

DOI: <http://dx.doi.org/10.18203/2320-1770.ijrcog20170510>

Original Research Article

A study of outcome of caesarean myomectomy in a tertiary care hospital

Shiveta Kaul*, Shivani Abrol, Farhat Jabeen, Asifa Ali

Department of Obstetrics and Gynecology, Government Medical College, Srinagar, Jammu and Kashmir, India

Received: 31 January 2017

Accepted: 06 February 2017

***Correspondence:**

Dr. Shiveta Kaul,

E-mail: shivetakaul05@gmail.com

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ABSTRACT

Background: Uterine leiomyoma (i.e. fibroid or myoma) are benign clonal tumours arising from the muscle cell of the uterus. Uterine myomas are the commonest tumour over the age of 30 years and seen in 2% pregnant women. The impact of uterine myomas on pregnancy depends on the size, number and location of myoma. Myomectomy is a surgery to remove one or more fibroids. Recently, it has been suggested that caesarean myomectomy is a safe surgical modality if is performed in carefully selected patients. The aim of the study was to assess the safety and feasibility of performing myomectomy during caesarean section.

Methods: This prospective observational study was conducted in the Postgraduate Department of Gynaecology and Obstetrics for a period of one and a half year in Government Lalla Ded Hospital – an associated hospital of Government Medical College, Srinagar which is the sole tertiary care referral centre in the valley.

Results: A total of 54 patients were taken for caesarean myomectomy. Majority of the patients were in the age group of 26-30 years and were of para-1 or 2. Mean blood loss was ≤ 500 ml during surgery. Most common intraoperative complication was haemorrhage and post-operative complication was fever.

Conclusions: From the present study, it is concluded that with the advent of better anaesthesia and availability of blood, caesarean myomectomy is no longer a dreaded job in the hands of an experienced surgeon and in a well-equipped tertiary institution.

Keywords: Caesarean myomectomy, Haemorrhage, Myoma

INTRODUCTION

Uterine leiomyoma are benign clonal tumours arising from the muscle cell of the uterus. Uterine myomas are the commonest tumour over the age of 30 years.¹ Uterine myoma is found in approximately 2% of pregnant women.²

The impact of uterine myomas on pregnancy depends on the size, number and location of myoma. They can be asymptomatic or associated with serious complications.³ In the pregnant women with coexisting fibroids, there are increased incidences of first trimester losses, pressure symptoms, pain from red degeneration (necrobiosis), torsion of a pedunculated variant, malpresentations,

preterm rupture of membranes and preterm labour during pregnancy, obstructed labour from a cervical or lower segment mass in partum and retained placenta, subinvolution of the uterus, postpartum endomyometritis, and postpartum haemorrhage in the immediate postpartum period.^{4,5} The overall risk of major complications is 71%.⁶ Documented reasons for the removal of uterine fibroids during caesarean section include the prevention of necrobiosis, pain during pregnancy, and unusual intraoperative appearance of the tumour, to gain access to the baby in patients in whom fibroids are obstructing the lower uterine segment, with pedunculated and anterior uterine fibroids, and when the fibroids cause difficulty with uterine wound closure thereby causing significant blood loss.⁷⁻¹¹ Myomectomy

is usually recommended when more conservative treatment options fail for women who want fertility preserving surgery or who want to retain the uterus.¹² If caesarean section and myomectomy be safely performed at the same time, the risk of anaesthetic complications, multiple surgeries, adhesions and intra or postoperative haemorrhage, exorbitant costs of operative procedures, and hospital stay could be reduced.¹³ Myomectomy at the time of caesarean section has traditionally been discouraged due to the theoretical risks of intractable haemorrhage which may require hysterectomy and increased postoperative morbidity.¹⁴ Several recent studies have described technique which can minimize blood loss at Caesarean myomectomy.

This study was conducted in Lalla Ded hospital to evaluate the safety, efficacy and outcome of performing myomectomy during caesarean section. Aim of the study was to investigate the safety and feasibility of performing myomectomy during caesarean section and the outcome of caesarean myomectomy.

METHODS

This prospective observational study was conducted in the Post Graduate Department of Gynaecology and Obstetrics, Government Lalla Ded Hospital – an associated hospital of Government Medical College, Srinagar for a period of 1.5 year. Myomectomy was performed during caesarean section in total of 54 patients who were diagnosed to have fibroids by ultrasound in the antenatal period and in those in whom myoma was incidentally found during caesarean section. Accurate evaluation of location, number, size and position was done. The patients were counselled and consent was taken for possibility of postpartum haemorrhage and hysterectomy. Pedunculated, anterior subserous, intramural fibroid on the anterior wall were removed. Myoma located near the cornua were not removed for the fear of distortion of patency and anatomy of fallopian tube.



Figure 1: Myomectomy at the time of caesarean section.

In cases where the myoma was in the lower uterine segment encroaching the proposed line of incision, myomectomy was done prior to delivery of the baby. But

in rest of the cases myomectomy was resorted to after delivery of the baby. Hemostatic measures used were vasopressin and oxytocin infusion. The patients were analysed based upon age, parity, number, location and size of the fibroids, time required for surgery, blood loss, post-operative period and findings at follow up after 6 weeks. The amount of blood loss was estimated by the mops, drapings, swabs and suction aspiration.

RESULTS

Distribution of Mothers according to age, parity and gestational weeks given in Table 1. Mean age mothers of having myoma were 29.2 years. In 44.4% mother's parity was zero and only 16.7% mothers were having parity two.

Table 1: Distribution of mothers according to age, parity and gestational age.

| | | |
|------------------------------------|-----------|------|
| Age in years (mean±SD) | 29.2±3.89 | |
| Parity (%) | Zero | 44.4 |
| | One | 35.2 |
| | Two | 16.7 |
| Gestational age in weeks (mean±SD) | 36.2±2.86 | |

Table 2: Distribution of mothers according to location and size of myoma.

| Distribution according to location and size of myoma | Number |
|---|--------|
| Location of fibroid (%) | 65.8 |
| Anterior Wall Fundus (%) | 34.2 |
| Size of myoma (%) | |
| Less than 3.0 Cm | 10.1 |
| 3.1Cm-5.0 Cm | 15.2 |
| More than 5.1 Cm | 74.7 |
| Number of myoma (%) | |
| 1-2 | 68.5 |
| 2- 5 | 27.7 |
| 6 or More | 3.8 |
| Type of fibroid (%) | |
| Subserous | 53 |
| Intramural | 43 |
| Sub mucous | 2.5 |
| Pedunculated | 2.5 |
| Histopathological report leiomyomata no evidence of malignancy (%) | 100 |

Table 2 depicts distribution of mothers according to location, size and number of myoma. In 65.8% mothers location of myoma was at anterior wall and in 34.2% cases it was fundal. Size of myoma was less than 3.0 Cm in 10.1% cases, 3.1 Cm to 5.0 Cm in 15.2% cases and more than 5.1 Cm in 74.7% cases. In 68.5% cases number of myoma were between 1-2 and only in 3.8% cases number of myoma were more than 6. In 53% cases myoma was subserous and in 43% cases myoma was intramural.

In Table 3 time required for surgery, intraoperative haemorrhage and length of hospital stay of mothers has been mentioned.

Table 3: duration of surgery, hospital stay and amount of blood loss.

| Mean ± SD (Range) | Number |
|---|-------------|
| Duration of surgery in Minutes Mean ± SD (Range) | 53.2±9.58 |
| Amount of blood loss in cc Mean±SD (Range) | 406.1±163.4 |
| Duration of hospital stay in Hours Mean±SD (Range) | 4.7±1.75 |

Table 4 and 5 suggestive of intraoperative and postoperative complications and among all patients 4 patients developed intraoperative haemorrhage 2 patients had undergone caesarean hysterectomy. Among postoperative complications, 2 patients developed febrile morbidity.

Table 4: Intra-operative complications in study patients.

| Intra-operative complications | Number of patients | Percentage |
|-------------------------------|--------------------|------------|
| Haemorrhage | 4 | 7.4 |
| Caesarean hysterectomy | 2 | 3.7 |

Table 5: Postoperative complications in study patients.

| Postoperative complications | Number of patients | Percentage |
|--|--------------------|------------|
| Post-operative infection (scar site infection) | 1 | 1.9 |
| Febrile Morbidity | 2 | 3.7 |

DISCUSSION

Caesarean myomectomy was practically absent from the obstetric literature until the last decade. This was due to the high risk of haemorrhage associated with this procedure and the need for blood transfusion. The training had been to do interval myomectomy. However, some obstetricians started performing selective myomectomy at caesarean section for specific indications like pedunculated uterine fibroid, anterior subserous fibroid and fibroid in the lower uterine segment. In the present study, mean age of the patients who underwent caesarean myomectomy was 29.2±3.89 years. The observations were in consonance with the study by Celal K.¹²

The total number of fibroids removed was 79. There were 68.5% of the patients who had single fibroid and five fibroids were removed only in one patient. The observations were in consonance with the studies by Fenn

MG where 79.3% of patients had single fibroid.¹⁵ Maximum, around, 73.4% fibroids removed were of the size of 6 to 9 cm. The observations were in consonance with the study by Gbadebo AA where 69.9% of the fibroids removed were of the size of 6 to 10 cm.⁷ Mean duration of hospital stay was 4.7±1.75 days in 53.7% patients. The observations were in consonance with the study by Alfred E in whom duration of hospital stay was 4.17±2.48 days in 57.1% patients.¹⁰

The mean haemoglobin before and after caesarean myomectomy was 9.3 and 8.6 respectively. The observations were in consonance with the study by Celal K.¹² 4 patients had intraoperative haemorrhage and 2 patients had undergone caesarean hysterectomy. One patient who had caesarean hysterectomy was a multigravida and she had uncontrolled PPH.

In the present study, 3.7% patients had febrile morbidity. Our observations were in consonance with the study by Adesiyun where 9.1% patients had febrile morbidity.⁷ One patient in the present study had infection at the myomectomy scar site on the seventh post-operative day. In the study by Biswas SP 4.76% patient had postpartum pyrexia.¹⁶

CONCLUSION

From the present study, it was concluded that with the advent of better anaesthesia and availability of blood, caesarean myomectomy is no longer a dreaded job in the hands of an experienced surgeon and in a well-equipped tertiary institution. Myomectomy during caesarean section is a safe procedure. Large fundal intramural fibroids should be intuitively avoided. Intramural myomectomy should be performed with caution. Fibroids obstructing the lower uterine segment or accessible subserosal or pedunculated fibroids in symptomatic patients can be safely removed by experienced surgeons.

Measures to minimize blood loss, like use of vasopressin, balloon catheters, uterotonic drugs, uterine artery ligation, uterine tourniquets, stepwise devascularisation would optimize outcomes and significantly decrease the chance of hysterectomy. Caesarean myomectomy may not be as dangerous as generations of obstetricians and gynaecologists have been trained to believe with adequate experience of routine myomectomy and the use of high dose oxytocin infusion, severe haemorrhage, which is the most serious complications can be curtailed.

The old dictum discouraging caesarean myomectomy should be reassessed. In a well-equipped tertiary care setting with availability of blood bank and expert anaesthetic facilities caesarean myomectomy can be a safe and effective procedure in selected patients.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: Not required

REFERENCES

1. Novak ER, Wooduff JD. Myoma and other benign tumours of the uterus. Novaks gynaecologic and obstetric pathology with clinical and endocrine relations. Philadelphia: WB Saunders; 1979:260.
2. Katz VL, Dotters DJ, Droegemeuller W. Complications of uterine leiomyomas in pregnancy. *Obstet Gynecol.* 1989;73:593-6.
3. Winer-Muram HT, Muram D, Gillieson MS. Uterine myomas in pregnancy. *J Ass Canadian Radiologists* 1984;35:168.
4. Omigbodun AO, Fawole AO. Myomectomy during pregnancy and delivery. Is it safe?-commentary. *Trop J Obstet Gynecol.* 2005;22(1):1-3.
5. Okoro O, Onwere S. Myomectomy during pregnancy. *Pak J Med Sci.* 2007;23(5):771-3.
6. Rice JP, Kay HH, Mahony BS. The clinical significance of uterine leiomyomas in pregnancy. *Am J Obstet Gynecol.* 1989;160(5):1212-6.
7. Gbadebo AA, Charles AA, Austin O. Myomectomy at caesarean section: descriptive study of clinical outcome in a tropical setting. *J Ayub Med Coll Abbottabad.* 2009;21(4):7-9.
8. Roman AS, Tabsh KMA. Myomectomy at time of cesarean delivery; a retrospective cohort study. *BMC Pregnancy and Child birth.* 2004;4:14-7.
9. Bhatla N, Dash BB, Kriplani A, Agarwal N. Myomectomy during pregnancy: a feasible option. *Journal Obstet Gynecol Res.* 2009;35(1):173-5.
10. Alfred E, Joy G, Uduak O, Chidozie U. Cesarean myomectomy outcome in a Nigerian District Hospital. *J Basic Clinic Reprod Sci.* 2013;2(2):115-8.
11. Owolabi AT, Loto MO, Kuti O, Ehinmitan RR, Ibrahim AY. Unavoidable caesarean myomectomy: a case report. *Nepal J Obstet Gynaecol.* 2007;2(2):81-3.
12. Celal K, Hulya C. The evaluation of myomectomies performed during cesarean section in our clinic. *Niger Med J.* 2011;52(3):186-8.
13. Awoleke JO . Myomectomy during caesarean birth in fibroid – endemic, low-resource settings. *Obstet Gynecol Int.* 2013;2013:1-6.
14. Cunningham FG, Gant NF, Levenok KJ, Gilstrap LC, Hauth JC, Wenstrom KD. Abnormalities of the reproductive tract. 21st ed. In: Williams Obstetrics. New York: McGraw Hill; 2001:930.
15. Fenn MG, Isac M. Cesarean Myomectomy- A Versatile Procedure for Management of Fibroids at C. Section. *J Evol Medic Dent Sci.* 2015;4(11): 1843-6,
16. Biswas SP, Fatema MK, Akhter S. Safety of routine caesarean myomectomy. *Bang Med J Khulna* 2013; 46:7-11.

Cite this article as: Kaul S, Abrol S, Jabeen F, Ali A. A study of outcome of caesarean myomectomy in a tertiary care hospital. *Int J Reprod Contracept Obstet Gynecol* 2017;6:833-6.