

Caesarean Myomectomy- A Rare Case

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Abstract

Introduction: Uterine leiomyomas (fibroids) represent the most prevalent benign neoplasms of the female reproductive system. Their presence during pregnancy may impair maternal and foetal outcomes, especially when situated in the lower uterine section. Historically, myomectomy after caesarean delivery has been eschewed due to the potential for haemorrhage; yet, emerging research endorses its safety in specific instances.

Case report: We present the case of a 27-year-old woman, G2P1L1, who arrived at 38 weeks and 3 days of gestation with abdominal pain and backache lasting one day. Upon inspection, she exhibited haemodynamic stability, a cephalic presentation, and a reassuring foetal heart rate. Continuous Category II cardiotocography necessitated an urgent lower segment caesarean surgery. During the operation, a 5 × 5 cm intramural fibroid was located in the lower uterine section, blocking the incision site. A myomectomy was conducted utilising a myoma screw, succeeded by a transverse uterine incision, amniotomy, and the delivery of a healthy newborn. The placenta and membranes were entirely evacuated, and haemostasis was achieved using numerous haemostatic sutures and intramuscular carboprost. Histopathological analysis showed the presence of leiomyoma. Both the mother and the infant experienced a smooth recovery and were released in satisfactory condition.

Conclusion: This case demonstrates that caesarean myomectomy, despite being conventionally advised against, can be executed safely in carefully chosen patients with suitable intraoperative methods and surgical proficiency. The excision of obstructive fibroids during caesarean section not only aids in delivery but also mitigates the necessity for further surgical intervention.

Keywords: Cesarean section, Fibroid, Leiomyoma, Myoma, Myomectomy, pregnancy

INTRODUCTION

Uterine leiomyomas (fibroids) are the predominant benign neoplasms of the uterus. Approximately 20–50% of women are impacted by them with a higher prevalence in elderly pregnant women or women who have undergone In vitro fertilisation. The challenges arising from their presence, however, are contingent upon their size, quantity, and placement. When located in the lower uterine section, they may impede fetal transit, necessitating surgical birth. The subject of whether myomectomy should be performed concurrently with cesarean delivery remains unresolved in contemporary obstetrics.[1,2]

Myomectomy is the most prevalent surgical procedure conducted during cesarean sections, with a study analyzing a decade of experience indicating it occurs in around 0.89% of all cesarean deliveries [3]. However, the majority of obstetricians were educated to refrain from excising big myomas during cesarean sections prior to the last decade. Pedunculated myomas can be readily excised while simultaneously ensuring hemostasis without jeopardizing the mother's life. Myomectomy after cesarean section was virtually non-existent in obstetric literature until the past decade, and it was recommended to defer the myomectomy, potentially conducting it before to the subsequent pregnancy [4]. The primary rationale for this recommendation is to avert unnecessary hysterectomy due to severe, uncontrollable hemorrhage during myomectomy. [5-7]

Nevertheless, due to the emergence of advanced selective devascularization techniques and improvements in anesthesia, numerous obstetricians now prefer to perform myomectomy concurrently with cesarean section (CS) to prevent the necessity of a subsequent surgery, along with its associated complications and financial implications. [8,9]

This case underscores the incidental intraoperative identification and excision of a leiomyoma during an emergency lower segment cesarean section.

CASE REPORT

A 27-year-old lady, married for 13 years, gravida 2 para 1 living 1 (G2P1L1), at 38 weeks and 3 days gestation, presented to the obstetric emergency unit with a one-day history of abdominal pain and backache. She had a positive perception of fetal movements during the day and denied any history of leakage, vaginal bleeding, fever, urinary issues, or trauma.

Past history- Her menstrual history was ordinary, characterized by regular monthly periods. The last menstrual period (LMP) occurred on September 30, 2023, and the estimated date of delivery (EDD) was July 7, 2024. She refuted any past history of dysmenorrhea, menorrhagia, or intermenstrual hemorrhage before conception. Her past pregnancy took place in 2012, resulting in a full-term vaginal delivery of a male infant weighing 3.5 kg. The neonate was admitted to the NICU for one day due to neonatal hyperbilirubinemia, after which recovery was unremarkable. She possessed no prior history of abortions, ectopic pregnancies, or infertility treatments. The patient had no notable medical conditions, including hypertension, diabetes mellitus, or thyroid disorders. She had no previous history of uterine surgery, myomectomy, or dilation and curettage. She was not prescribed any chronic drugs, and there was no familial history of fibroids or other gynecological cancers.

Clinical examination- During the comprehensive physical examination, the patient presented as afebrile, exhibiting a pulse rate of 104 beats per minute and a blood pressure of 120/70 mmHg. Her respiratory rate and oxygen saturation were within normal parameters. No pallor, jaundice, cyanosis, edema, or lymphadenopathy was observed. Obstetric examination revealed: Uterus corresponding to term size., Fetal lie was longitudinal, with cephalic presentation, Fetal heart rate was 140 beats per minute, regular and Uterine contractions were present but irregular. On per vaginal examination: Cervix was posterior, Os was one finger loose and cervix was uneffaced and high.

Investigations- Initial assessments upon admission indicated a hemoglobin level of 11.6 g/dL. All other hematological and biochemical assessments were within normal ranges. An obstetric ultrasound was conducted, confirming: Cephalic presentation, Placenta positioned anteriorly, satisfactory amniotic fluid index (AFI). Fetal weight was estimated to be within the usual range for the corresponding gestational age. Cardiotocography (CTG) revealed a sustained Category II tracing, necessitating urgent surgical intervention. (figure 1)



Figure 1: Radiographical examination

Operative procedure- The patient underwent an emergency lower segment cesarean section. An intramural fibroid measuring 5 x 5 cm was discovered in the lower uterine section upon entering the abdomen. The fibroid's existence at the incision site required alteration of the surgical technique. A transverse incision was performed over the fibroid, penetrating into the myometrium. A myomectomy was conducted utilizing a myoma screw, and the fibroid was completely enucleated. A transverse uterine incision (TCI) was subsequently made on the uterus. Amniotomy disclosed a sufficient volume of clear amniotic fluid. A healthy live-born neonate was delivered in vertex presentation. The cord was severed and the placenta, along with its membranes, was entirely evacuated. (figure 2)



Figure 2: Intraoperative procedures

The uterine incision was sutured in two layers, and many hemostatic sutures were utilized to manage hemorrhage from the lower uterine section. Carboprost 0.25 mg intramuscular injection was prophylactically provided to enhance uterine contractions and attain hemostasis. Hemostasis was verified upon completion of the procedure. The overall blood loss remained below permissible limits, and no intraoperative problems occurred.

Postoperative management- On the second postoperative day, the patient's hemoglobin decreased to 9.5 g/dL, indicating potential perioperative blood loss; however, she remained hemodynamically stable and did not necessitate a blood transfusion. The postoperative recovery was unremarkable, with satisfactory uterine involution and absence of febrile morbidity. The removed mass was sent for histological analysis, which verified the diagnosis of leiomyoma (benign smooth muscle tumor). The patient received counsel concerning the findings, surgical intervention, and prospective reproductive consequences. Both the mother and newborn were discharged in satisfactory health on postoperative day 5, with a follow-up appointment arranged in the outpatient department.

DISCUSSION

The majority of myomas do not necessitate surgical intervention during pregnancy or childbirth. The literature consistently advises against routine myomectomy during caesarean section, recommending it only for meticulously selected patients [10]. Exacoustos and Rosetti documented that in their cohort of 9 cases of Caesarean myomectomy, three experienced severe haemorrhage requiring hysterectomy; hence, they advised exercising prudence in the decision to have this treatment [11]. The administration of vasopressin in the pregnant uterus is contraindicated due to the heightened risk of the medication entering systemic circulation [12]. Recent research have delineated methods to reduce blood loss during Caesarean myomectomy, including the application of a uterine tourniquet, bilateral uterine artery ligation, and electrocautery [13].

The leiomyoma in this case was intramural, measuring 5 x 5 cm, situated at the lower uterine segment—specifically at the location necessitating the uterine incision. This rendered myomectomy imperative for delivery. The surgical team implemented techniques such as the enucleation of the fibroid with a myoma screw, double-layer closure of the uterus utilising numerous haemostatic sutures and utilisation of carboprost to enhance uterine contractions for the purpose of ensuring safety.

Numerous studies indicate that myomectomy performed concurrently with caesarean section is not as perilous as traditionally perceived; enucleation is facilitated due to the softening of tissues during pregnancy.[14-16] The patient should be advised that myomectomy is viable, with the definitive decision made during surgery based on the fibroids' location, size, and quantity; intramural myomectomy must be conducted with prudence. Only fibroids necessitating future surgical intervention should be excised during caesarean section. The association between fibroids and placental attachment must be understood; if the placenta is affixed beneath the fibroid base, myomectomy should be contraindicated due to the risk of uncontrolled haemorrhage. All endeavours must be undertaken to minimise blood loss. Operative procedures may necessitate extended duration and lead to significant haemorrhage.[17] In their extensive study, Song et al. reported a decrease in haemoglobin levels and prolonged recovery time in patients who underwent myomectomy during caesarean section compared to the control group. However, this decline and additional time expended were not substantial.[18] Park and Kim have reported analogous results. Ten Myomectomy during caesarean section is not invariably a perilous procedure and can be executed without considerable complications.[19] Myomectomy should be conducted subsequent to caesarean section unless the delivery of the infant is unfeasible without the excision of the fibroid; in such cases, the fibroid may need to be resected initially.[20] Adesiyun et al have examined fertility performance and

pregnancy outcomes following caesarean section myomectomy. They proposed that future fertility and subsequent pregnancy outcomes in patients were not influenced by caesarean myomectomy.[21] Myomectomy is not contraindicated during caesarean section, contrary to traditional beliefs. It should be evaluated on a case-by-case basis and may be conducted if the procedure is deemed safe. Currently, there are no standardised and established guidelines regarding the indications and contraindications for caesarean myomectomy. The patient should receive counselling, and the decision regarding myomectomy should be based on individual circumstances, primarily considering safety.

CONCLUSION

The findings indicate that myomectomy during cesarean section is safe when conducted by a skilled surgeon who considers the size and position of the myoma. Substantial myomas situated in the inferior segment of the uterus must be excised to avert post-partum hemorrhage and infection. Nonetheless, for small myomas situated on the uterine fundus, myomectomy may be unnecessary.

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