

Original Research

Evaluation of postoperative complications in patients undergoing Cesarean section: An observational study

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ABSTRACT

Background: Properly performed cesarean sections that follow an accurate medical indication are life-saving procedures. Hence; the present study was planned for assessing the prevalence and spectrum of postoperative complications among patients undergoing Cesareans section. **Materials & methods:** Sample size for the present study was 153 subjects who underwent C section. A self-framed questionnaire was prepared for obtaining the complete clinical and demographic details of all the subjects. Pre-operative hematological and biochemical profile of all the patients was obtained. C-sections were performed under the hands of skilled and experienced gynecologists. Postoperative follow-up records of all the subjects were obtained from the data record files. Incidence and pattern of postoperative complications was recorded. **Results:** Postoperative complications were found to be present in 9.8 percent of the patients (15 patients). Mean age of the patients with postoperative complications was found to be 34.5 years. Postoperative bleeding and post-operative complication was found to be present in 3 patients each. Surgical injury to bladder was found to be 13.3 percent of the patients. **Conclusion:** Under proper septic conditions and under the hands of skilled and experienced gynecologists, complications of cesarean section could be minimized.

Key words: Cesarean section, Complication, Prevalence

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INTRODUCTION

Properly performed cesarean sections that follow an accurate medical indication are life-saving procedures. However, on the one hand, the provision of safe and timely cesarean sections remains a major challenge in countries with high maternal mortality, where they are insufficient; on the other hand, their excess in certain regions results in the challenge of minimizing cesarean sections without clinical indication.¹⁻³

Despite the undeniable importance of this procedure, pregnant women and health professionals need to know the maternal risks associated with the different types of deliveries, using the best evidence.⁴ Cesarean sections (CSs) are classified as elective, urgent or emergency. Elective or planned CSs are performed according to an antepartal indication and at a time to suit the patient and the maternity team.⁴ Urgent CSs are performed after labor onset, mostly due to failure to progress or presumed fetal compromise, which is not immediately life threatening.⁵

Hence; under the light of above mentioned data, the present study was planned for assessing the prevalence and spectrum of postoperative complications among patients undergoing Cesareans section (C- section).

MATERIALS & METHODS

The present study was commenced in the department of gynecology of the medical institute with the aim of evaluating the incidence and pattern of postoperative complications among patients undergoing Cesareans section. Sample size for the present study was 153 subjects who underwent C section. A self-framed questionnaire was prepared for obtaining the complete clinical and demographic details of all the subjects. Pre-operative hematological and biochemical profile of all the patients was obtained. C-sections were performed under the hands of skilled and experienced gynecologists. Postoperative follow-up records of all the subjects were obtained from the data record files. Incidence and pattern

of postoperative complications was recorded. All the results were recorded in Microsoft excel sheet and were analyzed by SPSS software. Chi- square test was used for assessment of level of significance.

RESULTS

In the present study, postoperative complications were found to be present in 9.8 percent of the patients (15 patients). Mean age of the patients with postoperative

complications was found to be 34.5 years. Among these 15 patients, 9 were of rural residence while the remaining 6 were of urban residence. Postoperative bleeding and post-operative complication was found to be present in 3 patients each. Surgical injury to bladder was found to be 13.3 percent of the patients. Inflammation to uterus was found to be present in 3 patients.

Table 1: Prevalence of postoperative complications

Parameter	Number of patients	Percentage
Incidence of postoperative complications	15	9.80 percent

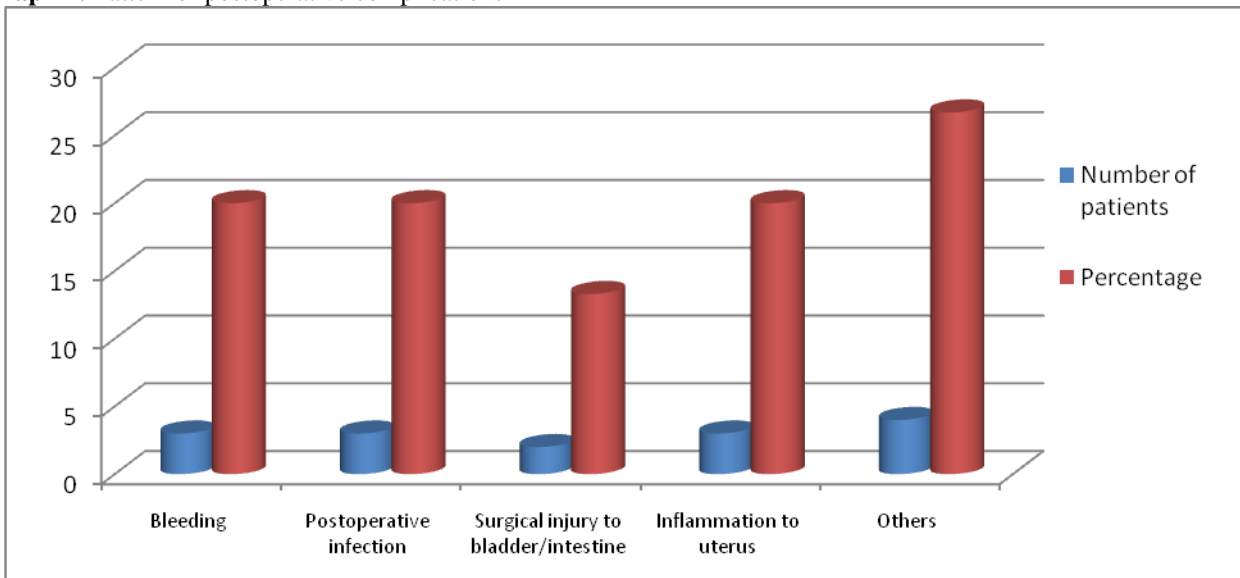
Table 2: Profile of patients with postoperative complications

Parameter	Value	
Mean age (years)	34.5	
Residence	Rural	9
	Urban	6
Educational qualification	Upto primary	4
	Upto secondary	3
	Upto graduation	2
	Upto post-graduation	2
	Illiterate	4
Socio-economic status	Upper	1
	Middle	8
	Lower	6

Table 3: Pattern of postoperative complications

Postoperative complications	Number of patients	Percentage
Bleeding	3	20
Postoperative infection	3	20
Surgical injury to bladder/intestine	2	13.3
Inflammation to uterus	3	20
Others	4	26.7
Total	15	100

Graph 1: Pattern of postoperative complications



DISCUSSION

Once upon a time in the last century, the modern cesarean delivery was begun to reduce the maternal and newborn complications, morbidity and mortality. Unfortunately nowadays, however, undergoing cesarean is not used only when necessary and only to save the mother and the baby; rather, it is gradually being assumed as something luxurious by some communities. In almost all of the scientific resources, the expected rate of cesarean delivery is considered as low as 13%, and according to the World Health Organization documents, it is recommended to be as low as 15%. Those documents also report the average rate of cesarean delivery in recent years has increased by 10-15% in the entire world's countries.⁵⁻⁸ Hence; the present study was planned for assessing the prevalence and spectrum of postoperative complications among patients undergoing Cesareans section (C- section).

In the present study, postoperative complications were found to be present in 9.8 percent of the patients (15 patients). Mean age of the patients with postoperative complications was found to be 34.5 years. Among these 15 patients, 9 were of rural residence while the remaining 6 were of urban residence. Häger RM et al determined complication rates after cesarean delivery and to identify independent risk factors for complications. In a prospective population-based cohort study in Norway, rates of predefined types of complications from 2751 cesarean deliveries were determined. The complications that were studied were intraoperative complications, blood loss, wound infection, cystitis, endometritis, hematoma, and reoperation. Independent risk factors were identified by stratification and multiple logistic regression analysis. Altogether, 21.4% of the women had > or =1 complications. The degree of cervical dilation, general anesthesia, low gestational age, and fetal macrosomia were independent risk factors. For operations that were performed at 9 to 10 cm cervical dilation, the complication rate was 32.6% versus 16.8% at 0 cm. Cesarean delivery was associated with a high complication rate. Increasing cervical dilation and, in particular, cervical dilation of 9 or 10 cm at the time of operation, general anesthesia, low gestational age, and fetal macrosomia were identified as independent risk factors.⁹

In the present study, postoperative bleeding and postoperative complication was found to be present in 3 patients each. Surgical injury to bladder was found to be 13.3 percent of the patients. Inflammation to uterus was found to be present in 3 patients. Loverro G assessed the prevalence of cesarean section (CS) related maternal complications and to evaluate post-CS complications in relationship with relative risk factors. 3010 patients who had a CS in the University Hospital of Bari during the period 1988-98 were retrospectively included into the study and 1007 women delivered vaginally at the same institution and in the same period of time, were randomly selected as the control group. For each single patient delivered by CS, the following risk factors were taken into account: age, parity, pre-pregnancy body mass index (BMI), and any disease antedating pregnancy or

diagnosed during pregnancy. Additionally, therapeutic procedures such as blood transfusion, number of days in hospital, and admission into intensive care were followed. The prevalence of puerperal complications was assessed for vaginal deliveries and CS by Student's t-test and a correlation of CS complications with risk factors was performed by multivariate analysis. In the cohort of abdominal delivery, puerperal complications were significantly more frequent compared with those following vaginal delivery ($p < 0.05$). In the group of CS, obese women have higher prevalence of maternal complications, particularly hypertension and intestinal complications ($p < 0.05$). Compared with vaginal delivery, CS delivery carries a higher number of postpartum complications, and the higher rate is mainly related to obesity.¹⁰

CONCLUSION

From the above results, it can be concluded that under proper septic conditions and under the hands of skilled and experienced gynecologists, complications of cesarean section could be minimized.

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