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### RESEARCH ARTICLE

#### INEVITABLE MYOMECTOMY OF EXTRUDING INTRAMURAL FIBROID DURING CAESAREAN SECTION- A CASE REPORT

Mirunalini Thondaiman<sup>1</sup>, Rajeswari K.S<sup>2</sup> and Preet Agarwal<sup>2</sup>

1. Assistant Professor, Sri Ramachandra Institute of Higher Education and Research.
2. Professor, Sri Ramachandra Institute of Higher Education and Research.

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#### Abstract

Myomectomy during caesarean sections have been avoided routinely in the past in the fear of massive hemorrhage which may lead to obstetric hysterectomy. However in the recent times with adequate facilities and expertise, caesarean myomectomies are being performed with good outcomes.

**Case Presentation:** A 35-year-old primi gravida was diagnosed to have intramural fibroid - anterior 4.6\*4.3cm and posterior 1.8cm\*2.8cm at 8 weeks of gestation. By 13 weeks, during her NT scan there was increase in the size of anterior wall fibroid 7.0\*6.6cm, the rest of NT scan and first trimester screening was normal. She developed early onset intrauterine growth restriction in her anomaly scan. She was conservatively managed as the doppler flow was normal. Her scan at 36 weeks showed estimated fetal weight at 2<sup>nd</sup> centile with normal doppler flow in breech presentation and an anterior intramural fibroid of size 9.5\*8.2cm. Hence an elective caesarean section was planned at 37 weeks. Baby was delivered by breech extraction. Manual removal of placenta was done. As the uterus started contracting, the intramural fibroid started extruding, became submucosal and bulging into uterine edges. Hence planned for myomectomy. Injection vasopressin was injected into the surface of myoma, enucleation of the myoma done and myoma bed closed in 2 layers followed by the closure of uterine edges. Intra operative blood loss was around 800ml. No primary or secondary PPH noted. Patient was discharged on 5th post operative day without any complaints.

**Conclusions:** Routine myomectomy at the time of cesarean section is not a standard procedure worldwide. However, it may be considered in carefully selected patients in centers with good facilities to tackle complications by the experienced obstetricians.

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#### Introduction:-

Leiomyomas are the most common benign tumors of the reproductive tract in women of reproductive age group. Most of them remain asymptomatic. Some may present with heavy menstrual bleeding, pain during menstruation, mass abdomen, infertility, compression symptoms of the bladder and bowel. Their exact incidence in pregnancy is hard to estimate. However, literature reports a prevalence of 2–4% (1). The majority of the patients are either

**Corresponding Author:- Mirunalini Thondaiman**

Address:- Assistant Professor, Sri Ramachandra Institute of Higher Education and Research.

asymptomatic or have mild symptoms and need conservative management only. Other outcomes of fibroid complicating pregnancy include miscarriage, red degeneration of fibroid, preterm labour, intrauterine growth restriction, abruption, abnormal presentations, labour abnormalities, increased caesarean section rates, post partum haemorrhage, subinvolution of uterus, puerperal sepsis etc. These outcomes mostly depend upon the size and location of the fibroids.

Myomectomy during caesarean sections may be done in the following scenarios, where the fibroid is protruding into the cavity causing, difficulty in delivery of the fetus or the placenta, difficulty in the closure of the uterine wound or in cases of subserosal fibroids which are pedunculated with high probability of torsion.

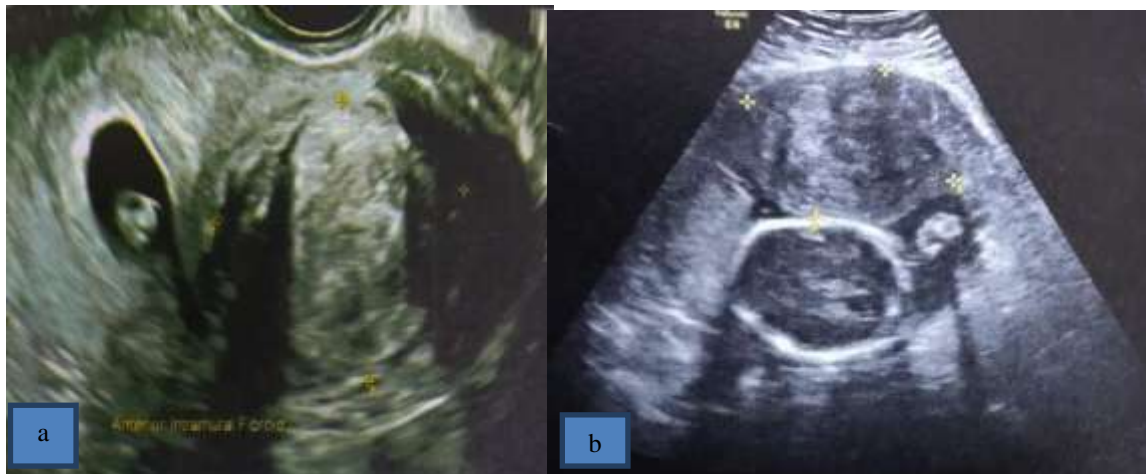
Myomectomy during caesarean section is routinely avoided due to increased vascularity of the gravid uterus leading to massive haemorrhage, unnecessary obstetric hysterectomy, and increased perioperative morbidity and mortality. However, with advancements in anaesthesia, adequate availability of blood products, selective devascularization techniques, and a multidisciplinary approach, myomectomy during caesarean section is being increasingly performed, thus saving the patient from future morbidity due to multiple surgeries, anaesthetic complications, and out-of-pocket expenditure. Here, we report the case of a successful myomectomy done during an emergency caesarean section without any complications.

### Case Presentation

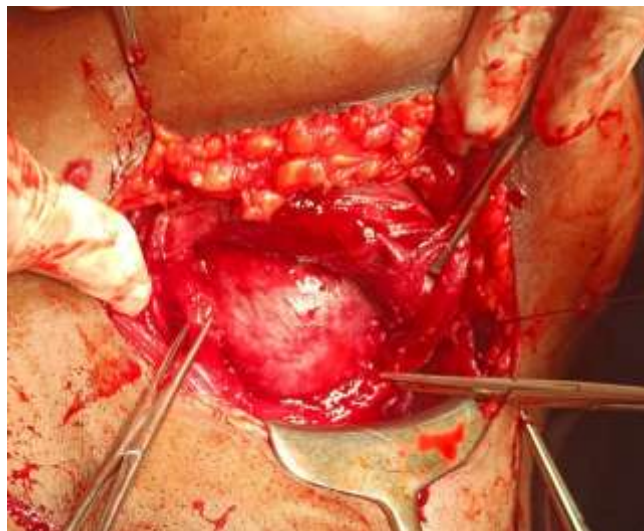
Our patient is a 35-year-old primigravida, spontaneous conception, came to us for the viability scan which had showed a viable intrauterine pregnancy of 8 weeks and anterior intramural fibroid measuring 4.6\*4.3cm and a small posterior intramural fibroid measuring 1.8\*2.8 cm. By 13 weeks, during her NT scan there was increase in the size of anterior wall fibroid 7.0\*6.6cm, the rest of NT scan and first trimester screening was normal. She had early onset intrauterine growth restriction identified in her anomaly scan, where the fetal weight was at 2nd centile (symmetrical IUGR) with normal doppler studies. There was slight increase in fibroid size in the scan 7.2\*8.2cm. Her TORCH panel and rheumatological panel were normal. The patient was followed at 2 weekly intervals. She was conservatively managed as the doppler flow was normal. At 28 weeks she was covered with steroids and magnesium sulphate for lung maturity and neuroprotection. Her scan at 36 weeks showed estimated fetal weight at 2<sup>nd</sup> centile with normal doppler flow in breech presentation, adequate liquor, posterior placenta and an anterior intramural fibroid of size 9.5\*8.2cm. Hence, she was planned for elective caesarean section at 37 weeks. Her preoperative haemoglobin was 12.1 gm%, blood group was O positive. Adequate blood products were arranged and informed written consent was obtained from the patient and her relatives after explaining to them about the risk of excessive bleeding, need for blood transfusion, myomectomy and peripartum hysterectomy.

The patient was taken up for elective caesarean section. Baby was delivered by breech extraction. Prophylactic carbetocin was started to reduce PPH. But placenta had to be manually removed as there were no signs of placental separation. The manual removal of placenta was difficult as the placenta was at the fundus and the anterior wall intramural fibroid was protruding into the cavity. After the manual placental removal, we started approximating the uterine edges. But as the uterus started contracting, the intramural fibroid started extruding, became submucosal and bulging into uterine edges. Hence planned for myomectomy.

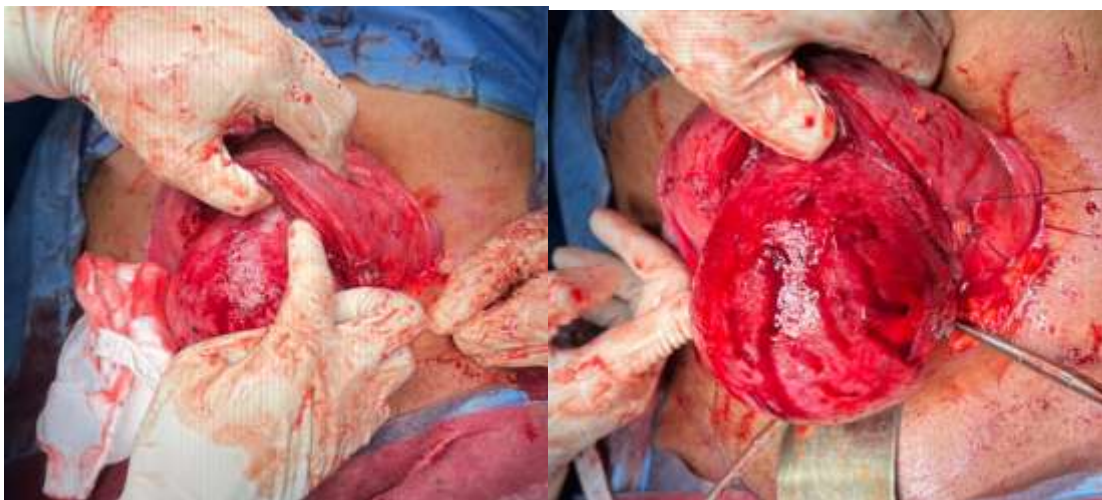
Injection vasopressin was injected into the surface of myoma, enucleation of the myoma done and myoma bed closed in 2 layers followed by the closure of uterine edges. Bakri balloon was inserted prophylactically for its tamponade effect. Intra operative blood loss was around 800ml. The patient recovered well. Bakri balloon was deflated after 24 hours. Post operative hemoglobin was 11.2gm/dl. No blood transfusion was required. No primary or secondary PPH noted. Patient was discharged on 5th post operative day with normal involuting uterus without any complaints. On follow-up at 6 weeks, the uterus was completely involuted.



**Figure 1:-** Viability scan showing large anterior intramural fibroid(a). Growth scan at 36 weeks showing anterior fundal intramural fibroid(b).



**Figure 2:-** Fibroid protruding into the uterine cavity.



**Figure 3:-** Fibroid extruding through the incision site.

### Discussion:-

We report a case of intramural fibroid complicating pregnancy which started extruding immediately post delivery of the fetus and successful myomectomy performed at the time of caesarean section, with an intent to show that extrusion of the fibroid can also happen immediately after the delivery though many case reports have shown extrusion of the fibroid in the puerperal period. Also, anticipation and preparedness for myomectomy is essential in all fibroid complicating pregnancy undergoing delivery.

Fibroid complicating pregnancy is categorised as high-risk pregnancy. Majority of the cases are asymptomatic or have mild symptoms like vague abdominal pain subsiding with analgesics, urinary or bowel compression symptoms. Around 10-40% of cases may present with pregnancy related complications like miscarriages, degenerative changes, malpresentation, placenta praevia, abruptio placenta, preterm labour, dysfunctional labour or uterine inertia, increased chances of operative delivery, postpartum haemorrhage, uterine inversion, subinvolution of uterus, puerperal sepsis, thus increasing maternal and fetal morbidity and mortality (1). Treatment is usually conservative during the antenatal period in the form of bed rest, adequate hydration and analgesics. Myomectomy is rarely required in the case of intractable abdominal pain due to torsion of pedunculated sub-serosal fibroid, red degeneration unresponsive to conservative treatment, or massively enlarged myoma causing severe abdominal discomfort to the patient. In the last decade myomectomy during caesarean section was avoided because of the increased vascularity of the gravid uterus which may lead to massive haemorrhage increasing the morbidity to the patients. But now many obstetricians are opting for myomectomy during caesarean due to the advancement in anaesthesia, availability of techniques like devascularisation procedures, uterine artery embolization, availability of adequate blood products and also to avoid future morbidity to the patient like any further medical or surgical management for fibroid. Many researches have concluded that the procedure is not dangerous and does not lead to complications in the hands of an experienced obstetrician and adequate facilities to tackle complications (4). In a study, a successful laparoscopic myomectomy was performed at 14 weeks for a myoma of 5\*6cm that was causing severe discomfort to the patient. The patient continued with pregnancy to term and delivered a healthy baby (2). Yet another case report showed a successful myomectomy for a 11-week pregnancy with a huge fibroids (13\*9cm, 7\*5cm) causing severe abdominal pain not relieved with conservative management. This case report showed that myomectomy could be an alternative for medical termination of pregnancy for huge fibroids in first trimester (3). Kwawukume reported that enucleation was much easier in pregnancy due to increased softness of the tissue (5). A retrospective case-control study, comparing 40 women with fibroids who underwent caesarean myomectomy with 80 women with fibroids who underwent caesarean without myomectomy, reported no significant difference in the incidence of haemorrhage, haemoglobin levels, incidence of blood transfusions, or postoperative pyrexia between the two groups (6). However, not all myomas need to be removed, only those causing difficulty in delivery of the fetus or wound closure and sub-serosal fibroids likely to undergo torsion can be removed. In our case, myomectomy was inevitable as the myoma was extruding, making wound closure impossible. All possible measures for reducing the blood loss during myomectomy should be taken like bilateral ligation of uterine arteries, injection of vasopressin, uterine artery embolization if facilities available. Bilateral ligation of uterine arteries immediately after delivery of the fetus significantly reduces both intraoperative and postoperative blood loss and risk of peripartum hysterectomy (7). The patient and relatives should be properly counselled and informed that removal of myoma is possible, and a final decision can be taken at the time of caesarean based upon the size, number, and location of the fibroid.

### Conclusion:-

Myomectomy during caesarean section could be a safe option in carefully selected patients, where the myomectomy is inevitable due to its location, size, or its complications, in experienced obstetrician's hands in centres with good facilities to tackle the complications like excessive haemorrhage. In the modern era there are increasing case reports of caesarean myomectomy done without any complications which also prevents the additional morbidity of future surgery, thus justifying the cost effectiveness of this procedure.

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