Caesarean myomectomy: How safe it is? A retrospective analysis

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ABSTRACT

Background

Leiomyoma uterus not only causes menorrhagia, pain abdomen but also complicates pregnancy in various ways. The objectives of present analysis were to investigate the outcome in cases of pregnancy complicated by fibroids undergoing lower segment cesarean section (LSCS) in Grande International Hospital, Kathmandu Nepal.

Method

Fourteen cases of leiomyoma with pregnancy underwent LSCS with myomectomy following the delivery of the baby. The suturing of the uterus was done using vicryl no 1 and vicryl no 1 '0' for closing the dead space after myomectomy. Continuous oxytocin infusion was given for next 12 hrs. The cases were analyzed for age of patient, parity, gestational age, an indication of LSCS, type of fibroid, size of fibroid, blood loss, duration of operation, and blood transfusions.

Result

Thirty-eight fibroids of various sizes (3-15cm) were removed from 18 women. The fibroid was on both anterior uterine walls with most being subserous and intramural. Mean blood loss (excluding cesarean section) was 76.1 ml and mean operative time (only myomectomy) was 26.1 mins. Three patients had a whole blood transfusion in post-operative period. No hysterectomy was required in any case.

Conclusion

Myomectomy during cesarean section is possible and safe in selected cases with proper indications and also with expert hands. It avoids a second surgery and its associated morbidity.

Keywords: **Fibroid, Myomectomy, Pregnancy**

Introduction

Cesarean delivery is the most common surgical procedure. Fibroid is the most common benign tumor of uterus, its incidence in pregnancy is 2-4%. Myomectomy at the time of LSCS has been discouraged due to the belief that because of increased vascularity in a pregnant uterus, myomectomy at the time of cesarean section would lead to massive hemorrhage and increase postoperative morbidity. However, physiologically we know that pregnant uterus is better adapted to control hemorrhage due to uterine contraction and retraction, which allows bleeding vessels to close down. In addition, pregnancy is a hypercoagulable state, the vascular changes for clot formation in the placental bed helps in stopping the bleeding[1].

The aim of the study is to assess the safety of myomectomy during cesarean section.

Material and Methods

Eighteen patients underwent cesarean myomectomy & altogether thirty-eight fibroids were removed. After conducting the LSCS, delivery

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of baby & removal of placenta completely, uterus was closed in three layers. For subserosal & submucosal first purse-string suture was applied & then myoma was removed. For intramural conventional incision was given & then myoma bed was obliterated with baseball stitch. Misoprostol was kept per rectal in postoperative period along with oxytocin infusion for the next 12 hrs. Blood loss was estimated approximately by visual inspection.

Results

In demographic data (Table 1), the incidence of fibroids in pregnancy is more in third decade of fertile life. In our study, the incidence of fibroid is higher in multipara (Table 2). The distribution of LSCS in various gestational ages and indications for LSCS has been shown in Table 3 and Table 4.

Table 1: Demographic data showing total no. of cases with fibroid in pregnancy.

Age	Frequency	Percentage
Less than 30	8	44.4
30-35	9	50.0
More than 35	1	5.6
Total	**18**	**100**
Mean Age	30.5	
Minimum age	28	
Maximum	33	

Table 2: Case distribution according to parity.

Parity	Frequency	Percentage
1	7	38.9
2	9	50.0
3	2	11.1

Table 3: Gestational ages of patients.

Gestational age	Frequency	Percentage
33	2	11.1
34	1	5.6
36	1	5.6
37	5	27.8
38	8	44.4
39	1	5.6
Total	**18**	**100.0**
Mean gestational age	36.89	
Minimum gestational age	33	
Maximum gestational age	39	

Table 4 gives the indications for which LSCS was performed in each of the 18 patients. In two patients, fibroid was situated in the lower segment.in the study, 13 patients had single fibroid (submucosal, subserosal, and intramural) whereas few had multiple fibroids.

Table 4: Indications for LSCS.

Indication of LSCS	Frequency	Percentage
Previous LSCS	9	50.0
Lower segment fibroid with preterm labour	2	11.1
Cephalopelvic disproportion	1	5.6
Oligohydramnios	3	16.7
Fetal Distress	3	16.7
Total	**18**	**100.0**

Table 5: Types of fibroid.

Type of fibroid	Frequency	Percentage
Submucosal	1	5.6
Intramucosal	5	27.8
Subserosal	7	38.9
Intramural subserosal	3	16.7
Submucosal subserosal	1	5.6
Intramural subserosal submucosal	1	5.6
Total	**18**	**100.0**

Of the 18 patients, 9 patients had single fibroid and rest of 9 had multiple fibroids. The minimum number of fibroid was 1 and maximum were 13. In the study mean size of fibroid was 4.95 cms with a minimum size of 2 cms and maximum 10 cms

Table 6: No. of fibroids in cases undergone cesarean section.

Number of fibroids	Frequency	Percentage
1	9	50.0
2	7	38.9
3	1	5.6
13	1	5.6
Total	**18**	**100.0**
fibroids	2.17	
Minimum	1	
Maximum	13	

Table 7: Size of fibroid

Size of myoma (in cm)	
Mean size of myoma	4.95
Minimum size of myoma	2
Maximum size of myoma	10

Regarding intraoperative blood loss, the minimum loss was 20 ml and maximum was 600 ml. We transfused blood in 3 cases. There were no cases of surgical site infection or postpartum hemorrhage. The mean operative time (only for myomectomy) was 12.5 minutes.

Table 8: Estimated blood loss

Blood Loss	Frequency	Percentage
20	2	11.1
30	4	22.2
40	2	11.1
50	5	27.8
60	1	5.6
70	2	11.1
80	1	5.6
600	1	5.6
Total	**18**	**100.0**

Table 9: Requirement of blood transfusion

Blood Transfusion		
Yes	3	16.7
No	15	83.3
Total	**18**	**100.0**

Table 10: Operative time

Operative time (in minutes)		
15	1	5.6
20	9	50.0
25	2	11.1
30	3	16.7
35	1	5.6
40	1	5.6
60	1	5.6
Total	18	100.0
Mean operative time=12.5 minutes		

Discussion

Late marriage & childbirth are the main cause of increasing fibroids in pregnancy. The incidence of leiomyoma in pregnancy is 2-4%. Ten percent of women with fibroids in pregnancy develop complications related to the myoma[1]. Technically enucleation of fibroid is easier in gravid uterus due to extra looseness of the capsule & dissection is easier[2]. The average age of cesarean myomectomy pt in this study was 30.5 yrs and most of them were multi. Rice et al.[3] reported that uterine myomas are common in multipara but Gravind et al.[4] reported that myoma are more prevalent in primi. Time needed only for myomectomy in our study was 12.5 mins whereas in a study done by Alexander T. Owolabi et al.[5] meantime was 10.4 minutes. Ehigiegba et al.[6] performed cesarean myomectomy in 25 patients and reported no case of severe bleeding. Orac et al.[7] did cesarean myomectomy for a large myoma & reported no hysterectomy, no any vessel ligation, or any other procedure was needed to control hemorrhage. Of nine cases of myomectomy during CS Rosat Et al.[8] three needed hysterectomy for uncontrolled hemorrhage. Burton et al.[9] reported 13 cases of myomectomy at cesarean section, only one case was complicated by intra-operative hemorrhage due to myomectomy. In our study also there was no case of severe bleeding or need for hysterectomy. Safely done myomectomy during cesarean deliveries can prevent the added morbidity of a separate procedure (laparotomy to remove fibroids, anesthesia, and its possible complications) in the future[10]. Puerperal uterine subinvolution could also be minimized as well as other known complications of fibroids such as menorrhagia, anemia, and pain (e.g., from torsion or “red” degeneration during a subsequent pregnancy)[11]. The scar integrity following cesarean myomectomy has been shown to be better than that following interval myomectomy[12].

Conclusion

In our study, the mean operating time only for myomectomy was 12.5 minutes; no patients had a hysterectomy or any postpartum complications and only three patients needed a blood transfusion. So, cesarean myomectomy if done by expert hands in well-equipped centers it is safe & would probably avoid second surgery and its related co-morbidities.

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