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A CASE SERIES OF CAESAREAN MYOMECTOMY AT A TERTIARY CARE CENTRE IN KOLKATA

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ABSTRACT

Background: Caesarean myomectomy is still approached cautiously because of the perceived risk of haemorrhage and perioperative morbidity. With improved anaesthesia, uterotonics, surgical technique, and blood-product support, selected cases may be managed safely. This case series assessed outcomes of caesarean myomectomy at a tertiary care centre in Kolkata.

Aim: To assess the operative risk and clinical benefits of caesarean myomectomy in selected pregnant women with uterine fibroids.

Methods: This retrospective case series included 15 pregnant women with antenatally diagnosed fibroids who underwent myomectomy during caesarean section at Binayak Multispeciality Hospital, Kolkata, from March 2025 to March 2026. Records were reviewed for age, parity, gestational age, fibroid characteristics, blood loss, postoperative stay, transfusion, hysterectomy, and complications.

Results: The mean maternal age was about 30 years, and the mean gestational age at delivery was 38 weeks. Fibroids measured 3–7 cm, with the largest measuring 6 × 7 cm. Most were anterior, while fundal and posterior fibroids were also seen. The average number removed was 2–3 per patient, and two women had more than eight myomas removed. Estimated blood loss was usually 600–800 mL, with one case reaching 1000 mL. No patient required blood transfusion, hysterectomy, or stepwise devascularisation. Operative time increased by nearly 20–30 minutes, but postoperative stay remained similar to routine caesarean delivery.

Conclusion: Caesarean myomectomy appears feasible in selected patients when performed by experienced obstetricians with adequate surgical and blood-bank support.

Keywords: Caesarean Myomectomy, Pregnant Mother, Leiomyoma.

INTRODUCTION

Uterine leiomyoma is among the most frequent benign tumours encountered in women of reproductive age, with an estimated incidence of about 10%-20%.

Leiomyomas, also called fibroids or myomas, are benign monoclonal smooth-muscle tumours of the uterus with a prominent extracellular-matrix component. They remain the commonest pelvic tumours after the age of 30 years.[1]The exact age at which these lesions begin is difficult to define, since they may be identified at any point from menarche to the postmenopausal years. Their prevalence rises as women grow older.

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Many patients remain symptom-free, while others report only mild complaints such as lower abdominal pain or heavy menstrual bleeding, so conservative treatment is adequate in a large proportion of cases.[2]

Fibroids are now diagnosed during pregnancy more often than earlier, partly because many women postpone childbirth into the late thirties and partly because routine obstetric ultrasonography detects even relatively small lesions. This wider use of imaging has improved the clinical understanding of myomas in pregnancy. Approximately 2% of pregnant women are reported to have uterine leiomyomas.

Effect of myoma on pregnancy

The pregnancy-related effect of a uterine myoma is governed mainly by its size, anatomical site and number. Some women remain asymptomatic, whereas others develop clinically relevant complications.

During early pregnancy, fibroids may be associated with bleeding and spontaneous miscarriage. In the second half of pregnancy, they have been linked

with preterm labour, premature rupture of membranes, postpartum haemorrhage, low-birth-weight neonates, placental abruption, malpresentation and an increased likelihood of caesarean delivery.[3]

Surgical management

Surgical removal of a myoma during caesarean section has traditionally been approached with hesitation. The gravid uterus is highly vascular, and surgeons have therefore feared heavy blood loss, avoidable hysterectomy, and greater perioperative morbidity or mortality.[4]

Although intrapartum bleeding remains a real concern, the postpartum uterus has several physiological mechanisms that favour haemostasis. Uterine contraction compresses the vessels within the myometrium, and coagulation changes around the placental bed also contribute to bleeding control. These mechanisms may make myomectomy at caesarean section feasible in selected situations.

In pregnancy, the fibroid capsule may be more easily separated because of tissue softness and loosening around the myoma. Retraction of uterine muscle, supported by uterotonic drugs, can further assist the surgeon in limiting haemorrhage.

For these reasons, caesarean myomectomy is being considered more frequently in modern obstetric practice. Safer anaesthesia, ready availability of blood and blood products, and improved devascularisation techniques have reduced the need to defer treatment to a second operation, thereby avoiding repeated surgery, another anaesthetic exposure and additional expenditure.[5]

The present report describes a case series in which myomectomy was performed during caesarean section. Excised fibroids measured between 3 cm and 7 cm, and the antenatal, perinatal and postoperative course of these patients is presented.

Aim and Objectives

Aim

To assess the risk-benefit profile of caesarean myomectomy.

Objectives

1. To estimate intraoperative blood loss during caesarean myomectomy.
1. To assess operative duration and postoperative hospital stay.
2. To document postoperative complications and the requirement for blood transfusion.

MATERIALS AND METHODS

This retrospective analytical study included 15 pregnant women with uterine myomas. All women underwent caesarean section with concurrent myomectomy at Binayak Multispeciality Hospital, Kolkata, during the period from March 2025 to March 2026.

Data were obtained from hospital records, including age, parity, antenatal findings, preoperative and postoperative haemoglobin, fibroid type, fibroid number and location, estimated blood loss, postoperative complications, blood transfusion requirement and neonatal outcome.

The mothers included in this study satisfied the following five criteria:

1. Fibroid diagnosed during pregnancy on antenatal ultrasonography
2. Delivery by caesarean section
3. Preoperative haemoglobin greater than 10 g/dl
4. No operative procedure other than caesarean section and myomectomy
5. Absence of pre-existing bleeding disorder

Written informed consent was taken before surgery. The fibroids were located in different uterine regions, including the fundus, anterior wall and posterior wall. The lesions were subserosal or intramural. Blood and blood products were arranged preoperatively for all cases.

RESULTS

The mean maternal age in this series was 30 years, and the mean gestational age at delivery was 38 weeks.

Estimated intraoperative blood loss generally ranged from 600 ml to 800 ml.

1. Most fibroids were situated on the anterior uterine wall. The measured size ranged from 3 cm to 7 cm, while a smaller number were fundal or posterior.
2. On average, two to three fibroids were removed per patient. In two of the 15 cases, more than eight myomas were excised during LSCS.
3. Intramural fibroids formed the larger share of lesions, with fewer subserosal fibroids.
4. Histopathological examination confirmed the type and size of the removed myomas.
5. Myomectomy prolonged the caesarean section by about 20-30 minutes, but the duration of hospital stay remained comparable with routine post-caesarean recovery. Neonatal outcomes were satisfactory in all cases.
6. No patient required hysterectomy, blood transfusion or stepwise devascularisation.
7. Two of the 15 women had undergone myomectomy before the index LSCS.
8. Five women were of advanced maternal age, with an average age of 37-38 years. Among them, three pregnancies followed IVF.

DISCUSSION

Pregnancy is characterised by physiological hypervolaemia and a hypercoagulable state. Because

of these adaptations, a limited degree of blood loss may be tolerated better than in the non-pregnant state. Caesarean myomectomy has been reported in approximately 3%-12% of pregnant women.

Historically, surgeons were advised not to remove fibroids during caesarean section. In routine practice, many obstetricians remained reluctant to combine caesarean delivery with myomectomy because of the possibility of serious complications, particularly haemorrhage.

Older reports recommended avoiding myomectomy at caesarean section except when the fibroid was pedunculated or when a myoma lay directly in the lower-segment incision line and interfered with fetal delivery or uterine closure. Some authors warned that uterine atony and severe bleeding could necessitate hysterectomy, with subsequent loss of fertility.[6] In the series by Exacoustos and Rosati,[7] three of nine patients developed severe haemorrhage requiring hysterectomy. Because myomas may shrink after uterine involution, older textbooks also advised postponing myomectomy until the postpartum period.[8-10] Multiple fibroids were considered relatively unfavourable for removal at caesarean section.[11-12]

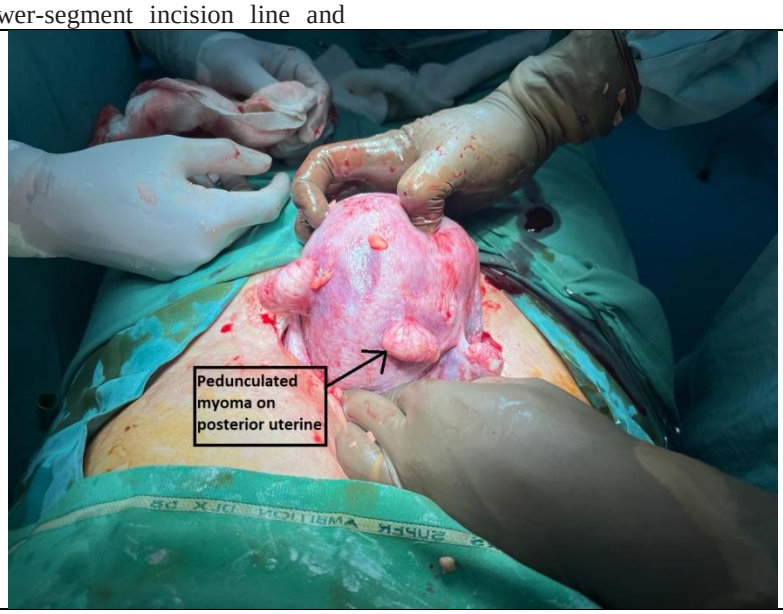

Image 1

Small pedunculated myoma on posterior uterine wall

NEW EVIDENCE

The earlier conservative position is now being reconsidered. A growing body of published evidence suggests that, with appropriate selection and preparedness, caesarean section combined with myomectomy can be performed safely.

Roman and Tabsh[13] reviewed a 10-year retrospective cohort that included 111 women who underwent myomectomy during caesarean section and 257 women who had caesarean section alone. They found no significant difference in intraoperative bleeding, postoperative fever, operative duration or length of hospital stay. No woman in their report required hysterectomy or embolisation, and fibroid size did not alter the outcome.

Li H et al[14] conducted a large retrospective case-control study involving 1242 pregnant women with fibromyomas who underwent myomectomy during caesarean delivery. Their comparison groups included 200 women without myomas who delivered by caesarean section, 145 women with myomas who had caesarean section without removal of the lesions, and 51 women with fibromyomas who underwent hysterectomy at caesarean section. The authors observed no significant difference in haemoglobin change, postoperative complication rate or hospital stay between the relevant groups.

In the present series, only one patient had an estimated blood loss of 1 litre during caesarean myomectomy, and postoperative morbidity was not increased. No postoperative complication was recorded. Despite the presence of large myomas, multiple myomas and intramural lesions in many patients, including anterior and posterior locations, none required hysterectomy. Stepwise devascularisation was also not needed.

The pathological report confirmed the size and nature of the excised fibroids. The myomectomy component added approximately 20-30 minutes to the procedure, while the overall duration of hospitalisation remained similar to that expected after caesarean section. No case of postoperative sepsis was observed.

These findings are broadly consistent with published experience, where caesarean myomectomy has not shown a marked increase in haemorrhagic risk, postoperative morbidity or hospital stay when performed under controlled conditions.

Park BJ et al. reported comparable observations, with no significant differences between caesarean myomectomy and control groups regarding blood transfusion, postoperative fever, operative time or duration of hospital admission.[15]

Kwon DH et al. and Machado LS et al. also reported that operative time and length of hospital stay did not differ significantly between women undergoing caesarean myomectomy and controls.[16]

Image 2

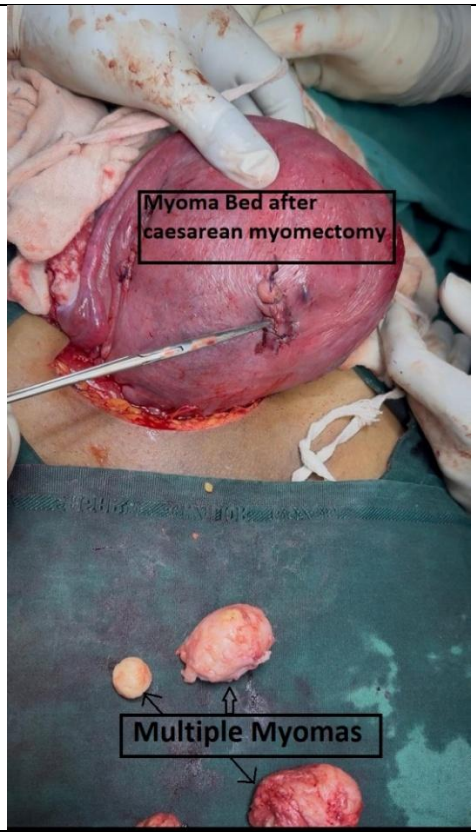

Image 3

PURPOSE OF THIS STUDY

The debate around caesarean myomectomy has not fully settled. This case series adds practical support to the view that the procedure may be undertaken in selected women by experienced obstetricians, provided adequate preparation is available. Although many surgeons remain concerned about bleeding, the present experience indicates that this

fear should be balanced against the benefit of avoiding a future interval myomectomy. The procedure should therefore be considered selectively rather than rejected routinely.

The main limitations of this study are its retrospective design and small sample size.

Age in years	Parity	Gestational Age in weeks	Type of myoma	Location of myoma	Number of myoma removed	Largest size of myoma	Blood loss during LSCS	Post-Operative hospital stay in days
34	Primi	37	Intramural	Anterior and posterior	8	4*5cm	900	3
29	Primi	38	Intramural and subserosal	Anterior and Fundal	3	4*3cm	700	3
36	P1+2	38	Subserosal	Anterior	2	4*3	600	3
38	Primi	38	Intramural	Anterior	1	4*5 cm	600	3
37	Primi IVF	37	Intramural	Anterior	2	4*3cm	600	3
35	P0+1	37	Intramural Subserosal	Anterior Fundal Posterior	9	6*7	1000	3
25	P1+2	38	Intramural	Anterior	3	4*4cm	700	3
29	P0+1	38	Intramural	Anterior	2	5*4	600	3
38	P1+0	38	Subserosal Intramural	Anterior	2	4*5cm	600	3
27	Primi	39	Subserosal	Fundal	1	4*5 cm	600	4
38	Primi IVF	37	Intramural	Anterior and posterior	6	5*4 cm	800	3
30	P0+2	38	Intramural	Anterior	3	5*5cm	600	3
32	Primi	38	Intramural	Anterior and posterior	4	4*4cm	700	3
32	P1+1	38	Subserosal	Posterior	1	5*6cm	600	3

CONCLUSION

Caesarean myomectomy can be a safe and useful procedure when performed by skilled obstetric surgeons in properly selected patients. In this series, it was not associated with significant bleeding, hysterectomy or postoperative morbidity. It may also prevent fibroid-related symptoms and avoid the cost, anaesthetic exposure and inconvenience of a later interval myomectomy. Safety, however, depends on the surgeon's experience, fibroid size and location, availability of blood and blood products, and the hospital infrastructure.

Conflict of Interest

None

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