

## Caesarean Myomectomy: Safety and Feasibility of The Procedure

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**Received date:** February 22, 2022; **Accepted date:** March 14, 2022; **Published date:** March 21, 2022

**Citation:** Singh V, Doshi B, Rastogi A, et al. (2022) Caesarean Myomectomy: Safety and Feasibility of The Procedure. J Obst Gynecol Surg 3(1): pp. 4-6. doi: 10.52916/jogs224022

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### ABSTRACT

**Introduction:** Frequency of uterine myomas has increased these days with factors like delayed child bearing and IVF conception in elderly pregnant women. The vascularity of uterus increased and thus myomectomy during caesarean was considered a risk. With advanced surgical techniques the risk has become minimal these days.

**Case Report:** 42 year G4P3L3 presented with 36 weeks gestation with USG s/o 3 large uterine fibroid, 2 subserosal fibroids with largest of size 7.1 x 6.3 x 7.2 cms, and 1 intramural fibroid. Emergency LSCS was done for her due to fetal indication. Due to emergency nature of surgery the option of preoperative uterine artery embolisation was not feasible and hence decision of stepwise de-vascularisation was taken. The de-vascularisation was done at the level of B/L uterine arteries, utero ovarian anastomosis bilaterally followed by removal of the three myomas.

**Discussion:** Majority of myomas do not require surgical intervention during pregnancy or delivery. It has been repeatedly stated in the literature that routine myomectomy during cesarean section should be avoided and should only be carried out in carefully selected patients. In our case, stepwise devascularisation was required to control the bleeding. Proper devascularization and experienced obstetricians can reduce the incidence of haemorrhage and hysterectomy. The approximate blood loss was only 400 ml signifying the importance of this approach to myomectomy during caesarean section.

### Introduction

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 [1]. The prevalence of uterine myomas in pregnancy ranges from 1.6 percent to 12.6%, with a higher prevalence in elderly pregnant women or women who have undergone In vitro fertilisation. Furthermore, the use of ultrasonography has improved the diagnostic capability of detecting small myomas, increasing our knowledge of myomas in pregnancy [2]. The vascularity of the uterus increases dramatically during pregnancy, and it receives 17% of the cardiac output at term, putting myomectomy during pregnancy at risk and possibly necessitating hysterectomy [3]. The treatment of fibroids that develop during caesarean delivery is a therapeutic conundrum. Traditionally, myomectomy has been discouraged during caesarean delivery. In fact, many surgeons opt for a classical caesarean over a low transverse caesarean to avoid lower uterine segment myomas, a procedure that comes with its own risk of increased blood loss. However, thanks to advancements in surgical techniques, the risk has become very minimal.

### Case Report

42 year, Elderly gravida, G4P3L3 with previous three vaginal deliveries presented at 36 weeks gestation with pre term labor pain. Ultrasound was suggestive of single live intrauterine gestation of 36 weeks gestation with abnormal fetal doppler

parameters along with 2 subserosal fibroids with largest of size 7.1 x 6.3 x 7.2 cms (Figure 1) and one intramural posterior wall fibroid of size 3.4 x 4 x 4.2 cms. Emergency LSCS was done as NST was persistently category 3. A live male baby of 1.97 kg was delivered. Intra-op subserosal myoma of size 6 x 7 cm was over anterior uterine wall, small subserosal fibroid of size 2 x 2 cm posteriorly and intramural fibroid of size 4 x 4cm over posterior uterine wall.



**Figure 1:** The large anterior wall fibroid of size 7 x 6 x 7 cms.

Due to emergency nature of surgery the option of preoperative uterine artery embolisation was not feasible and hence decision of stepwise de-vascularisation was taken. The devascularisation was done at the level of B/L uterine arteries (Figure 2), utero

ovarian anastomosis bilaterally followed by removal of the three myomas. The largest myoma was found to have necrotic changes (Figure 3) and thus was removed completely from base. Intra-operative blood loss was approximately 400cc. Post operative period was uneventful and Patient was discharged on day 3 of LSCS.



Figure 2: Uterine artery ligation.

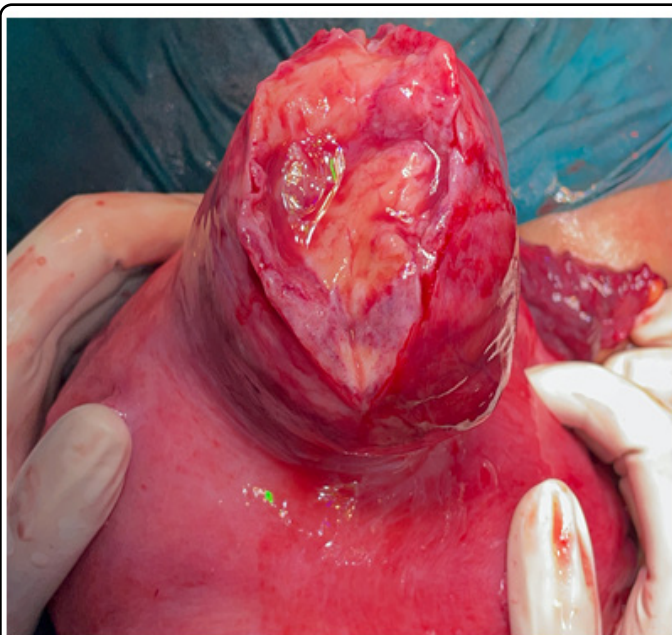


Figure 3: The large fibroid with necrotic changes.

## Discussion

Majority of myomas do not require surgical intervention during pregnancy or delivery. It has been repeatedly stated in the literature that routine myomectomy during cesarean section should be avoided and should only be carried out in carefully selected patients [4]. Exacoustos and Rosetti reported that in their series of 9 cases of Caesarean myomectomy, three were complicated by severe haemorrhage necessitating hysterectomy; hence, they recommended caution while making the decision to perform this procedure [5]. Use of vasopressin on pregnant uterus is avoided due to increased risk of drug

entering systemic circulation [6]. Recent studies have described techniques to minimise blood loss at Caesarean myomectomy including uterine tourniquet, bilateral uterine artery ligation, and electrocautery [7]. In our case, stepwise devascularisation was required to control the bleeding [8]. Proper devascularization and experienced obstetricians can reduce the incidence of haemorrhage and hysterectomy. In another study which evaluated different ways of controlling bleeding during myomectomy it was seen that Ligation of the uterine and utero-ovarian arteries can decrease uterine bleeding by reducing perfusion pressure in the myometrium [9]. It will not completely control bleeding from uterine atony or placenta accreta spectrum but may decrease blood loss while other interventions are being attempted. It does not harm the uterus and does not appear to impact reproductive function. In a study by Janu Kanthi et al where retrospective study of 53 caesarean myomectomy was done it was concluded that Caesarean myomectomy can be safely undertaken by experienced surgeons [10]. Single or multiple, smaller subserosal and intramural myomas can be safely removed. Though larger fibroids have increased blood loss intra operatively, with the prophylactic measures, we can safely remove them too. In our case only stepwise devascularisation was used to control the bleeding for myomectomy [11]. The approximate blood loss was only 400 ml signifying the importance of this approach to myomectomy during caesarean section. Therefore we should not consider caesarean myomectomy as taboo anymore and give the women a complete solution to her gynaecological issues when we get the opportunity, thus preventing unnecessary medication or surgery in future for fibroid. With better training of upcoming generation of gynaecological surgeries this problem can be tackled.

## Conclusion

Caesarean myomectomy can be a complete solution for a patient with symptomatic and big fibroids as it would relieve her from various complications like postpartum hemorrhage and future gynecological issues. Per-operative use of dilute vasopressin and step wise devascularization are safe methods to be adopted for controlling bleeding during surgery . It also avoids unnecessary medication or surgery in future for fibroid.

## Conflict of Interest

The author declares no conflict of interest.

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