

Caesarean Myomectomy: Prospective Study

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Abstracts: Introduction: Contrary to previous belief many studies published now have shown that myomectomy during cesarean section (CS) is a safe procedure with no significant increased risk of intra and postoperative complications. Methods: This prospective study was carried out in antenatal mothers from May 09 to Sep 10 in a tertiary care hospital of Uttar Pradesh after taking institutional ethical committee approval. Diagnosis of myoma was confirmed by ultrasonography. Only those mothers were included in the study who gave the informed consent to participate in study. Cesarean myomectomy was planned in all mothers having myoma. Operative time, intraoperative haemorrhage and length of hospital stay of mothers having myoma were compared to matched pregnant women with CS alone (28 cases). Data were collected on a questionnaire and analyzed by appropriate test of significance. Results: Out of 966 antenatal mothers registered during the study period myoma was detected in 14 (1.18%) cases. Mean age mothers of having myoma were 27.08 years and 61.54% were primigravida and only 23.08% were third gravida. In 61.54% mother's parity was zero and only 15.39% mothers were having parity two. Mean haemoglobin was 10.56 gm%. In all cases presentation of foetus was vertex. In 92.3% mothers location of myoma was at anterior wall and subserous and in 7.7% cases it was fundal. Size of myoma was less than 3.0 Cm in 38.50 cases, 3.1 Cm to 5.0 Cm in 23.1% cases and more than 5.1 Cm in 38.4% cases. There was no significant difference in operative time, intraoperative haemorrhage and length of hospital stay in comparison to matched pregnant women with CS alone. Postnatal period was uneventful and complication like PPH was nil in all in cesarean myomectomy cases. Conclusion: caesarean myomectomy can be safely performed in majority of patients with myomas without any serious or life threatening complication. [Agarwal K et al. NJIRM 2011; 2(3) : 11-14]

Key Words: caesarean myomectomy, gravid, myoma

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Introduction: Uterine leiomyomata or fibroids are the commonest tumours of the female genital tract. It is 3-9 times commoner among the Negroid race, compared to the Caucasians¹. Traditionally obstetricians and gynaecologists had avoided performing myomectomy either during pregnancy or at cesarean section because of fear that bleeding may be intractable as a result of the increased vascularity of the pregnant uterus. The presence of fibroid in the lower uterine segment may be an indication for classical cesarean section. Recent reports indicate that myomectomy, at the time of cesarean section operation; can be safely undertaken by skilled practitioners.

A retrospective case-control study including 1,242 pregnant women with fibromyomas who underwent myomectomy during cesarean section (CS) and three control groups of 200 matched pregnant women without fibromyomas who underwent CS deliveries (Group A), 145 patients

with fibromyomas who underwent CS deliveries without removal of fibromyomas (Group B) and 51 patients with fibromyomas who had a hysterectomy during CS² found no differences in the mean hemoglobin change, the incidence of postoperative fever and the length of hospital stay among groups. Other smaller case-control studies have also reported caesarean myomectomy to be safe and effective³⁻⁷. A prospective non-randomised study including 29 women found that future fertility and or subsequent pregnancy outcome was unaffected by caesarean myomectomy⁸. This study was planned to study the safety and feasibility of performing myomectomy during cesarean section in a tertiary care hospital.

Material and Methods: This prospective study was carried out from May 09 to Sep 10 in a tertiary care hospital of Uttar Pradesh in antenatal mothers after taking institutional ethical committee approval.

Diagnosis of myoma was confirmed by ultrasonography. Out of 966 antenatal mothers registered during the study period myoma was detected in 14(1.18%) cases. Only those mothers were included in the study who gave the informed consent for caesarean myomectomy. Irrespective of the situation of the myoma the technique of myomectomy was conventional, and involved making an incision over the myoma and enucleating it. The dead space was obliterated by interrupted sutures with 1-0 vicryl. Myomas located near the cornu were not removed for fear of distortion of patency and anatomy of fallopian tube. If the myoma was located in the lower uterine segment encroaching the proposed line of incision then myomectomy was done prior to delivery of the baby. But in other cases myomectomy was resorted to after delivery of the baby. Uterine incision for LSCS was closed in two layers with 1-0 vicryl and the abdomen closed after ensuring hemostasis. The women were analyzed as regards to age and parity, number, location and size of the fibroids, time required for surgery, intraoperative haemorrhage and length of hospital stay. Time required for surgery, intraoperative haemorrhage and length of hospital stay of mothers having myoma were compared to matched pregnant women with CS alone (28cases). Data were collected on a questionnaire and analyzed by appropriate test of significance.

Result: Out of 966 antenatal mothers registered during the study period myoma was detected in 14(1.18%) cases. Table I depicts distribution of Mothers according to age and Obstetric history. Mean age mothers of having myoma were 27.08 years and 61.54% were primigravida and only 23.08 % were third gravida. In 61.54% mother's parity was zero and only 15.39 % mothers were having parity two. Mean haemoglobin was 10.56 gm%. In all cases presentation of foetus was vertex.

Table II depicts distribution of mothers according to location, size and number of myoma. In 92.3% mothers location of myoma was at anterior wall and in 7.7% cases it was fundal . Size of myoma was less than 3.0 Cm in 38.50 cases , 3.1 Cm to 5.0 Cm in 23.1% cases and more than 5.1 Cm in 38.4% cases .In 92.90 % cases number of myoma was less

than one and only in one case (7.10%) number of myoma was nine. In 92.90 % cases myoma was subserous and only in one case (7.10%) of myoma was intramural.

Table I: Distribution of Mothers according to age and Obstetric History

1	Age in Years Mean \pm SD (Range)	27.08 \pm 4.42 (22-35)
2	Gravida (Percentage)	
	one	61.54 %
	Two	15.38%
	Three	23.08%
3	Parity	61.54%
	Zero	23.07%
	One	15.39%
	Two	
4	History of Abortion	92.31%
	Nil	7.69%
	one	
5	Haemoglobin in Gm % Mean \pm SD (Range)	10.56 \pm 1.14 (9-12.8)
6	Presentation of Foetus	100%
	Vertex	

Table II: Distribution of Mothers according to location and Size of Myoma

1	Location of Myoma	92.3%
	Anterior Wall	7.7%
	Fundus	
2	Size of Myoma	38.5%
	Less than 3.0 Cm	23.1%
	3.1Cm-5.0 Cm	38.4%
	More than 5.1 Cm	
3	Number of Myoma	92.90%
	1-2	NIL
	2- 5	7.10%
	6 or More	
4	Subserous/Intramural	92.90%
	Subserous	7.10%
	Intramural	
5.	Histopathological report lieomyomata no evidence of malignancy	100%

In Table III time required for surgery, intraoperative haemorrhage and length of hospital stay of mothers having myoma has been compared to matched pregnant women with CS

alone (28cases) There was no significant difference in operative time, intraoperative haemorrhage and length of hospital stay in comparison to women with CS alone. Postnatal period was uneventful and complication like PPH was nil in all in cesarean myomectomy cases.

Table III : Distribution of Mothers according to intra-operative /Post-operative event Distribution of Mothers according to location and Size of Myoma

		Cesarean myomectomy	Matched pregnant women with CS alone	P value
1	Duration Of Surgery in Minutes Mean \pm SD (Range)	32 \pm 7 (25-40)	29 \pm 6 (23-35)	NS
2	Amount of Blood Loss in cc Mean \pm SD (Range)	400 \pm 100 (300-500)	350 \pm 100 (250-450)	NS
3	Duration of Hospital Stay in Hours Mean \pm SD (Range)	96 \pm 24 (72-120)	84 \pm 24 (60-108)	NS

Discussion: Since preservation of an organ without loss of its function is always a greater surgical achievement than its destruction, myomectomy is usually preferred to hysterectomy. But myomectomy in pregnancy and during cesarean section has always been condemned. Bonney the pioneer of myomectomy wrote – “It is tempting for the adventurous and sympathetic surgeon to condense the operation of LSCS and myomectomy into one undertaking and save his patient the ordeal of a second admission to hospital. This kindly but misguided policy we heartily deprecate.” But even pupils of Bonney have deviated from this orthodox idea, and Howkins and Stallworthy⁹ advocate cesarean myomectomy in selected cases. This is particularly so when the myoma is situated anteriorly in the lower segment on the proposed line of incision. In these cases after mobilizing the bladder the myoma is enucleated by a transverse incision on its surface and then the uterus opened

by an incision through the posterior wall of the capsule. Though myomectomy during pregnancy is still not encouraged cesarean myomectomy is a feasible undertaking¹⁰. The reasoning behind this is that a uterus in the immediate postpartum phase is better adapted physiologically to control hemorrhage than in any other stage in a women’s life.

Several authors have published their results on myomectomy during the course of pregnancy when conservative treatment fails to relieve the woman of her symptoms. Roman and Tabsh¹¹ in a retrospective study involving women with myomectomy at cesarean section and 257 women undergoing cesarean section alone noted no significant difference in incidence of intraoperative hemorrhage, post partum fever, operative time, and length of hospital stay. Omar et al¹² report two cases wherein myomectomy had to be done to facilitate the delivery of the baby during cesarean. section with uneventful intraoperative and postoperative period. Our study also shows that cesarean myomectomy is not as dangerous as generations of obstetricians have been trained to believe. Enucleation of the fibroid is technically easier in gravid uterus owing to greater looseness of the capsule.

Conclusion: With the advent of better anesthesia and availability of blood, cesarean myomectomy is no longer a dreaded job in the hands of an experienced surgeon and in a well equipped tertiary institution.

References:

1. Ogedengbe OK. Uterine fibroids. In: Okonofua F, Odunsi K (eds.), Contemporary Obstetrics and Gynaecology for developing Countries, Benin City: Women’s Health and Action Research Centre. 2003; 202-213.
2. Li H. Du J. Jin L. Shi Z. Liu M. Myomectomy during cesarean section. Acta Obstetricia et Gynecologica Scandinavica 2009. 88(2):183-6.
3. Hassiakos D. Christopoulos P. Vitoratos N. Xarchoulakou E. Vaggos G. Papadias K. Myomectomy during cesarean section: a safe procedure? Annals of the New York Academy of Sciences 2006. 1092:408-13.
4. Kaymak O. Ustunyurt E. Okyay RE. Kalyoncu S. Mollamahmutoglu L. Myomectomy during

- cesarean section. *International Journal of Gynaecology & Obstetrics* 2005. 89(2):90-3.
5. Kwawukume EY. Caesarean myomectomy. *African Journal of Reproductive Health* 2002. 6(3):38-43.
 6. Dimitrov A. Nikolov A. Stamenov G. [Myomectomy during cesarean section]. [Bulgarian] *Akusherstvo i Ginekologija* 1999. 38(2):7-9.
 7. Brown D. Fletcher HM. Myrie MO. Reid M. Caesarean myomectomy--a safe procedure. A retrospective case controlled study. *Journal of Obstetrics & Gynaecology* 1999. 19(2):139-41.
 8. Adesiyun AG. Ojabo A. Durosinlorun-Mohammed A. Fertility and obstetric outcome after caesarean myomectomy. *Journal of Obstetrics & Gynaecology* 2008. 28(7):710-2.
 9. Howkins J, Stallworthy J. *Bonney's Gynecological Surgery*, 8th edn. London. Bailliere Tindall. 1974:421.
 10. Fletcher HM, Frederick J. Abdominal myomectomy revisited. In: Studd J. *Progress in Obstetrics and Gynecology* Vol.16. New Delhi. Elsevier. 2005:277-86
 11. Roman AS, Tabsh KMA. Myomectomy at time of cesarean delivery; a retrospective cohort study. *BMC Pregnancy and Child birth* 2004;4:14-7.
 12. Omar SZ, Sivanesaratnam V, Damodaran P. Large lower segment myoma--myomectomy at lower segment caesarean section a report of two cases. *Singapore Med J* 1990; 40:109-10