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Dr. Lovely Thomas
Calderdale Royal Hospital, UK

Fifydani Shamsudin
Calderdale Royal Hospital, UK

Corresponding Author:
Dr. Lovely Thomas
Calderdale Royal Hospital, UK

Spontaneous expulsion of sub-mucous fibroid within twelve hours of emergency caesarean section: A case-report

Dr. Lovely Thomas and Fifydani Shamsudin

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Abstract
We report a case of 41yr old Gravida 5 Para 4-previous 1 CS (caesarean section) followed by 3 VBAC (vaginal birth after caesarean section), with history of previous preterm deliveries and this pregnancy complicated by submucosal fibroid of size 7.5*6 cm. She was a late booker at 18 weeks hence EDD (expected date of delivery) calculated from scan at 18+6. Fibroid remained almost stable in size throughout pregnancy. She presented to emergency services with pre-term labour at 36+1 weeks and examination revealed that she was in established labour (cervix fully effaced, 5 cm dilated) with breech presentation. She opted for emergency caesarean section and hence shifted to theatre quickly. She was fully dilated on reaching theatre with breech at -1 station. Because of pathological CTG (cardiotocogram) and high station of the presenting part, decision made to proceed with caesarean section. Emergency caesarean section was challenging due to adhesions, multiple fibroids and atonic PPH (postpartum haemorrhage), which was managed with uterotonics. She had severe abdominal pain and heavy PV (per vaginal) bleeding couple of hours after caesarean section and was taken for examination under anaesthesia (EUA) and surgical management of PPH. EUA revealed a prolapsed fibroid of size 7*5 cm in the vagina which was removed by simple traction and bleeding settled. This case underlines the importance of considering fibroids as a cause for abdominal pain during and after pregnancy.

Keywords: Submucosal fibroid, PPH, EUA, after pregnancy, sub-mucous fibroid

Introduction
In women of reproductive age group, uterine fibroids or leiomyoma are the most common benign pelvic tumour [1]. The risk factors for fibroids are known to be age, ethnicity, family history of fibroids, long inter-pregnancy interval and early menarche. During pregnancy, uterine fibroids are present in 2–11% of women [10]. The complications associated with fibroids during pregnancy are preterm labour, preterm pre-labour rupture of membranes (PPROM), spontaneous miscarriage, placental abruption, malpresentation, increased caesarean deliveries and postpartum haemorrhage (PPH) [2].
While reviewing the literature, there were few cases of spontaneous expulsion of fibroid after normal delivery from day 1 to 6 weeks postnatal. However, only three cases of fibroid expulsion after caesarean section were reported previously [3]. Our case will be the fourth case of spontaneous fibroid expulsion after caesarean but first case to occur within 12 hours of the surgery.

Case Study
41yr old Gravida 5 Para 4-previous 1 CS (caesarean section) followed by 3 VBAC (vaginal birth after caesarean section) with last 2 preterm deliveries due to APH (antepartum haemorrhage). BMI (body mass index) 37, VTE (venous thromboembolism) score 3 on low molecular weight heparin (Tinzaparin) from 28/40. She is Rhesus positive and late booker at 18 weeks. EDD (expected date of delivery) determined from HC (head circumference) on scan at 18+6 weeks.
First scan at 18+6, showed normal foetus with submucosal fibroid of 7.5*6 cm size, clear from the OS, placenta was located on right lateral wall clear of the os. She had serial growth scans from 28 weeks in view of fibroid complicating pregnancy. In the scans, the fibroid was present with no change in size, with foetus in breech presentation.

She presented to emergency services with pre-term labour at 36+1 weeks and examination revealed that she was in established labour (cervix fully effaced, 5 cm dilated) with breech presentation. She opted for emergency caesarean section and hence shifted to theatre quickly. As she was multiparous, she progressed rapidly. She was fully dilated on reaching theatre with breech at -1 station. Because of pathological CTG and high station of the presenting part, decision made to proceed with caesarean section.

Emergency caesarean section was challenging due to adhesions, multiple fibroids and atonic PPH (postpartum haemorrhage), which was managed with uterotonics. Estimated blood loss (EBL) at the end of surgery was 1.3 L (litres). She had severe abdominal pain and heavy PV (per vaginal) bleeding 9 hours after caesarean section, which was managed with analgesics and uterotonics. However, it didn't settle. Due to the ongoing blood loss, she was taken for examination under anaesthesia (EUA) and surgical management of PPH. EUA revealed a prolapsed fibroid of size 7*5 cm in the vagina which was removed by simple traction. We could not identify the pedicle. Surprisingly, bleeding settled after removing the prolapsed fibroid. Uterine cavity checked and was found to be empty, Caesarean section suture lines were intact. As the bleeding settled, we didn't insert the Bakri balloon. Total estimated blood loss was 2.2 L. She was given 3 units of packed red blood cells postnatally and was discharged on postnatal day 3. Histology report showed leiomyoma.

Discussion

This case will be the fourth case of spontaneous fibroid expulsion after caesarean but first case to occur within 12 hours of caesarean section.

Uterine fibroids are present in 2–11% of women, during pregnancy [10]. Fibroids are asymptomatic or undetectable clinically during pregnancy in most cases [4]. There is difficulty in differentiating fibroids from physiological endometrial thickening, hence the prevalence of fibroid is underestimated [5]. Ultrasound studies show that about 20% of fibroids enlarge during pregnancy under the oestrogenic effect in pregnancy and a similar proportion of fibroids decrease in size. Prospective studies using ultrasound to follow the size of uterine fibroids throughout pregnancy, show that most fibroids (60%-78%) do not show any notable alteration in volume during pregnancy [6]. In our case, the fibroid remained almost the same size.

The complications associated with fibroids during pregnancy are preterm labour, preterm pre- labour rupture of membranes (PPROM), spontaneous miscarriage, placental abruption, malpresentation, increased caesarean deliveries and postpartum haemorrhage (PPH) [7]. In our case, the woman went into preterm labour, baby was in breech position (malposition) and she had emergency caesarean section for fetal distress, which was complicated with PPH.

The red degeneration of the fibroid occurs when the growth rate of fibroid outstrips its blood supply causing lack of oxygen and nutrients and in turn causes the fibroid to break down [8]. Another explanation is the possibility of 'kinking' of blood vessels as the fibroid grows resulting in ischaemia and necrosis (9,12). The woman presents with severe abdominal pain and is managed with pain relief medications. In our case, there were no admissions with abdominal pain which might be due to steady size of the fibroid throughout pregnancy.

In a fibroid complicating pregnancy, the pregnant uterus tends to have reduced oxytocinase activity, which can cause a local rise in oxytocin levels and in turn cause pre-mature contractions. The oxytocin receptor plays a significant role in the initiation of normal labour, as these receptors are increasingly present in the uterine myometrium around the onset of labour [11]. Uterine fibroids in pregnancy are a risk factor for caesarean section. Several studies show an increase in caesarean sections in fibroid complicating pregnancies, approximately a 3.7-fold increase in the risk. The contributing factors are malpresentation, dysfunctional labour and placental abruption.

The expulsion of the fibroid could be explained by the postnatal contraction of the uterus, which pushes the submucosal fibroid towards the OS thus causing interruption to the fibroid blood supply [14]. Decreased blood supply of the myoma after the caesarean section and the uterine contraction may have contributed to the spontaneous expulsion of fibroid in our case.

Our lady presented with severe abdominal pain along with heavy PV bleed. She was requesting for more analgesia. One of our differential diagnoses was uterine inversion as it can present with severe lower abdominal pain with a strong bearing down sensation along with PV bleeding. The common differential diagnoses are atonic PPH or retained placental tissue. Other rare differentials are placental site tumour and pyomyoma [13].

During examination under anaesthesia, after removal of the prolapsed fibroid by simple traction, the bleeding settled completely hence we changed our plan of inserting Bakri balloon.

While reviewing the literature, we could find three other cases of fibroid expulsion after a caesarean section. Murakami *et al* in 2007 described a case of fibroid expulsion 16 days after caesarean section and had presented with moderate vaginal bleeding, fever and vaginal discomfort [14]. In the report it is described as part of the myoma had been sloughed off into the vagina and the lady underwent myomectomy later to remove the complete fibroid.

Sagoo *et al* in 2015 reported a case of spontaneous expulsion of fibroid six weeks after caesarean section. They have described removing large necrotic fibroid through the vagina by twisting off the long pedicle [15]. Jian Zhang *et al* described a case in 2018 where there was spontaneous expulsion of a huge cervical leiomyoma from the vagina after caesarean [3].

Conclusion

As women delay their childbearing age, the prevalence of uterine fibroids during pregnancy is likely to increase. We should be aware of the complications of fibroid in pregnancy and postnatal period.

Conflict of Interest

Not available

Financial Support

Not available

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