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The Utility of Caesarean Myomectomy as a Safe Procedure: A Retrospective Analysis of 25 cases from a tertiary care hospital

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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.This retrospective study was conducted in a tertiary care teaching hospital in Kerala in an attempt to identify the safety and feasibility of caesarean myomectomy. 25 pregnant women who underwent caesarean myomectomy during the period January 2013 to June 2015 were considered as study group and similar number of pregnant women who underwent caesarean section alone in the same period matched for age, parity, period of gestation at caesarean section was taken as control.In this study, there was no statistically significant difference in post-operative haemoglobin level, duration of hospital stay and time to do procedure in the CS myomectomy group and LSCS alone group. The possibility of safely performing myomectomy during caesarean section is appealing in the low-resource settings

KEYWORDS

Introduction

Fibroids are smooth muscle tumours of uterus.[1] Incidence of fibroids during pregnancy varies from 2.7% to 12.6%.[2] The effects of fibroid in pregnancy are miscarriages, preterm labour, malpresentations, non-engagement of head, uterine inertia, postpartum haemorrhage (PPH), difficulty in caesarean section and puerperal infections.[3]

Fibroid uterus per se is not an indication for caesarean section (CS). Most women with fibroid go through pregnancy and deliver uneventfully. PPH should be anticipated and cross-matched blood should be kept ready. Due to the problem of haemorrhage, it is inadvisable to perform myomectomy during CS, which may require multiple blood transfusions, increased operating time and may require hysterectomy.[4]But there were studies proving the safety of myomectomy during CS.Studies have shown that the physiological changes during pregnancy may actually make myomectomy successful along with CS. The contraction and retraction of uterine musculature following delivery, the vascular changes associated with clot formation in placental bed and post-partum myometrium responding well to oxytocics; all tend to reduce the blood loss following caesarean myomectomy.[5-7]

This retrospective study was conducted in a tertiary care teaching hospital in Kerala in an attempt to identify the safety and feasibility of caesarean myomectomy.

Materials and Methods

Travancore Medical College, Kollam is a tertiary care hospital with all speciality and super speciality departments. All pregnant women who underwent caesarean myomectomy during the period January 2013 to June 2015 were considered as study group and similar number ofpregnant women who underwent caesarean section alone in the same period matched for age, parity, period of gestation at caesarean sectionwere taken as control.

Data is collected from inpatient and outpatient medical records and operative notes.Variables like age, number of days of post-operative hospital stay, fibroids detected incidentally or by ultrasound imaging; number, size and site of fibroids, mean time of CS myomectomy, pre &post-operative haemoglobin, details of uterine artery ligation,details of blood transfusion, puerperal sepsis were collected.

In all women, myomectomy was performed after 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 enucleating it.The dead space was obliterated by interrupted sutures with 1-0 vicryl.

Primary outcome measures studied were incidence of haemorrhage, significant intraoperative difficulties and blood loss requiring immediate blood transfusion. Secondary outcome measures were operative time, postpartum fever, wound infection and length of hospital stay.

Operative time was noted from skin incision to skin closure. Fever was defined as postoperative rise in temperature of 38.0°C or greater.

All the data were analysed using SPSS 12.0 for Microsoft Windows.Chi square test was used to compare difference between proportions. P value less than 0.05 is considered as statistically significant.

Results

During study period 25 women underwent caesarean myomectomy. Age of mother was less than 25 years in 32% (8/25) of subjects. About 60% (15/25) had single fibroid.Size of the fibroid was more than 5 cm in 36% (9/25) of the study subjects. About 3/4th (17/25) were subserous fibroids. Ten (40%) had symptoms due to fibroid. The characteristics of the study subjects who underwent CS myomectomy were shown in Table 1.

Table 1. Characteristics of subjects underwent CS myomectomy (N=25)

Characteristics	Categories	Frequency	Percentage
Age	20-25	8	32.0
	25-30	11	44.0
	>30	6	26.0
Fibroids detected	Incidentally	8	32.0
	Ultrasound Imaging	17	68.0
No. of fibroids	1	15	60.0
	2-5	5	20.0
	>5	5	20.0
Size of fibroids	<2 cm	2	8.0
	2-5 cm	14	56.0

	>5 cm	9	36.0
Site of fibroids	Subserous	19	76.0
	Intramural	2	8.0
	Both	4	16.0
Symptoms	Symptomatic	10	40.0
	Asymptomatic	15	60.0

72% in CS myomectomy group and 80% in LSCS alone group had duration of hospital stay less than five days (p 0.508).32.0% in CS myomectomy group and 48.0% in LSCS alone group had duration of surgery less than one hour (p 0.248). Uterine artery ligation and blood transfusion were needed for one person in the myomectomy group. Two of the subjects in each group had post-operative hemoglobin less than 10.5g/dl. The details of comparison between two procedures were shown in Table 2.

Table 2. Comparison of CS Myomectomy with LSCS alone

	Procedure		**Chi square value**	**p value**
	Myomectomy with CS (N=25)	**Only LSCS (N=25)**		
No of days of hospital stay				
<=5 days	18(72.0%)	20(80.0)	0.439	0.508
>5 days	7(28.0%)	5(20.0%)		
Time to do procedure	**Myomectomy**	**Only LSCS**		
<1 hour	8(32.0%)	12(48.0%)	1.333	0.248
>=1 hour	17(68.0%)	13(52.0%)		
Uterine artery ligation	**Myomectomy**	**Only LSCS**		
Yes	1(4.0%)	0(0.0%)	1.020	0.312
No	24(96%)	25(100.0%)		
Pre OP haemoglobin	**Myomectomy**	**Only LSCS**		
10-11g	10(40.0%)	12(48.0%)	0.325	0.569
>11g	15(60.0%)	13(52.0%)		
Post OP haemoglobin	**Myomectomy**	**Only LSCS**		
<10.5g	2(8.0%)	2(8.0%)	0.000	1.000
>10.5g	23(92.0%)	23(92.0%)		
Blood transfusion	**Myomectomy**	**Only LSCS**		
Yes	1(4.0%)	0(0.0%)	-	-
No	24(96.0%)	25(100.0%)		

Discussion

There is a therapeutic dilemma associated with fibroids encountered during caesarean section. Myomectomy has traditionally been discouraged during caesarean section. 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.[8,9] Two surgeries in one sitting avoid multiple hospital admissions and hospital stay, post-operative morbidity and cost of surgeries.

In this study, there was no statistically significant difference in post-operative haemoglobin level, duration of hospital stay, time to do procedure between CS myomectomy and LSCS alone; which correlated with studies by Roman et al., Li et al., and Brown et al.[5,7,10]

Kaymak et al compared 40 patients who underwent myomectomy at Caesarean section with 80 patients with myomas who underwent Caesarean section alone. The authors found no significant difference in the incidence of haemorrhage (12.5% in the Caesarean myomectomy group versus 11.3% in the controls), postoperative fever, or frequency of blood transfusions between the two groups and concluded that myomectomy during Caesarean section is not always a hazardous procedure and can be performed by experienced obstetricians without any complications.[8]

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 possibility of safely performing myomectomy during caesarean section is appealing in the low-resource settings.

It is recommended that large multicentre randomized trials be conducted to evaluate the best practice for myomectomy at caesarean section. These will identify appropriate selection criteria, surgical techniques, and haemostatic options and improve the overall outcome of the procedure.

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