

DOI: <http://dx.doi.org/10.18203/2320-1770.ijrcog20202362>

Case Report

Caesarean myomectomy in a case of bad obstetric history and multiple fibroids: a case report

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Received: 22 March 2020

Accepted: 22 April 2020

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ABSTRACT

Uterine myomas are being observed in pregnancy more frequently now than in the past, because many women are delaying child bearing till their late thirties, which is the time for the greatest risk of the myoma growth. Traditionally, obstetricians are trained to avoid myomectomies during caesarean sections as severe haemorrhages can occur, which may often necessitate hysterectomies. Pedunculated fibroids which can be easily removed are an exception. A 38-year-old, elderly female, G3 A2, 37 weeks pregnancy with bad obstetric history and multiple fibroids was admitted in Apollo Hospitals, Ahmedabad. She underwent high risk caesarean section followed by myomectomy. Four large and one small fibroid were removed. One posterior wall intramural fibroid 6×5 cm was lower down, hence not removed. Histopathological examination showed leiomyomata with degenerative changes, infarct and calcification. She didn't have any intraoperative haemorrhage or any postpartum complications. On follow up after 6 weeks, patient was healthy, had no complaints. Caesarean scar was healthy. Ultrasound scan showed normal uterus with one posterior wall intramural fibroid 3×3 cm. With the advent of better anaesthesia, easy availability of blood and blood components, caesarean myomectomy is a safe surgical procedure when performed by experienced obstetrician in carefully selected patients. Intraoperative assessment of fibroids is important in decision making for caesarean myomectomy.

Keywords: Caesarean section, Haemorrhage, Leiomyoma, Myomectomy

INTRODUCTION

Uterine leiomyoma is the most common uterine neoplasm of women. The latest statistics confirm that uterine leiomyomas are present in 20-50% women of reproductive age.¹ Indeed, they are found in up to 77% of women if the uterus is examined closely at autopsy.² The incidence of uterine leiomyomas in pregnancy varies from 1.6% to 10.7% according to the trimester of assessment and the size threshold.³⁻⁶

During pregnancy leiomyoma usually remain asymptomatic, but they may be associated with increased frequency of spontaneous abortion, preterm labour, premature rupture of membranes, antepartum bleeding,

abruptio placenta, malpresentation and high incidence of caesarean delivery. Sometimes it may undergo red degeneration usually during second trimester of pregnancy. A pedunculated fibroid may undergo torsion. The impact of uterine myoma on pregnancy depends on size, number and localization of myoma. If it is located in lower uterine segment or cervix, it can lead to obstructed labour or cervical dystocia. It can also lead to retained placenta, subinvolution of uterus, postpartum endomyometritis and Postpartum Haemorrhage in immediate postpartum period.^{7,8}

Maternal age for pregnancy is increasing and that the incidence of myoma increases with age, obstetricians are more likely to encounter pregnant patients with myomas

and be required to treat complications related to them.^{9,10} Myomectomy during caesarean section is still a controversial subject. The main concern here is the excessive bleeding and increased morbidity that may occur during the operation.¹¹ Many sources still object to routinely performed myomectomy during caesarean section for these reasons.^{12,13} Recent literatures states that, however, studies and meta-analyses have been carried out suggesting that caesarean myomectomy is a safe surgical procedure and that positive results may be obtained for subsequent pregnancy outcomes.^{14,15} For this reason, this combined surgical procedure has been introduced more frequently by many surgeons.¹⁶

Here authors report an interesting case of elderly pregnant patient with bad obstetric history and multiple fibroids where myomectomy was done during caesarean section.

CASE REPORT

Mrs. X, a 38-year-old female, G3A2 with 9 weeks pregnancy presented at Apollo Hospitals, Ahmedabad on 6th February, 2018. Ultrasound scan showed a single live intrauterine pregnancy with multiple fibroids, 3 subserous fibroids, 7.8×5.1 cm fibroid on fundal anterior wall of uterus, 4.9×4.4 cm fibroid on upper posterior wall of uterus, 7.1×5.8 cm fibroid in lower posterior wall of uterus just above cervix and 1.4×1.4 cm intramural fibroid on anterior wall of uterus. She was quite apprehensive and wanted to know if she could continue pregnancy in view of large multiple fibroids. She was counselled to continue the pregnancy explaining her the risks.

Obstetric history

G3 A2

1st right tubal ectopic pregnancy treated with injection methotrexate in April 2016.

2nd missed abortion at 6 weeks, given MTP pills in July, 2017.

Menstrual history

4-5/30 days, regular, moderate flow, painless.

As her pregnancy continued, the fibroids increased in size as per anomaly scan done at 20 weeks and 3rd trimester scan done at 33 weeks. The 3rd trimester scan showed single live fetus 33 weeks gestation, transverse lie with multiple fibroids measuring 10×8 cm, 9.6×6 cm, 7×5.5 cm respectively on fundal-anterior wall of uterus and one posterior wall fibroid 5.8×5 cm in lower body of uterus. She was on Injection Hydroxy progesterone acetate 500 mg I/M once monthly and was given injection betamethasone 12 mg I/M 2 doses 24 hours apart at 34 weeks of pregnancy. Due to growing fibroids, her uterus

was unduly enlarged, seemed as if she is carrying twin pregnancy. She was admitted at 37 weeks pregnancy at Apollo Hospitals on 22nd August, 2018 for elective caesarean section in view of precious pregnancy.

On examination

Patient was normal built, weight 80 Kgs. Pulse - 84/min, BP - 126/80 mmHg.

Temperature - 98 F, CVS - S1 S2 normal, RS - RR-20/min, chest clear.

Per abdomen examination - Uterus unduly enlarged with irregular contour, multiple fibroids felt, cephalic presentation, FHS present 130/ min, Uterus relaxed.

Bimanual examination - Os admits tip of finger, vertex above brim, pelvis adequate.

Investigations - On 21.08.18: Hb- 12.7 gm%, white cell count - 10,600/ cu mm. DC- N 72%, L 18 % M 6 %, E 4%, platelets - 2,00,700/cu mm, BT -2 min, CT-6 min.

PT - 11.7 sec (T), 11.5 sec (C), INR 1., S Creatinine -0.7,

Blood group - A positive, HIV, HBsAg and VDRL - non reactive.

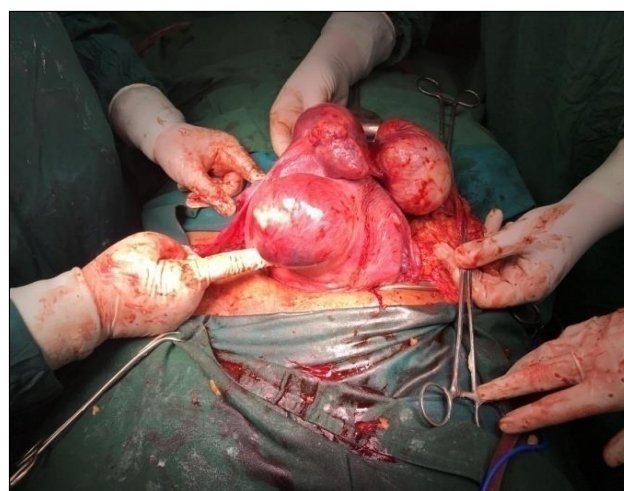


Figure 1: Uterus after caesarean section with multiple fibroids.

A clinical diagnosis of G3A2 with 37 weeks pregnancy, bad obstetric history with multiple fibroids was made. She underwent high risk lower segment caesarean section followed by myomectomy and adhesiolysis under SA on 22.08.18. A healthy male child, weight 3.9 kg delivered at 3.39 PM (Figure 1), (Figure 2).

Intraoperative findings - Uterus enlarged with multiple fibroids, two subserosal fibroids measuring 15×12, 11×10 cm, two intramural to subserosal fibroids measuring 10×10 cm, 6×6 cm, one small anterior wall intramural

fibroid 1.4×1.4 cm, one posterior wall intramural fibroid 6×5 cm. Intestines and omentum were adherent to fundal fibroids (Figure 3) (Figure 4).

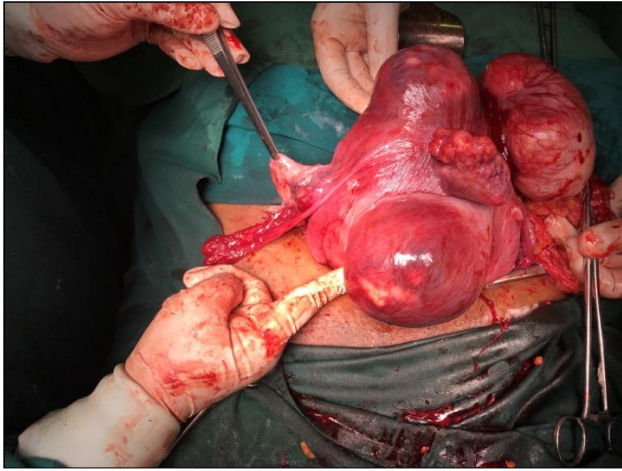


Figure 2: Uterus of two subserous fibroids and two intramurals to subserous fibroids.



Figure 3: Uterus with multiple fibroids

After caesarean section, adhesiolysis was done separating the omentum and intestines from the fibroids. Pfannenstiel scar was extended to assess the size, number and location of fibroids for myomectomy.

Then myomectomy was done giving incision over capsule of fibroids, enucleation done and five fibroids were removed. Four fibroids were large and one small, size as mentioned above.

Posterior wall intramural fibroid 6×5 cm was lower down, hence not removed. Myoma bed was sutured with vicryl no. 1. Proper hemostasis was achieved. Abdomen was closed in layers keeping ADK drain in pouch of Douglas (Figure 5).

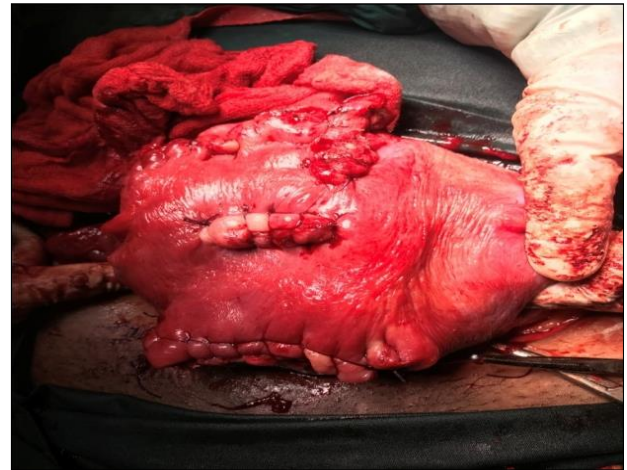


Figure 4: Uterus after caesarean section and myomectomy - end result.

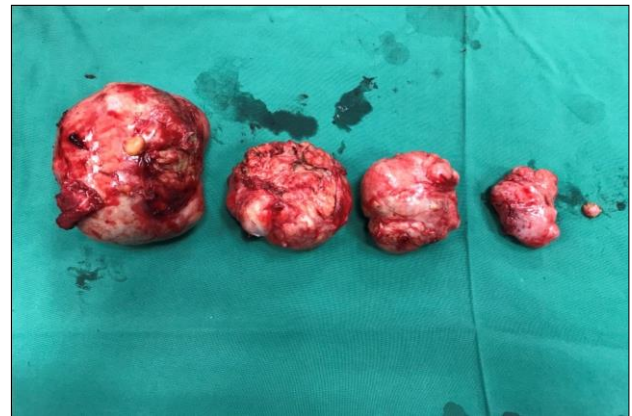


Figure 5: Five leiomyomas removed after myomectomy. Specimen sent for histopathological examination.

Skin closed with subcuticular stitches with monocryl no 3-0. Operative time was 62 minutes. An oxytocin infusion was started after delivery of baby and was continued for 8 hours.

Broad spectrum antibiotics and analgesics were given in post-operative period. Post-operative course in the hospital was uneventful. Catheter was removed on 2nd post-operative days; drain was removed on 4th post-operative day. CBC was done on 3rd post-operative days; HB was 11.9 gm%. She did not require blood transfusion. Patient was discharged in stable hemodynamic condition on day 5th, 26th August 2018.

Histopathological examination showed leiomyomata with degenerative changes, infarct and calcification.

On follow up after 6 weeks, patient was healthy, had no complaints. Caesarean scar was healthy. Ultrasound scan showed normal uterus with one posterior wall intramural fibroid 3×3 cm. Her child was healthy, growing well and was taking breast feed properly.

DISCUSSION

Uterine myomas are being observed in pregnancy more frequently now than in the past, because many women are delaying child bearing till their late thirties, which is the time for the greatest risk of the myoma growth. Also, the use of ultrasonography has improved the diagnostic capability of detecting the small myomas and this has increased our knowledge on the myomas in pregnancy.¹⁷

The management of pregnant women with uterine leiomyoma can be challenging because the appropriate clinical management should assure the health of both the mother and fetus.

Caesarean myomectomy has traditionally been discouraged due to fear of intractable haemorrhage, postoperative morbidity and possibility of hysterectomy. If performed in carefully selected patients, it saves the patient, the ordeal of second admission to hospital. In addition, the uterus in immediate postpartum phase is better adapted physiologically to control haemorrhage than at any other stage in woman's life.¹⁸ In this case, it seems logical to perform caesarean myomectomy as enucleation of the fibroids was technically easier owing to greater looseness of capsule. Also, retraction of uterine muscles was enhanced by oxytocin to help arrest the haemorrhage.

Recent studies have shown that caesarean myomectomy can be performed safely and successfully by an experienced obstetrician in carefully selected patients. Ehigiegba et al, conducted successful caesarean myomectomy on 25 patients and no patient required caesarean hysterectomy.¹⁹ In this study, caesarean myomectomy was performed in 34 patients and 58 fibroids were removed. The mean preoperative hemoglobin was 11.8 ± 0.7 g/dl and mean postoperative hemoglobin was 10.9 ± 0.8 g/dl. No patient required caesarean hysterectomy and blood transfusion was needed in two patients. In this case also the preoperative hemoglobin was 12.7 g/dl and postoperative hemoglobin was 11.9 g/dl and the patient did not require blood transfusion and there was no intra or postoperative complication.

Kaymak et al, compared 40 patients who had undergone myomectomy during caesarean section with 80 patients with myomas who underwent only caesarean section.²⁰ The mean size of fibroids removed was 8.1 cm. There was no significant difference in incidence of haemorrhage, postoperative fever or frequency of blood transfusion between two groups.

Some literatures suggested that caesarean myomectomy could be performed when specific factors such as the size and location of the uterine leiomyomas were taken into account. Song, et al. assessed the safety of myomectomy performed during caesarean section, the results showed hemoglobin levels dropped more in the caesarean

myomectomy group versus the caesarean section group by 0.30 g/dL, but the difference was not significant.¹⁵ Operative time was longer in the caesarean myomectomy group versus the caesarean section group by 4.94 min, but the difference was not significant. It suggested that performing a myomectomy during caesarean section was feasible, though operative technique must be attended to, such as tourniquet, uterine artery occlusion, and uterine artery ligation. However, most of the studies included in the meta-analysis did not require any techniques beyond the use of oxytocin. In our case, we used oxytocin infusion for 8 hours postoperatively and no other technique and the operative time was also less, that is 62 minutes.

It becomes a common understanding that the optimal uterine myomas for removing are those which are easily accessible, such as subserosal or pedunculated at present. In our case we removed subserous and intra-myometrial to subserous fibroids which were accessible and we refrained from removing low posterior wall intramural fibroid. In 2015 Topcu et al, found the size of leiomyomas alone did not seem to have a significant impact on hemorrhage since the mean hemoglobin change and frequency of blood transfusions were similar in patients with or without myomectomy during caesarean section when they were grouped by the size of leiomyoma.²¹

Kwon's study also supported that there were no differences in preoperative and postoperative hemoglobin changes, operative time, postoperative fever, and hospitalized days of caesarean myomectomy in pregnant women with the large myomas (>5 cm), compared with those of myoma ≤ 5 cm, uterine artery embolization was not used during operation and no case needed peripartum hysterectomy in women with myoma >5 cm.²²

The association between fibroids and placenta previa has been examined, which suggested that the fibroids made risk of placenta previa in future pregnancy increased with a 2-fold.²³⁻²⁵

Reports on the relationship between fibroids and postpartum hemorrhage are conflicting, pooled cumulative data suggested that postpartum hemorrhage with 2.5% was significantly more likely in women with myomas compared with control subjects with 1.4%, because fibroids may distort the uterine architecture and interfere with myometrial contractions resulting in uterine atony and postpartum hemorrhage.^{24,26,27}

Additionally, according to data from one survey, changes in fibroid size ranged from 89% shrinkage to 138% growth, with a median of 9% change in volume in a 6-month period, moreover, fibroids can have growth spurts.^{28,29} In this case also the fibroids increased in size as the pregnancy continued, hence large fibroids were removed. If the myomas was left in place during

caesarean section, the possibility of repeat operation for increasing growth myomas was higher in future.

Of course, caesarean myomectomy has always not been encouraged. For example, myomas located in broad ligament, uterus-rectum fossa, cornu and cervix might not be good candidates for removing at the time of caesarean section due to massive hemorrhage rate. If doing so, should be performed with caution. It is better not to perform myomectomy for pregnant women complicated with cardiopathy, cardiac failure, eclampsia, disseminated intravascular coagulation (DIC), uterine inertia and so on, in order to shorten the operative time.

Leaving fibroids untouched during myomectomy has been shown to be associated with complications in few of the studies. Hasan et al noted a high incidence of hysterectomy for postpartum haemorrhage.³⁰ An increased incidence of postpartum sepsis has been reported by Davis et al.³¹

Although myomectomy during pregnancy should not be done, but during caesarean section, it is a successful undertaking.³² Understanding hemostasis achievements, techniques, expertise, availability of blood components and expert anesthetist are some of the essential requirements for undertaking caesarean myomectomy.

CONCLUSION

Myomectomy during caesarean delivery may be a reasonable and safe option by experienced obstetrician in a tertiary care centre with a very quick technique in handling amount of intraoperative haemorrhage. Intraoperative assessment of fibroids is important in decision making for caesarean myomectomy. Fibroids obstructing lower uterine segment and accessible sub serosal fibroids can be safely removed. Hence preservation of uterus should be aimed at by experienced obstetricians whenever it is feasible. It is also rewarding to the patient as she is relieved of stress and exhibits satisfaction and sense of wellbeing on knowing that one extra lifetime surgical procedure has been minimized.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: Not required

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Cite this article as: Nahar K, Nahar N. Caesarean myomectomy in a case of bad obstetric history and multiple fibroids: a case report. *Int J Reprod Contracept Obstet Gynecol* 2020;9:2622-7.