

Assessment of Maternal Consequences of Caesarean Section: A Retrospective Study

Nisha Singh¹, Piyush Ranjan^{2*}

¹MBBS, MS (Obs & Gynae), Assistant Professor, Department of Obstetrics and Gynaecology, Narayan Medical College and Hospital, Sasaram, Bihar, India.

²MBBS, MD (Pediatrics), Assistant Professor, Department of Pediatrics, Narayan Medical College and Hospital, Sasaram, Bihar, India.

ABSTRACT

Background: Rates of caesarean delivery continue to rise worldwide. Maternal preferences are an important influence on decisions about mode of delivery. At present, evidence of longer-term complications of caesarean delivery has not been adequately synthesized to allow fully informed decisions about mode of delivery to be made. Hence; the present study was undertaken for assessing maternal consequences of caesarean section.

Materials & Methods: Data record of a total of 130 women was enrolled in the present study. These 130 women were broadly divided into two study groups as follows: Group 1: Primary elective group (n=58), and Group 2: Failed vaginal delivery (n=72). Complete demographic details of all the subjects were obtained from the data record files. An excel chart was prepared and outcome and complications were recorded systematically.

Results: Overall, out of 130 females, complications were found to be present in 18 women (13.85%). However; among patients of Group 1, complications were found to be present in 5 patients (8.62%) while among patients of Group 2, complications were found to be present in 13 patients (18.06%). On comparing statistically, overall prevalence of complications was significantly higher among patients of group

2. Uterine corpus was the most common maternal complication was found to be present in 2 patients of group 1 and 4 patients of group 2.

Conclusion: Emergency caesarean section is associated with significantly higher risk of maternal complications in comparison to elective caesarean procedures.

Key words: Caesarean, Complications, Maternal.

*Correspondence to:

Dr Piyush Ranjan,
MBBS, MD (Pediatrics),
Assistant Professor,
Department of Pediatrics,
Narayan Medical College and Hospital,
Sasaram, Bihar, India.

Article History:

Received: 07-10-2019, Revised: 05-11-2019, Accepted: 02-12-2019

Access this article online

Website: www.ijmrp.com	Quick Response code 
DOI: 10.21276/ijmrp.2020.6.1.009	

INTRODUCTION

Rates of caesarean delivery continue to rise worldwide. In the presence of maternal or fetal complications, caesarean delivery can effectively reduce maternal and perinatal mortality and morbidity; however, an increasing proportion of babies are delivered by caesarean when there is no medical or obstetric indication.¹⁻³ The short-term adverse associations of caesarean delivery for the mother, such as infection, haemorrhage, visceral injury, and venous thromboembolism, have been minimized to the point that caesarean delivery is considered as safe as vaginal delivery in high-income countries, though in low- and middle-income countries, there is an increased risk of adverse short-term maternal outcomes even with caesarean delivery without medical indication.^{4,5} Maternal preferences are an important influence on decisions about mode of delivery. At present, evidence of longer-term complications of caesarean delivery has not been adequately

synthesized to allow fully informed decisions about mode of delivery to be made.⁶ Hence; the present study was undertaken for assessing maternal consequences of caesarean section.

MATERIALS & METHODS

The present study was conducted in the Department of Obstetrics and Gynaecology, Narayan Medical College and Hospital, Sasaram, Bihar (India) and it included assessment of maternal consequences of caesarean section. Ethical approval was obtained from institutional ethical committee in written after explaining in detail the entire research protocol. Data record of a total of 130 women was enrolled and these 130 women were broadly divided into two study groups as follows:

Group 1: Primary elective group (n=58)

Group 2: Failed vaginal delivery (n=72)

Complete demographic details of all the subjects were obtained from the data record files. An excel chart was prepared and outcome and complications were recorded systematically.

All the results were recorded and analysed by SPSS software. Chi—square test was used for assessment of level of significance. P- value of less than 0.05 was taken as significant.

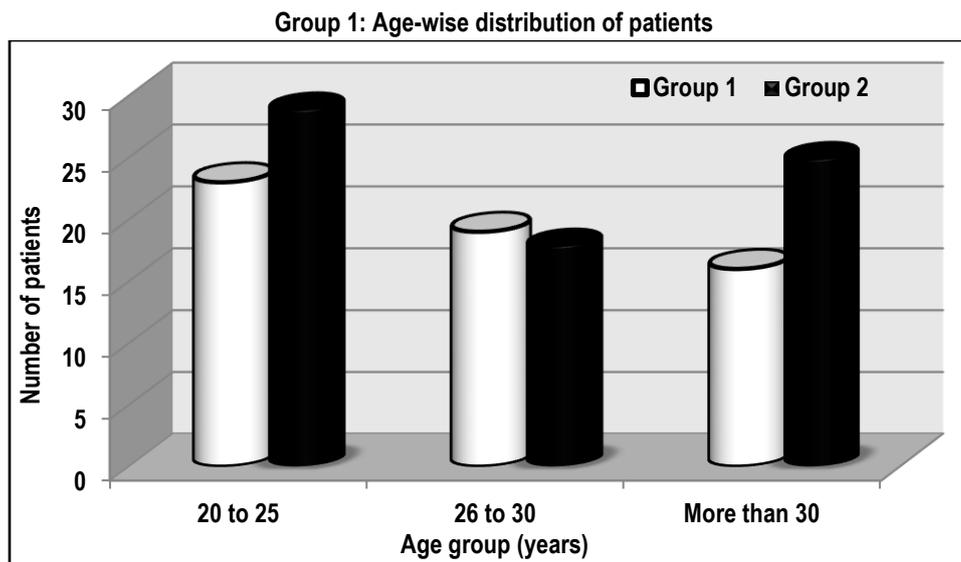


Table 1: Prevalence of maternal complications

Maternal complications	Number of patients	Percentage of patients
Group 1	5	8.62
Group 2	13	18.06
Overall	18	13.85
Chi- square value	402.88	
p- value	0.016 (Significant)	

Table 2: Maternal complications

Maternal complications	Group 1 (n)	Group 2 (n)
Uterine corpus	2	4
Blood loss of more than 1000 ml	1	3
Fever	1	2
Hematoma	0	2
Urinary tract infection	1	2

RESULTS

In the present study, a total of 130 females were analysed who underwent caesarean section. Among these females, 58 females comprised of primary elective group (Group 1) while the remaining 72 females comprised of failed vaginal group (group 2). Majority of patients of both the study groups belonged to the age group of 20 to 25 years. Overall, out of 130 females, complications were found to be present in 18 women (13.85%). However; among patients of Group 1, complications were found to be present in 5 patients (8.62%) while among patients of Group 2, complications were found to be present in 13 patients (18.06%). On comparing statistically, overall prevalence of complications was significantly higher among patients of group 2.

In the present study, uterine corpus was the most common maternal complication was found to be present in 2 patients of group 1 and 4 patients of group 2. Blood loss of more than 1000 ml was found to be present in 1 patient of Group 1 and 3 patients of group 2. Fever was found to be present in 1 patient of Group 1 and 2 patients of Group 2. Hematoma was found to be present in 2 patients of Group 2. Urinary tract infection was found to be present in 1 patient of Group 1 and 2 patients of Group 2.

DISCUSSION

A caesarean section (CS) can be a life-saving intervention when medically indicated, but this procedure can also lead to short-term and long-term health effects for women and children. Given the increasing use of CS, particularly without medical indication, an increased understanding of its health effects on women and children has become crucial, which we discuss in this Series paper. The prevalence of maternal mortality and maternal morbidity is higher after CS than after vaginal birth.⁵⁻⁷ In emergencies, or when a fetal or maternal indication is present, the choice is clear. But in cooler moments, such as repeat or maternal choice of caesarean, it makes sense to consider the risks and benefits of caesarean versus vaginal delivery, just as we would for other medical treatments. Both modes of delivery are associated with well-known acute risks.⁸⁻¹⁰ Hence; the present study was undertaken for assessing maternal consequences of caesarean section.

In the present study, majority of patients of both the study groups belonged to the age group of 20 to 25 years. Overall, out of 130 females, complications were found to be present in 18 women (13.85%). However; among patients of Group 1, complications

were found to be present in 5 patients (8.62%) while among patients of Group 2, complications were found to be present in 13 patients (18.06%). On comparing statistically, overall prevalence of complications was significantly higher among patients of group 2. Van Ham MA et al assessed the intra-operative surgical complications and postoperative maternal morbidity rate of caesarean section. A total of 2647 women, delivered by caesarean section in our department between 1983 and 1992, were studied retrospectively. Three caesarean section groups were formed: (1) primary elective, (2) primary acute, without any effort to deliver vaginally, and (3) secondary acute, due to a failed vaginal delivery. The overall maternal intra-operative complication rate was 14.8%. The most common complications were lacerations of the uterine corpus (10.1%) and blood loss > or = 1000 ml (7.3%). The complication rate of the secondary group (23.4%) was significantly higher ($p < 0.001$) compared to both primary groups (7.4%). The overall maternal postoperative morbidity rate was 35.7%. Fever (24.6%), bloodloss between 1000 and 1500 ml (4%), haematoma (3.5%) and urinary tract infections (3.0%) were the most frequent complications. The primary elective group showed significantly ($p < 0.001$) lower major (2.6%) and minor (23.7%) complication rates compared to the emergency groups (major 5.2%, minor 34%). Emergency caesarean sections carried the greatest risks regarding maternal complications compared to elective procedures.¹¹

In the present study, uterine corpus was the most common maternal complication was found to be present in 2 patients of group 1 and 4 patients of group 2. Blood loss of more than 1000 ml was found to be present in 1 patient of Group 1 and 3 patients of group 2. Fever was found to be present in 1 patient of Group 1 and 2 patients of Group 2. Hematoma was found to be present in 2 patients of Group 2. Urinary tract infection was found to be present in 1 patient of Group 1 and 2 patients of Group 2. Hemminki E studied whether women having had caesarean sections (index women) have more subsequent health problems, measured by hospital admissions, than women having had vaginal deliveries (control women). The study involved comparison of hospital admissions before (2-5 years) and after (7-10 years) the first caesarean section (exposure) among two cohorts of index and control women. About 75% of all Swedish primiparas who had a caesarean section in 1973 ($n = 2578$) and in 1976 ($n = 3822$), and their age-matched controls, were studied; non-Swedish women and women with certain specific problems at their first birth were excluded. Numbers of discharges from general and mental hospitals excluding discharges relating to birth, and in some analyses to pregnancy, were determined. Total numbers of discharges from general and mental hospitals, and the numbers of discharges with operations, were higher among index than control women both before and after exposure. In analyses by diagnosis, a caesarean section was a risk factor for ectopic pregnancies and sterilisations. The analyses suggested that the higher rate of hospital admission after caesarean section than after vaginal delivery is not due to the section itself, but to a continuation of a previous pattern of health service use.¹²

CONCLUSION

It can be concluded that emergency caesarean section is associated with significantly higher risk of maternal complications in comparison to elective caesarean procedures.

REFERENCES

1. Zdeb MS, Therriault GD, Logrillo VM. Frequency, spacing, and outcome of pregnancies subsequent to primary caesarean childbirth. *Am J Obstet Gynecol.* 1984 Sep 15;150(2):205–12.
2. Hemminki E, Graubard BI, Hoffman HJ, Mosher WD, Fetterly K. Caesarean section and subsequent fertility: results from the 1982 National Survey of Family Growth. *Fertil Steril.* 1985 Apr;43(4):520–8.
3. Betran AP, Ye J, Moller AB, Zhang J, Gulmezoglu AM, Torloni MR. The increasing trend in caesarean section rates: Global, regional and national estimates: 1990–2014. *PLoS ONE.* 2016;11(2):e0148343.
4. Kim SY, Park JE, Lee YJ, Seo HJ, Sheen SS, Hahn S, et al. Testing a tool for assessing the risk of bias for nonrandomized studies showed moderate reliability and promising validity. *J Clin Epidemiol.* 2013;66(4):408–14.
5. Rortveit G, Daltveit AK, Hannestad YS, Hunskaar S, Study NE. Urinary incontinence after vaginal delivery or caesarean section. *N Engl J Med.* 2003;348(10):900–7.
6. Schytt E, Linkmark G, Waldenstrom U. Symptoms of stress incontinence 1 year after childbirth: prevalence and predictors in a national Swedish sample. *Acta Obstet Gynecol Scand.* 2004;83:928–36.
7. Black M, Bhattacharya S, Philip S, Norman JE, McLernon DJ. Planned Caesarean Delivery at Term and Adverse Outcomes in Childhood Health. *JAMA.* 2015;314(21):2271–9.
8. Lin SL, Leung GM, Schooling CM. Mode of delivery and adiposity: Hong Kong's "Children of 1997" birth cohort. *Ann Epidemiol.* 2013;23(11):693–9.
9. Hannah ME, Whyte H, Hannah WJ, Hewson S, Amankwah K, Cheng M, et al. Maternal outcomes at 2 years after planned caesarean section versus planned vaginal birth for breech presentation at term: The international randomized Term Breech Trial. *Am J Obstet Gynecol.* 2004;191(3):917–27.
10. Hemminki E. Effects of caesarean section on fertility and abortions. *J Reprod Med.* 1986 Jul;31(7):620–4.
11. van Ham MA, van Dongen PW, Mulder J. Maternal consequences of caesarean section. A retrospective study of intra-operative and postoperative maternal complications of caesarean section during a 10-year period. *Eur J Obstet Gynecol Reprod Biol.* 1997 Jul;74(1):1-6.
12. Hemminki E. Long term maternal health effects of caesarean section. *J Epidemiol Community Health.* 1991;45(1):24–8.

Source of Support: Nil. **Conflict of Interest:** None Declared.

Copyright: © the author(s) and publisher. IJMRP is an official publication of Ibn Sina Academy of Medieval Medicine & Sciences, registered in 2001 under Indian Trusts Act, 1882.

This is an open access article distributed under the terms of the Creative Commons Attribution Non-commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

Cite this article as: Nisha Singh, Piyush Ranjan. Assessment of Maternal Consequences of Caesarean Section: A Retrospective Study. *Int J Med Res Prof.* 2020 Jan; 6(1):32-34.
DOI:10.21276/ijmrp.2020.6.1.009