

Caesarean Myomectomy: A Retrospective Case Controlled Study

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Abstract

The study design was a retrospective case controlled study done to assess the safety and efficacy of myomectomy during caesarean section in Holy Family Red Crescent Medical College Hospital, Dhaka, Bangladesh. The subjects were 46 pregnant women underwent elective or emergency myomectomy during caesarean section. All caesarean section myomectomy were performed by consultant gynaecologist and obstetrician. Intra-operative and post-operative complications such as length of operation, blood loss were estimated. Length of hospital stay was also recorded. Results: Myomectomy was performed at caesarean section after delivery of the baby and the placenta, with the administration of intravenous oxytocin. The fibroid defects were occluded with continuous interlocking and fixed sutures. Fibroids were on whole of the anterior uterine wall and upper part of the posterior uterine wall with most being subserous and intramural. No hysterectomy needed at the time of caesarean section. There was no significant frequency of blood transfusion and incidence of post operative fever. The average duration of post operative hospital stay was 4 to 8 days. In selected cases myomectomy during caesarean section does not appear to be result in an increased risk of intrapartum or postpartum morbidity if performed by an experienced practitioner. Caesarean myomectomy may be a safe surgical option with no significant complications.

Keywords: Caesarean section, uterine fibroids, myomectomy.

Introduction:

Uterine leiomyomata or fibroids are the commonest tumours of the female genital tract. It is 3-9 times commoner among the Afro Asians, compared to the Caucasians¹. Pregnancy complicating fibroid and fibroid complicating pregnancy is not uncommon presentations to obstetrician practicing in Bangladesh. Approximately 10% of gravidas develop complications associated with myomas during pregnancy. Such as pain abortion, placental abruption, premature ruptures of membrane (PROM), premature labor, postpartum hemorrhage and dysfunctional labor².

Traditionally obstetricians and gynaecologist had avoided performing myomectomy either during pregnancy or at caesarean section because of fear that bleeding may be intractable as a result of the increased vascularity of the pregnant uterus. Recent reports indicate that myomectomy; at the time of caesarean section operation can be safely undertaken by skilled practitioners³⁻⁶. However most obstetricians in the tropics. Still avoids caesarean myomectomy as a routine at caesarean section.

This retrospective study was done to find out the clinical outcome of caesarean myomectomy in Holy Family Red Crescent Medical College Hospital, Dhaka, Bangladesh and to compare our findings with published results of studies that advocate's routine caesarean myomectomy for uterine fibroids.

Materials and method:

In these retrospective study 46 patients with different types of uterine fibroids in pregnancy who were treated by caesarean myomectomy between January 2010 and June 2016 at Barguna General Hospital, Barguna, Doctors care Clinic (Pvt) Barguna, Central Hospital (Pvt) Barguna, Sher-E-Bangla Medical College Hospital, Barisal, Ambia Memorial Hospital, Barsial and Advocate Hemayetuddin Ahmed Diabetic Hospital, Barisal. All the patients with known uterine myoma and the patients with uterine myoma detected at the time of caesarean section were counseled and consented for a possible caesarean myomectomy.

Inclusion criteria were i) Detection of uterine myoma on prenatal ultrasonography or during caesarean section (ii) No placenta praevia or placental abruption (iii) No other procedures performed during the caesarean section, except myomectomy (e.g. ovaian cystectomy) (iv) No coagulation disorder.

All the patients had spinal anaesthesia, Myomectomy for subserous and interamural types of myoma was performed at caesarean section after the delivery of the baby. Conventiional method of incision over the myomas followed by its enucleation was employed irrespective of the location of the fibroid. The dead space was repaired in layers with adequate haemostasis. The oxytocin infusion was started after the delivery of the baby and continued for 12-24 hours thereafter. Blood loss was estimated from the measurement of that sucked by the suction pump in addition to estimates of blood loss on the line and swabs. The number and sizes of uterine fibroids removed were documented in the operation notes. Broad spectrum antibiotics and analgesics were administered in the postoperative period. The cases were analyzed for age of the patient, parity, duration of surgery, estimated blood loss at surgery and need for blood transfusion, duration of hospital stay and incidence of postpartum fever, Location, types, sizes and number of fibroids were noted for cases.

Results:

During the study period from January 2014 to June 2016 forty six cases of caesarean myomectomy were performed. The characteristics of the cases in terms of age and parity are shown in table I. The age range of the patients was 25 to 40 years and more than 54% of them were nulliparous.

Table-I: Distribution of patients according to age and parity.

Variables	Number of Patients (n=46)	Percentage of Patients (%)
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Age		
25-30 years	17	36.96
31-35 years	19	41.30
36-40 years	10	21.74
Parity		
0	25	54.35
1	11	23.90
2	5	10.87
3	4	08.70
4	1	02.18

Table-II shows location, types, sizes and number of fibroids removed. Twenty five (54.35%) patients had the fibroids removed from anterior upper uterine segment and four (8.70%) patients from posterior upper uterine segment. The sub serous and pedunculated fibroids encompass 78.26% and rest was the intramural. The most of the fibroids (65.21% patients) removed were mainly between 3 cm and 5 cm only 9 (19.57%) patients contain single fibroid.

Table-II: Location types sizes and number of fibroids removed.

Variables	Numbers of patients (n=46)	Percentage of patients
Location of fibroids removed		
Anterior upper uterine segment	25	54.35
Anterior lower uterine segment	11	23.91
Whole of the anterior wall	6	13.04
Posterior upper uterine segment	4	08.70
Types of fibroids removed		
Subserous/ Pedunculated	36	78.26
Intramural	10	21.74
Sizes of fibroids removed		
<3 cm	12	26.09
3-5 cm	30	65.21
> 5cm	4	08.70
Number of fibroids removed		
1	9	19.57

2	11	23.91
3	17	36.96
4	5	10.87
5	3	06.52
6	1	02.17

Table-III depicts duration of surgery, estimated blood loss, blood transfusion, duration of hospital stay, and incidence of postpartum fever. Twenty two (47.83%) patients required 30 to 35 minutes time to complete the operation and only 6(13.04%) patients need 41 to 45 minutes significant blood loss occurred only in two (4.35%) patients. Most of the patients (82.61%) needed no blood transfusion. Only one patient (02.17%) need 3 unit of blood transfusion. All the patients were discharged home between post operative day four and eight. Significant post partum fever occurred in 5 (10.87%) patients. There was no wound infection and maternal of perinatal mortality.

Table-III: Duration of surgery, estimated blood loss, blood transfusion, duration of hospital stay and incidence of postpartum fever.

Variables	Number of Patients (n=46)	Percentage of patients (%)
Duration of Surgery		
30-35 minutes	22	47.83
36-40 minutes	18	39.13
41-45 minutes	6	13.04
Estimated blood loss		
<500ml	12	26.09
500-750ml	32	69.56
751-1000ml	2	04.35
Blood transfusion		
0 unit	38	82.61
1 unit	5	10.87
2 unit	2	04.35
3 unit	1	02.17
Duration of hospital stay		
4-5 days	28	60.87
6-7 days	12	26.09
7-8 days	6	13.04
Postpartum fever	5	10.87

Discussion:

Uterine myoma is the most common type of uterine tumor, the incidence of myomas in fertile women has been reported to be 25-30% 7.8 Histopathologically uterine myoma have been reported to occur in 77% of uteri obtained from total abdominal hysterectomy specimens⁹.

The etiology of uterine myoma has been reported to be associated with various factors such as age genetic factors, hormones and ethnicity; however the exact etiology or pathophysiology under myomas remains unclear.

The incidence of uterine myomas has been reported to be three times higher in the black population than white or other ethnic populations¹⁰.

It has also been reported that the growth of the uterine myomas is closely related to estrogen growth hormone and progesterone¹¹.

Uterine myomas are rarely seen and their size are decreased in postmenopausal women. Based on there finding it has been suggested that estrogen plays a critical role in the growth of uterine myomas⁸.

With respect to the distribution of myomas as a function of parity, Rice et al¹² reported that uterine myomas frequently develop in multiparas, but Gravind et al¹³ noted that myomas are more prevalent in primiparas. In the study. Uterine myomas were common in primiparas (54.35%).

Uterine myomas may be subserosal, intramural or submucosal or peduculated. In the current study, subserosal and peduculated myomas had the heighest incidence (78.26%) as reported by other anthers^{3,4}.

In general, most obestricians have been instructed not to perform uterine myomectomy during caesarean section, with the exception of pedunculated myopas because of risk of massive hemorrhage, and the possibility of hysterectomy. However, if the uterine myomas are not removed, the possiblity of re-operation due to complications arising from myomas and the influence on future pregnancies persist. Because of these uncertainties several studies involving caesarean myomectomy have been conducted^{3,4,5,6}.

Several authors have suggested that uterine myomectomy can be performed both safely and successfully during caesarean section if performed by an experienced obstetrician in a carefully selected patient. Burton et al⁶ performed myomectomy during caesarean section in 13 patients and reported successful recovery in 12 patients. one transfusion was performed intra operatively because of bleeding the authors concluded that myomectomy during caesarean section is safe in carefully selected patients⁶.

Ehigiegba et al¹⁴ performed caesarean myomectomy in 25 patients and reported no case of severe bleeding.

All the patients in this study were discharged by the fourth to eighth postoperative day; this is comparable with the study that advocates routine caesarean myomectomy for all anterior uterine wall fibroids 14 the average estimated blood loss was 720 mls, which is less than 876 ml reported in a series of patients that had routine anterior uterine wall caesarean myomectomy 14 However it has been reported that hemorrhage is increased at caesarean Myomectomy 15 16

In this study, none of the patients had hysterectomy on account of haemorrhage but Hassan et al 17 in their series reported three hysterectomies out of the ten patients that had caesarean myomectomy.

In our study group, 17.39% of the patients required blood transfusion. This percentage is also less than compared with 20% of the patients that required blood transfusion in the series that did routine caesarean myomectomy for all anterior fibroids.

Interestingly, caesarean myomectomy, which is said to be a cost effective procedure in a resource constrained setting¹⁸ has its other benefits. It obviates the need for interval myomectomy and decreases complication (s) associated with fibroid in subsequent pregnancies¹⁹.

Conclusion:

This study shows that myomectomy during caesarean section is a safe procedure in experienced hands and is not as dangerous as generations of obstetricians have been trained to believe. The use of high dose oxytocin infusion severe hemorrhage, which is the most serious complications, can be curtailed. Further research is necessary to establish the cost effectiveness of the procedure.

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