 3 days and SPO<sub>2</sub> became 99 % on Oxygen and PCV was 32 %.

However, SPO<sub>2</sub> was persistently dropping without oxygen.

She was counselled on the need for exploratory laparotomy due to the life-threatening symptoms. The patient consented and she had laparotomy and myomectomy under general anaesthesia with intra-operative findings of grossly distended abdomen, minimal ascites, huge pedunculated solid mass (? fibroid) about 40cm by 40cm by 30cm surrounded by tortuous omental vessels (figure 2); the mass had a highly-vascularized thick stalk of about 3cm in length and 5cm wide attached to the cornual end of the uterus, 20-weeks sized uterus with smooth surface, normal bladder, mildly dilated bowel loops, normal liver, stomach, and ovaries bilaterally (figure 3). The estimated blood loss was 1 litre.

The abdomen was accessed through a midline incision, and the mass was gently rolled to the right (held by the assistant). The tortuous omental vessels were meticulously ligated one after the other until they were separated from the mass. The stalk was injected with vasopressin, double-clamped, divided in between clamps, and suture-ligated with Vicryl 1 suture. This could not achieve the desired hemostasis and the bleeding points were closed with Vicryl 0 suture (figure 4). Two units of whole blood were transfused intra-operatively and extubation was delayed for her to have a smooth reversal of anaesthesia.

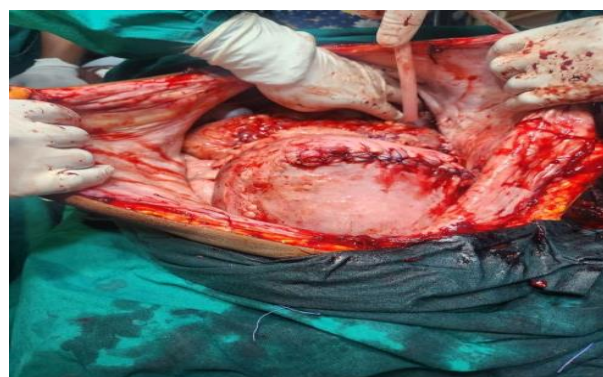
Post-operatively, she had intravenous fluid, antibiotics, analgesics, and tocolytics (nifedipine). She had an obstetric ultrasound immediately after the surgery which was normal. The post-operative period was uneventful and she was discharged on the seventh post-operative day.

Histopathological examination of the mass revealed a huge solid mass weighing 18.5 kg (figure 5); microscopically, it showed proliferating fascicle of spindle-shaped smooth muscle cells arranged in a whorled pattern with no mitotic figures or necrosis seen. She was registered for antenatal care in our clinic and the antepartum period was uneventful. At term, she had an elective

caesarean delivery of a live male baby weighing 2.8 kg with good Apgar scores. She had her postnatal clinic visit 6 weeks after delivery with no complaint. She was counselled on child spacing and the need for hospital-supervised delivery in her next pregnancy.



**Figure 3:** Uterus with normal Ovaries



**Figure 4:** The gravid uterus after the removal of the mass



**Figure 5:** The mass removed at laparotomy

## **DISCUSSION**



Generally, the management of uterine myoma co-existing with pregnancy is expectant with surgical intervention considered a viable post-delivery option due to the increased risk of pregnancy loss, hemorrhage, and hysterectomy if done in pregnancy.<sup>2,3</sup> Antepartum myomectomy is reserved for life-threatening systemic symptoms as seen in the index patient.

Most patients are asymptomatic but symptoms could include red degeneration, miscarriage, preterm labour, pre-labour rupture of membrane, and severe respiratory distress which is usually relieved by surgical removal of the mass.<sup>1,4</sup> Giant uterine fibroid can increase the intra-abdominal pressure and this may affect the pulmonary, renal, splanchnic, and cardiovascular system with elevation and splinting of diaphragm along with partial occlusion of the inferior vena cava.<sup>4</sup> The index case presented with severe respiratory distress which necessitated the surgery.

The differential diagnosis of huge abdominal mass in pregnancy could be an ovarian tumor, ligamental fibroid, hydrop changes of myoma, massive ascites from any cause, Meig syndrome, pseudo-Meig syndrome, gastrointestinal stromal tumour, omental cysts and hepatic masses.<sup>5,6</sup> The preliminary set of investigations and the tumor biomarker helped rule out some of these suspicions though pregnancy could increase the levels of the markers.

Pre-operative preparation and optimization of the patient are important because of the deteriorating clinical state of the patient caused by prolonged systemic decompensation from the huge abdominal mass.<sup>1,4</sup> The patient had anaemia, hypoxia, and dehydration at presentation which were quickly corrected before surgery.

Intracapsular myomectomy; where the pseudocapsule of the fibroid is preserved, is advocated because the capsule contains substance P and vasoactive intestinal polypeptide which help in wound healing and early return of uterine anatomy.<sup>7,8</sup> However, this was not done for our patient because it was a pedunculated fibroid and the stalk was

easily accessible for the removal of this giant tumor.

Gradual decompression of a cystic mass by paracentesis has been proposed to reduce severe hypotension, increase vital capacity, and prevent splanchnic shock due to a sudden release of compressed inferior vena cava.<sup>4,9</sup> However, with a huge solid mass like our patient's, gradual rolling of the mass away from the inferior vena cava is the recommended surgical modality.<sup>4,9</sup> A further precautionary step in managing this clinical scenario is delayed extubation to allow efficient and optimal recovery as was done for the patient.

The post-operative care of the patient involved the use of tocolytics to prevent spontaneous rupture of membrane, uterine contractions, and cervical dilatation due to the irritation of the uterine smooth muscles.<sup>10</sup> Generally, tocolysis is achieved with the use of calcium channel blockers (nifedipine),  $\beta$ -adrenergic agents (terbutaline, salbutamol), high-dose magnesium sulphate, non-steroidal anti-inflammatory drugs (indomethacin), and oxytocin inhibitors (atosiban). Atosiban showed similar tocolytic efficacy as magnesium sulphate though the latter exhibited some maternal side effects like electrolyte imbalance, lethargy as well as severe and potentially dangerous cardiotoxicity. Despite the superiority of atosiban compared to other agents, its use is still limited in some low and middle-income countries due to the cost and thermal instability. Nifedipine was used in this case due to its availability and affordability. The need for the gravid uterus to remain quiescent following laparotomy and uterine manipulation is very paramount and is an integral step towards a complication-free surgery.

## CONCLUSION

Symptoms of huge intra-abdominal mass may be confusing especially when pregnancy appears in the picture and delay in presentation or decision to intervene could be fatal. Hence, the clinician should focus on the

best option of management that will guarantee the optimal survival of the mother and the unborn child.

### Ethical considerations

Informed consent was obtained from the patient to use her data in this publication.

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**Authors' Contributions:** OSJ and AOO did a literature review. OSJ and OMO drafted the manuscript. OSJ and ARA revised the draft for sound intellectual content. All the authors approved the final version of the manuscript.

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