

Gravid fibroid uterus: torsion, posterior wall caesarean section and myomectomy for red degeneration, a case of obstetrician beware

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Introduction

The incidence of uterine leiomyomas (fibroids) during women's reproductive years is estimated at 20–40% [1]. The prevalence of fibroids in the pregnant population is estimated between 2.7% and 25% [2–4]. The complications that fibroids can cause both in pregnancy and in the purperium are well documented and numerous. Ante-natal complications include pain [5], miscarriage [6], intra-uterine growth restriction and preterm labour [2]. Intra-partum complications include labour dystocia and foetal malpresentation. Complications reported post-natally include post-partum haemorrhage and retained placenta [2].

Outside the context of fibroids, cases of uterine torsion both acute and chronic are well documented [7–9], as are cases of posterior wall caesarean section [7, 10, 11]. We present a case of a fibroid uterus with chronic torsion and posterior wall lower segment caesarean section. Red degeneration occurred in the purperium and was a cause of high temperature, rapid pulse and abdominal pain. These symptoms mimic a lot of pathologies and opened the door for many investigations and delayed the treatment. This might be one of the few indications for myomectomy shortly after delivery.

Case presentation

A 29-year-old primigravida of Asian origin booked under consultant care. Nuchal scan at 12^{+1} week's gestation revealed a normal intra-uterine pregnancy and an incidental finding of an intramural, fundal fibroid approximately 13 cm in diameter. Due to the finding of the large fibroid, additional growth scans were planned at 28, 32 and 36 weeks. Modified glucose tolerance test was performed at 28^{+1} week's gestation for a family history of diabetes mellitus; this resulted in a diagnosis of gestational diabetes mellitus. Detailed anatomy scan at 22^{+1} viewed that the fibroid was of $21 \times 16 \times 16$ cm. Induction of labour was planned around 39 weeks gestation due to the ongoing decreased foetal movements and gestational diabetes.

Prostaglandin was used for induction at 38 weeks +6 days. After prolonged induction with prostaglandin, artificial rupture of the membrane was done when the cervix was 2 cm dilated. Syntocinon drip started few hours later. Caesarean section was done under epidural anaesthesia for failure of progress. The uterus was found to be rotated (around 60°) with the left tube and ovary seen anteriorly. Due to the very limited mobility of the uterus, caesarean section was done through the posterior uterine wall (Figs. 1 and 2). The uterus was delivered outside the wound after removal of the placenta. The uterine incision was sutured in two layers. After correction of the torsion, the uterus was delivered back. At operation, the fibroid was estimated to have a maximum diameter of 25 cm. Oxytocics given at the time of the procedure were 5 units of IV syntocinon and a drip of 40 units syntocinon in 500 ml of normal saline over 4 h. Misoprostol 800 mcg was given per rectum at the end of the

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Fig. 1 Posterior wall caesarean section, both ovaries and tubes seen

procedure. A single dose of co-amoxiclav 1.2 g IV was given intraoperatively, and a pelvic drain was left in situ.

The patient was unwell postoperatively with high temperature, rapid pulse and continuous abdominal pain with tenderness over the uterus. The white cell counts and CRP were high and continue to increase on a daily basis. Intravenous antibiotics and pain killers failed to improve her symptoms. MRI (Fig. 3) did show fibroid degeneration with no other obvious cause for fever. Both kidneys looked normal. Myomectomy was done through longitudinal skin and uterine incisions, and the endometrial cavity was not opened. Cut section of the myoma showed dark red colouration with fishy odour. Histopathology showed haemorrhagic infarction of the fibroid. The patient recovered quickly after her second surgery. She was seen in the postnatal clinic, and on consultation, it was agreed to have elective caesarean section in her next pregnancy.

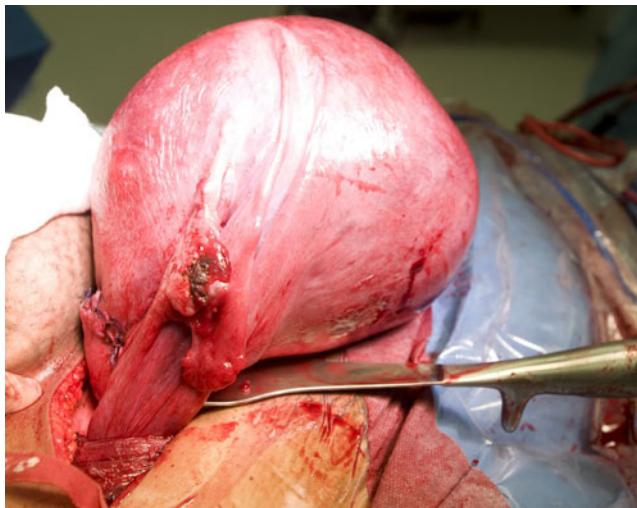


Fig. 2 Fundal fibroid, part of posterior wall caesarean section and right round ligament, ovary and tube are seen

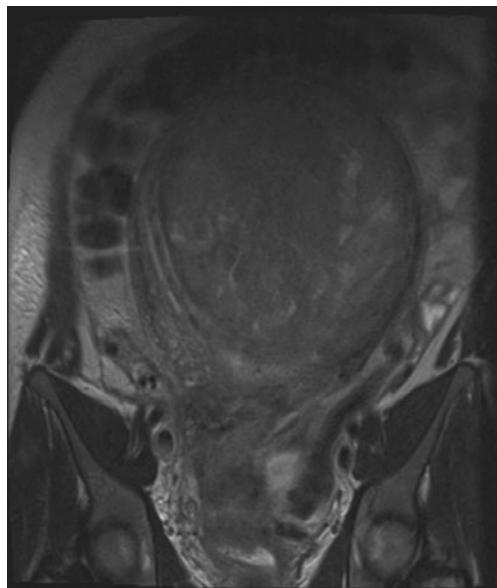


Fig. 3 MRI of degenerated fibroid

Discussion

Uterine torsion is defined as a rotation of more than 45° around the long axis of the uterus. It is an unusual complication of pregnancy, and for most obstetricians, it probably represents a ‘once in a lifetime’ diagnosis [12]. Torsion presenting in labour may manifest itself by failure of cervical dilatation despite strong uterine contractions or foetal distress due to reduction in uterine blood flow. The uterine incision is inadvertently made on the posterior or lateral wall due to rotation of the uterus. In cases of torsion recognized at term, manual correction followed by delivery of the foetus by a caesarean section is the treatment of choice. In cases where correction is not possible, a deliberate posterior hysterotomy can be done for delivery of foetus. Patients with incision on the posterior wall of the uterus should have a repeat caesarean section in future pregnancy, since the risk of rupture is not known [13].

Bilateral plication of the round ligaments can be done to prevent immediate postpartum recurrence of uterine torsion [9] in spite that we have not adopted this policy in our case.

There has been much debate over the natural history of fibroids in pregnancy; a commonly accepted theory is that fibroids will tend to grow in the 1st trimester if at all and thereafter, remain relatively stable [2]. We have shown that fibroids can significantly increase in size throughout the pregnancy, in this case from a maximum diameter of 13 cm at the end of the 1st trimester to 25 cm at the term. Cervical and lower segment fibroids are known to cause labour dystocia [5]. In this case, we have shown that a fibroid in any location can indirectly result in labour dystocia or failure of induction of labour. Despite the long time of induction of labour and painful contractions, the cervix

failed to dilate beyond 3 cm. At caesarean section, no mechanical obstruction to the descent of the foetal head was noted, leading us to suggest that the failure to progress was as a result of the extreme rotation of the uterus. Our case also suggests that significant uterine rotation as a result of a large fibroid uterus can be predicted using clinical history taking and ultrasound imaging. In this case, retrospectively the patient recalls an occasion where the foetus was particularly active and following this she noticed a significant change in the shape of her abdomen. We suggest that uterine rotation should be considered in those patients known to have large fibroids who fail to labour or to progress in labour.

This case demonstrates the benefits and feasibility of exteriorising the uterus at caesarean section under epidural anaesthesia. Had the uterus not been exteriorised, it is possible that the uterus would have remained rotated, the clinical significance of which is unknown.

Red degeneration occurs particularly in pregnant women. The cut surface of the affected tumour has a dull red appearance and a somewhat fishy smell [14].

Uterine fibromyomata of a red colour are divided pathologically into two cases—thrombotic and angiomatous. The thrombotic have clinical symptoms of abdominal pain, tender tumour, rapid enlargement of the tumour, general ill health, rise of temperature and pulse rate; these symptoms may occur singly or in combination. [15] On occasion, the parietal peritoneum overlying the infarcted myoma becomes inflamed, and a peritoneal friction rub develops. Myoma degeneration may be difficult to differentiate from appendicitis, placental abruption, ureteral stone or pyelonephritis, but imaging techniques (e.g MRI) might be helpful [13].

Resection of intramural myomas during pregnancy, or at the time of delivery, may stimulate profuse bleeding. In some cases, however, unrelenting pain from infarction and degeneration prompts surgical treatment [16].

Declaration of interest The authors report no conflicts of interest. The authors alone are responsible for the content and writing of the paper.

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