



Original Research Article

Maternal complications following caesarean myomectomy and caesarean alone-an observational comparative study

Amina S Kabeer¹, Shahnas M^{1,*}, Abdul Vahab KP¹¹Dept. of Obstetrics & Gynaecology, MES Medical College, Perinthalmanna, Malappuram, Kerala679338, Kerala679338, Kerala679338, Kerala, India

ARTICLE INFO

Article history:

Received 21-01-2020

Accepted 05-02-2020

Available online 21-02-2020

Keywords:

Uterine leiomyoma

Caesarean myomectomy

Obstetric hysterectomy

ABSTRACT

Introduction: Uterine leiomyoma is the commonest tumour of female genital tract. Earlier myomectomy at caesarean sections was generally avoided due to fear of intractable haemorrhage and atonicity leading to subsequent hysterectomy and future fertility issues. The aim of this study is to compare the intra-operative and post-operative complications following caesarean myomectomy and caesarean section alone in antenatal patients with myomas.

Materials and Methods: A hospital based observational comparative study was performed on 38 antenatal woman with myomas, include 19 antenatal patients with myomas who were posted for caesarean myomectomy compared with age matched 19 antenatal women who were posted for caesarean alone, were selected for the study in the department of obstetrics and gynecology.

Results: In the present study patients mean age was of 30.8+5 years and 30.8+5 years respectively for caesarean myomectomy and caesarean group. Out of the 38 patients 15 patients were primipara and 13 patients were multipara. The duration of surgery for caesarean myomectomy was 65 ± 12.9 minutes compared to 47.4 +4.2 minutes in caesarean only group. Out of the 38 patients mean and standard deviation of hemoglobin fall during surgery in caesarean myomectomy was 1.1+0.7gm/dl when compared to 0.7+0.2gm/dl in caesarean group. And 2 patients needed blood transfusions post-operatively in caesarean myomectomy compared one patient in caesarean group. The hospital stay in hours in caesarean myomectomy was 126.3±10.9 hours and 121.3±5.5 hours in caesarean group. None of them ended on obstetric hysterectomy.

Conclusion: In this study, No significant difference was observed in haemoglobin change, incidence of intra-operative complications and length of hospital stay, in the caesarean myomectomy group as compared to other post caesarean group. The possibility of performing myomectomy during caesarean section has become a safe procedure with experienced surgeons and anaesthetic facilities

© 2020 Published by Innovative Publication. This is an open access article under the CC BY-NC-ND license (<https://creativecommons.org/licenses/by/4.0/>)

1. Introduction

The incidence of myoma associated with pregnancy is on rising owing to the delay in child bearing age group and improved diagnostic techniques. Complications associated with fibroids in pregnancy are miscarriages, placental insufficiency, malpresentations, abruption, preterm labour, increased caesarean section rate, pain due to fibroid degeneration and torsion.¹ Uterine myomas are observed

in pregnancy more frequently than in past because many women are delaying child bearing till the late thirties, which is time for greatest risk of myoma growth. Traditionally obstetricians have avoided performing myomectomy during caesarean section due to fear of potential complications like intractable haemorrhage and atonicity leading to hysterectomy, as the pregnant uterus is more vascular.² However a number of recent studies have favoured caesarean myomectomy with the help of better blood bank and anaesthetic facilities. Recent reports indicate that myomectomy, at the time of caesarean section operation,

* Corresponding author.

E-mail address: obgmesams@gmail.com (Shahnas M).

can be safely undertaken by skilled practitioner since it greatly reduces the need for a second surgery for fibroid, uterus and future fertility and adds on its cost effectiveness.³ The scar integrity following caesarean myomectomy has been shown to be better than that following interval myomectomy. When assessed with serial ultrasound scan in subsequent pregnancies and at subsequent caesarean section.⁴ The aim of this study is to compare the intra-operative and post-operative complications following caesarean myomectomy and caesarean section alone in antenatal patients with myomas.

2. Materials and Methods

The study was an observational comparative study of 19 antenatal patients with myomas who were posted for caesarean myomectomy along with 19 antenatal patients (age matched) with myomas who were undergoing caesarean alone, admitted under dept of Obstetrics and Gynaecology of MES Medical College Perinthalmanna. The study was conducted between January 2016 to July 2017. The inclusion criterias were (a) Antenatal patients with documented myoma in present pregnancy by antenatal ultrasonogram. (b) Elective caesarean section cases alone. and (c) written informed consent. Patients with coagulopathies, patients who were undergoing any other surgery other than myomectomy at the time of caesarean delivery and patients with history of antepartum hemorrhage were excluded. Convenient sample was used to get both groups of patients. Data collection after taking written informed consent from all participants, from pre-designed semi- structured questionnaire and socio demographic details were done. All the antenatal patients had ultrasonography (USG) during pregnancy. Pre-op haemoglobin and USG findings recorded. All of them had daily iron tablets during their antenatal period. They also had prophylactic antibiotic during induction of anaesthesia and repeated after 12 hours. Intra-op duration of surgery in minutes and no of mops used and intraoperative drain noted. Post-operative duration of hospital stay in hours and post op haemoglobin were also noted. Complications like postpartum hemorrhage (PPH), need for blood transfusions, haemostatic sutures, post operative fever or sepsis or if ended up in obstetric hysterectomy were noted. Data collected was entered in MS excel sheet and the analysis was done using epi -info. Descriptive analysis done and comparison in hospital stay (in hours) between the 2 groups were done using 't' test. Time taken for surgery (in minutes) was compared using 't' test. Post-operative complications like PPH, need for haemostatic sutures and need for obstetric hysterectomy were compared between the groups using χ^2 test.

3. Results

In our study 42.1% of women were between 26-30 years 26.3 % among 31-35. And have a mean of 30.8±5.1 years. In caesarean myomectomy cases 10 cases were subserosal, 9 cases were intramural. 1 In that of caesarean alone, 18 cases were intramural and one was subserosal sessile type. In the caesarean myomectomy group, 10 patients had myomas <6cms (52.6%) and 9 patients had myomas 6-10 cms (47.4%). While in caesarean alone group 14 were <6cms (73.7%) and 26.3% were between 6-10cms. Mean change in hemoglobin during surgery in caesarean myomectomy group was 1.1gm% while in caesarean alone group it was 0.7gm% which was not significant (p=0.06). Of the caesarean myomectomy group, 31.57% needed vessel ligation like uterine artery or internal iliac for achieving haemostasis and none of the caesarean alone group needed vessel ligation. 10.3% who underwent caesarean myomectomy needed haemostatic sutures and none of 19 women who had undergone caesarean alone needed haemostatic sutures. Mean time needed for caesarean myomectomy was 65 minutes while that for caesarean alone was 47.4minutes which was significantly more (p<0.001). Only 2 of the 19 women underwent caesarean myomectomy needed blood transfusion which was not significant (p=0.14). 4 of 19 patients had blood loss between 750-900ml, 12 had between 500-750ml. 14 patients in caesarean alone had blood loss between 500-750ml. Only one patient out of 19 patients who had undergone caesarean myomectomy had puerperal pyrexia without sepsis while none of the patients in caesarean group had pyrexia. Out of the 38 people none of them needed obstetric hysterectomy which was the most dreaded complication of the procedure. There is no mean difference in hospital stay in hours between caesarean myomectomy and caesarean groups. (Table 1)

4. Discussion

Several authors have shown that in selected patients and in experience hands, myomectomy at the time of caesarean section is a safe and effective procedure.³⁻⁶ Myomectomy at caesarean section has many advantages.⁷ In our observational comparative study 39 antenatal women with myomas were included. Out of these 19 antenatal underwent caesarean myomectomy and age matched 19 women underwent caesarean alone. Intra-operative and post-operative complications were compared between the two groups. All of these patients were followed up for 12 weeks post-operatively. None of the patients lost follow up. The average hemoglobin of the patients in pre and post operative period in caesarean myomectomy group were 11.9 and 10.8gm/dl respectively, while in caesarean alone group, the values were 12gm/dl and 11.3gm/dl respectively. 6 of the 19 patients who underwent caesarean myomectomy needed

Table 1: Comparison of caesarean myomectomy and caesarean

Variable		Caesarean myomectomy	Caesarean	P value
Hemoglobin drop		1.1g%	0.7g%	0.06
Vessel ligation	No	68.4%	100%	0.052
	Yes	31.6%	0%	
Hemostatic Sutures	No	89.4%	100%	0.06
	Yes	10.6%	0%	
Intra operative blood loss	<500	15.7%	26.3%	0.43
	500-750	63.3%	73.7%	
	750-900	21%		
Surgery time		65±12.9	47±4.2	<0.001

bilateral uterine artery ligation while 2 of the 19 patients in caesarean alone group needed uterine artery ligation. Several studies have described techniques which can minimise blood loss at caesarean myomectomy.⁸⁻¹² In our study 2 of the 19 women in the caesarean myomectomy group needed hayman compression sutures to prevent atonicity. None of the women in caesarean alone group needed compression sutures. In our study none of the patients needed obstetric hysterectomy which also shows the safety of surgery.¹¹ This can be compared with the prospective study done in 2011 on 29 patients.¹ In another study on 111 patients none needed obstetric hysterectomy. In our study the intra-operative blood loss was moderate and only 2 of 19 patients in caesarean myomectomy group had blood loss >750ml and needed one unit of blood transfusion each immediate post-operatively. None in the caesarean alone group had significant blood loss. In this study, the mean duration of surgery was 65 minutes for caesarean myomectomy and 47.4 minutes for caesarean alone.¹³ This was comparable to a study of caesarean myomectomy conducted in 9 women between 2003-2005, where the mean operating time was 40-60 minutes.³ This is also comparable with the study conducted earlier.¹⁴ The possibility of performing myomectomy during caesarean section has become a safe procedure with experienced surgeons, anaesthetic facilities and availability of blood bank facilities in tertiary care settings. Patient selection is crucial in caesarean myomectomy and pre-operative localisation of myomas is essential. This will help to improve the overall outcome of the procedure.

5. Source of funding

None.

6. Conflict of interest

None.

References

- Agarwal K, Agarwalla TA. Caesarean myomectomy: prospective study. *NJIRM*. 2011;2(3):11–14.
- Adesiyun AG, Ojabo A, Durosinlorun MA. Fertility and obstetric outcome after caesarean myomectomy. *J Obstet Gynecol*. 2008;28(7):710–712.
- Kant A, Seema M, Pandey R. Caesarean myomectomy. *J Obstet Gynecol*. 2007;57(2):128–130.
- Romans AS, Tabsh KMA. Myomectomy at the time of caesarean delivery ;a retrospective cohort study. *BMC Pregnancy Child Birth*. 2004;4:14–17.
- 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;40:109–110.
- Kaymak O, Ustunyurt E, Okyay RE, Kalyoncu S, Mollamahmutogula L. Myomectomy during caesarean section. *Int J Gynaecol Obstet*. 2005;89(2):90–93.
- Kwawukumey EY. Myomectomy during caesarean section. *Int J Gynecol Obstet*. 2002;76:183–184.
- Hem E, Borhdal PE. Max Sanger -father of the modern caesarean section. *Gynecol Obstet Invest*. 2003;55(3):127–129.
- Anorlu RI, Maholwana B, Hofmeyer GJ. Methods of delivering the placenta at caesarean section. *Cochrane Database Sys Rev*. 2008;16(3):37–43.
- Dodd JM, Anderson ER, Gates S. Surgical techniques for uterine incision and uterine closure at the time of caesarean section. *Cochrane Database Syst Rev*. 2008;16(3):23–37.
- Lovino SM, Machado M, Gowri V, Al-Kharusi L. Caesarean Myomectomy feasibility and safety. *Sultan Qaboos Univ Med J* . 2012;12(2):190–196.
- Mayer D, Shililov V. Ultrasonography and magnetic resonance imaging of uterine fibroids". *Obstet Gynecol Clin North Am*. 1995;22:667–667.
- Schwartz L, Panageas E, Lange R. Female pelvis: impact of MR imaging on treatment decisions and net cost analysis. *Radiol*. 1994;9:1273–1273.
- Andreyko J, Blumenfeld Z, Marshall L. Use of an agonistic analog of gonadotropin-releasing hormone (nafarelin) to treat leiomyomas: assessment by magnetic resonance imaging. *Am J Obstet Gynecol*. 1988;158.

Author biography

Amina S Kabeer Junior Resident

Shahnas M Assistant Professor

Abdul Vahab KP Professor and HOD

Cite this article: Kabeer AS, Shahnas M , Vahab KP A. Maternal complications following caesarean myomectomy and caesarean alone-an observational comparative study. *Indian J Obstet Gynecol Res* 2020;7(1):88-90.