

Myomectomy during caesarean section: a safe procedure?

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Abstract

Caesarean myomectomy has traditionally been discouraged due to fears of intractable haemorrhage and increased postoperative morbidity. However, a number of authors have recently shown that myomectomy during Caesarean section does not increase the risk of haemorrhage or postoperative morbidity. Patient's frequent request is the simultaneous surgical removal of a previously diagnosed myoma during cesarean section. The aim of this study was to evaluate the safety and efficacy of myomectomy during cesarean section. From July 2015 until December 2015, 15 pregnant women with coexisting uterine myomas underwent cesarean section and simultaneous myomectomy. Complications such as blood loss was estimated and compared with women with uterine myomas who underwent surgical delivery without removal of the fibroids. Furthermore, the length of hospitalization was compared between the two groups. Myomectomy added a mean time of 15 min to the operative time of cesarean section. The difference between the preoperative and postoperative hemoglobin mean value was statistically significant ($P=0.001$) but did not differ between isolated cesarean and myomectomy-combined cesarean groups. None of the patients received blood transfusion. The length of hospitalization was comparable between the two groups. Despite controversial literature data, we suggest that myomectomy during cesarean section could be generally recommended. Depending on size and location of myomas, the associated risks are similar to those of isolated cesarean section.

Keywords: Myomectomy, Caesarean

Introduction

Fibroids are the benign smooth muscle cell tumour of the uterus and female pelvis [1]. The incidence of myoma associated with pregnancy is reported at 0.3–5%, with a majority of myomas not requiring surgical intervention during pregnancy or delivery. 1–4 Myomectomy at the time of a Caesarean section has traditionally been discouraged due to fears of intractable haemorrhage and increased postoperative morbidity.

However, a number of authors have recently shown that myomectomy at Caesarean does not increase the risk of haemorrhage. [2]

Myomas are usually asymptomatic however sometimes patients present with menorrhagia, dysmenorrhoea, pressure related symptoms of bowel and bladder and infertility. Definitive treatment for symptomatic fibroids is only surgery [2].

Myomas are observed in 2.7% to 12.6% of pregnant women [3]. Most often they do not pose any problem during pregnancy but approximately 10% to 30% of pregnant women develop complications [4]. The location of fibroids determines the risk of bleeding in pregnancy with those situated close to placental site having more bleeding complications [3,5].

Myomectomy during caesarean delivery has traditionally been discouraged. With the exception of small, pedunculated fibroids most of the textbooks advice against caesarean myomectomy due to theoretical risk of massive hemorrhage and increased postoperative morbidity [2]. Contrary to the traditional belief some of the recent reports indicate that in selected patients, myomectomy during caesarean delivery does not appear to result in an increased risk of intrapartum or short term postpartum morbidity and is a safe and effective procedure [6–9].

This retrospective study was conducted in our institution in an attempt to identify the safety and feasibility of caesarean myomectomy.

Materials and methods

This retrospective study was conducted in a tertiary care teaching hospital, SMS Medical College, Jaipur. This study was conducted to identify the safety and feasibility of caesarean myomectomy. All pregnant women who underwent caesarean myomectomy during the period July, 2015 to December, 2015 were enrolled into study group & 15 pregnant women who underwent caesarean section alone in the same period were taken as control.

Controls were matched for age, parity, period of gestation at caesarean section, preoperative haemoglobin and baby birth weight. Data was collected from inpatient and outpatient medical records and operative notes. It includes Age, Parity, Period of gestation at caesarean delivery, Indication for caesarean delivery, Preoperative haemoglobin, size, number, location of myomas removed, birth weight, Postoperative haemoglobin which was routinely done 24 hrs of operation in our hospital.

In all women, myomectomy was performed after delivery of the baby except in two cases where myoma was located in the lower uterine segment at the proposed line of incision, myomectomy was done prior to delivery of the baby. Uterine incision for LSCS was closed in two layers with No 1 vicryl. Myomectomy was done by making an incision over the myoma and enucleation done. The dead space was obliterated by interrupted sutures with 1-0 vicryl. Abdomen was closed in layers after ensuring haemostasis. Techniques used to reduce bleeding were electrocautery, intramyometrial PGF2 α and oxytocin infusion.

Results

During study period of one year, 15 women underwent caesarean myomectomy. Majority of the women i.e. 8 (53.35%) women were in the age group of 31 to 35 years and 10(66.6%) were primigravida [Table 1 and 2].Majority of termination of pregnancy was done in women whose gestational age was between 38 to 40 weeks. 11 women had subserous type of fibroid.

Table 1: Distribution according to age groups.

S. No.	Age (in years)	No. of patients (n)	Percentage (%)
1.	<20	1	6.66
2.	20-25	1	6.66
3.	26-30	2	13.33
4.	31-35	8	53.35
5.	>35	3	20
	TOTAL	15	100

Table 2: Distribution according to parity.

S.No.	Parity	No. of patients (n=15)	Percentage (%)
1	1	10	66.66
2	2	3	20
3	3	1	6.66
4	>=4	1	6.66
	Total	15	100

Table 3: Distribution according to gestational age at which termination of pregnancy was done.

S.No	Gestational age (in weeks)	No. of patients (n= 15)	Percentage (%)
1	<32	1	6.66
2	32-34	0	0
3	35-37	2	13.33
4	38-40	11	73.33
5	>=41	1	6.66
	Total	15	100

Table 4: Distribution according to time taken during surgery.

S.No	Duration of surgery (minutes)	No. of patients (n=15)	Percentage (%)
1	<60	2	13.33
2	60-75	10	66.66
3	75-90	2	13.33
4	>90	1	6.66

Table 5: Distribution according to the duration of hospital stay.

S.No.	Duration of hospital stay (days)	No. of patients (n=15)	Percentage (%)
1	<5	0	0
2	5-7	11	73.33
3	7-10	2	13.33
4	>10	2	13.33

Table 6: Distribution according to pre op and post op haemoglobin levels.

S.No.	Difference in preop and postop hb(gm/dl)	No. of patients (n=15)	Percentage (%)
1	<=1	9	60
2	1.1-2	2	13.33
3	2.1-3	3	20
4	3.1-4	1	6.66

Table 7: Statistical analysis of cesarean myomectomy cases compared with controls.

	Group	N	Mean
Hb difference	Cases	15	1.33
	Controls	15	1.05
Discharge day	Cases	15	7.62
	Controls	15	6.55
OT time	Cases	15	68.57
	Controls	15	51.55

Discussion

Leiomyomas are extremely common with the incidence of 40 to 60% by the age of 35 and 70 to 80% by the age of 50 years, the precise aetiology however, still remains unclear [1]. Most of our patients also belonged to the age group of 31 to 35 years (53.15%). Treatment is primarily surgery in the form of myomectomy or hysterectomy if necessary. Hysterectomy is performed for many other indications but leiomyomata uteri are the most common indication for hysterectomy [2]. In our study no patients in either group required hysterectomy.

Fibroids encountered during caesarean section pose a therapeutic dilemma. Myomectomy has traditionally been discouraged during caesarean section. In recent years some authors have advocated routine removal of all anterior wall uterine fibroid during caesarean section [10]. The advantages of caesarean myomectomy is that it obviates the need for interval myomectomy, decreases complications associated with fibroid in subsequent pregnancies and gives sense of relief to patients. It also increases the chances of vaginal delivery in subsequent pregnancies

when removed from the lower uterine segment [11].

There was no statistically significant difference in mean change in haemoglobin, incidence of haemorrhage, need for blood transfusion and hospital stay noticed in our study which correlated with studies by Roman et al.,[6], Li et al.,[8] and Brown et al.,[12].

In this study, it was observed that myomectomy during caesarean section is not associated with increased risk of haemorrhage, need for blood transfusion, prolonged operative time, hospital stay, postoperative fever or wound infection. These results indicate that myomectomy during caesarean delivery can be a safe procedure. With more number of case series in the future proving the safety of caesarean myomectomy it may no longer remain an absolute contraindication. The limitations of this study are the small sample size and the retrospective nature of the study.

Conclusion

In conclusion, patient selection is crucial in Caesarean myomectomy. Measures to minimise blood loss, like preoperative

placement of uterine artery, balloon catheters, uterotonic drugs, uterine artery ligation, uterine tourniquets, stepwise devascularisation, and post-Caesarean uterine artery embolisation would optimise outcomes and significantly decrease the chance of hysterectomy. The message is that what was once considered taboo should now be reconsidered.

References

1. Day BD, Dunson DB, Hill MC, et al. High cumulative incidence of uterine leiomyoma in black and white women: ultrasound evidence. *Am J Obstet Gynecol.* 2003;188:100–07.
2. Breech Lesly L, John AR. *Telindes operative gynaecology.* 10th edition. Lippincott: Williams & Wilkins; 2008. Leiomyomata uteri and myomectomy. In, John A. Rock, Howard W. Jones III; pp. 687–726.
3. Klatsky PC, Tran ND, Caughey AB, Fujimoto VY. Fibroids and reproductive outcomes: a systematic literature review from conception to delivery. *Am J Obstet Gynecol.* 2008; 198:357–66.
4. Katz VL, Dotters DJ, Droegemueller W. Complications of uterine leiomyomas in pregnancy. *Obstet Gynecol.* 1989; 73: 593–96.
5. Lee HJ, Norwitz ER, Shaw J. Contemporary management of fibroids in pregnancy. *Rev Obstet Gynecol.* 2010; 3(1):20–27.
6. Roman A S, Tabsh K M. Myomectomy at time of caesarean delivery: a retrospective cohort study. *BMC Pregnancy Childbirth.* 2004;4(1):14.
7. Myomas and reproductive function : The Practice Committee for the American Society for Reproductive Medicine in collaboration with The Society of Reproductive Surgeons. *Fertility and Sterility.* 2008; 90:S125–30.
8. Li H, Jin L, Shi Z, Liu M. Myomectomy during caesarean section. *Acta Obstet Gynecol Scand.* 2009;88(2):183–86.
9. Burton CA, Grimes DA, March CM. Surgical management of leiomyomata during pregnancy. *Obstet Gynecol.* 1989; 74:707–09.
10. Kwawukume EY. Myomectomy during caesarean section. *Int J Gynaecol Obstet.* 2002;76:183–84.
11. Omar S Z, Sivanesaratnam V, Damodaran P. Large lower segment myoma: Myomectomy at lower segment section - a report of two cases. *Singapore Med J.* 1999; 40:109–10.
12. Brown D, Fletcher HM, Myrie MO, Reid M. Caesarean myomectomy-a safe procedure. A retrospective case controlled study. *J Obstet Gynaecol.* 1999; 19(2):139-41.