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Research Article

A Retrospective Analysis of the Profile of Maternal Complications in Patients Undergoing Cesarean Sections

Dr. Monica Agarwal
Assistant Professor, Department of Obstetrics & Gynaecology, Pacific Medical College & Hospital, Udaipur, Rajasthan.
Corresponding Authors: Dr. Monica Agarwal
Assistant Professor, Department of Obstetrics & Gynaecology, Pacific Medical College & Hospital, Udaipur, Rajasthan.
Email: drmonicaagarwal@gmail.com
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ABSTRACT
Cesarean section (C-section) has emerged as a cornerstone of modern obstetric practice, significantly reducing maternal and fetal morbidity and mortality when indicated. However, with rising cesarean rates in India, understanding the pattern of maternal complications associated with this surgery is vital. This retrospective study analyses patient profiles, types of complications, and outcomes among women undergoing cesarean delivery at a tertiary care teaching hospital. Cesarean section (CS) has become one of the most frequently performed surgical procedures in obstetric practice. While it is a lifesaving intervention when medically indicated, CS is associated with increased maternal complications compared to vaginal delivery. Caesarean section (CS) requires a longer recovery time, and operative complications such as lacerations and bleeding may occur, at rates varying from 6% for elective Caesarean to 15% for emergency Caesarean. Hence; present study was conducted to assess various maternal complications occurring in subjects undergoing CS.
Materials & Methods: Present study was planned to evaluate maternal complications in subjects undergoing C section. A total of 40 subjects undergoing CS were enrolled in the present study. Complete demographic details along with clinical data were obtained in all the patients. Data in relation to maternal complication was obtained and was compiled on Microsoft excel sheet. All the results were analyzed by SPSS software.
Results: Parity was 0 in 35 subjects while parity was 1 in 4 subjects only. Maternal complications encountered in the present study included fever, wound infection, urinary problem, peritonitis, haemorrhage, hysterectomy, anaesthetic complication, endometritis etc.
Conclusion: CS is associated with certain maternal complication, and therefore, it should be done only when indicated.

Keywords: Caesarean section, Complications, Maternal.

INTRODUCTION

In the present scenario, there has been an increase in the number of women who are requesting delivery by elective caesarean section without an accepted "medical indication".[1,2] This trend is due in part to the general perception that caesarean delivery is much safer now than in the past and to the recognition that most studies looking at the risks of caesarean section may have been biased, as women with medical or obstetric problems were more likely to have been selected for an elective caesarean section.[3-5] Caesarean section (CS) requires a longer recovery time, and operative complications such as lacerations and bleeding may occur, at rates varying from 6% for elective caesarean to 15% for emergency caesarean. Having a caesarean delivery increases the risk of major bleeding in a subsequent pregnancy because of placenta previa and placental abruption. Among term babies, the risk of neonatal respiratory distress necessitating oxygen therapy is higher if delivery is by cesarean.[6-8] Hence; present study was conducted to assess various maternal complications occurring in subjects undergoing CS.

MATERIALS & METHODS

Present study was planned in the Department of Obstetrics and Gynaecology, Pacific Medical College & Hospital, Udaipur and it included evaluation of maternal complications of subjects undergoing C section. Written consent was obtained after explaining in detail the entire research protocol. A total of 40 subjects

undergoing CS were enrolled in the present study. Complete demographic details along with clinical data were obtained in all the patients.
Exclusion criteria for the present study included:

- Subjects less than 20 years of age,
- Subjects more than 35 years of age,
- Subjects with any other systemic illness

Data in relation to maternal complication was obtained and was compiled on Microsoft excel sheet. All the results were analyzed by SPSS software. One way ANOVA was used for assessment of level of significance.

RESULTS

A total of 40 subjects undergoing CS were included in the present study. Mean age of the subjects of the present study was 27.5 years. 62.5 percent of the subjects of the present study were between 24 to 28 years of age. Parity was 0 in 35 subjects while parity was 1 in 4 subjects only. Maternal complications encountered in the present study included fever, wound infection, urinary problem, peritonitis, haemorrhage, hysterectomy, anaesthetic complication, endometritis etc.

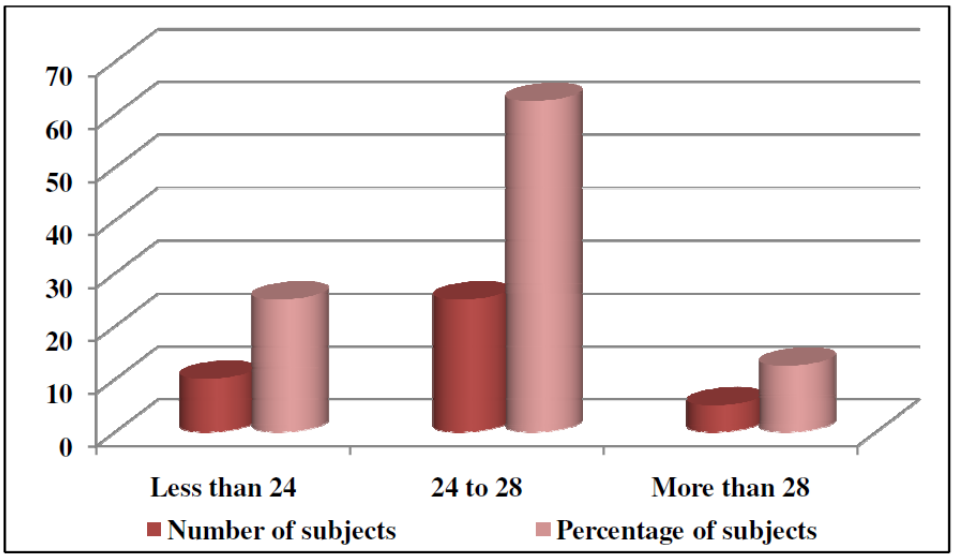
Table 1: Demographic details of the subjects in the present study

Parameter		Number
Number of subjects		40
Mean age (years)		27.5
Parity	0	35
	1	4
	>2	1

Table 2: Distribution of subjects according to maternal complications

Maternal complication	Number of subjects	Percentage
Fever	10	25
Wound infection	6	15
Urinary problem	4	10
Peritonitis	4	10
Haemorrhage	5	12.5
Hysterectomy	3	7.5
Anaesthetic complication	2	5
Endometritis	2	5
Others	2	5

Graph 1: Age-wise distribution of subjects



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DISCUSSION

In the present study, the major maternal complications encountered were fever, wound infection, urinary problem, peritonitis, haemorrhage, hysterectomy, anaesthetic complication, endometritis etc. Häger RM et al determined complication rates after cesarean delivery and to identify independent risk factors for complications. 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 anaesthesia, 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 anaesthesia, low gestational age, and fetal macrosomia were identified as independent risk factors.[9] Loverro G et al 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. 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] Chongsuvivatwong V et al compared the mortality, morbidity of emergency and elective cesarean section with vaginal delivery among Asian teaching hospitals. 12591 vaginal deliveries, 3062 elective and 4328 emergency cesarean section were followed up to 5 days postpartum. Maternal deaths (95% CI) per 1000 births among vaginal deliveries being 0.47 was not significantly different from 0.31 of elective caesarean section and both rates were significantly lower than 2.87 per 1000 births of emergency section. The vaginal delivery group had significantly lower incidences of all major complication except significantly higher chance of secondary operations and non-significantly different risk for endometritis. Corresponding neonatal mortality per 1000 deliveries among the three groups were 7, 2.2 and 12.4. Vaginal delivery also had higher rates of severe asphyxia and palsy than elective cesarean section. Maternal complications were increased by caesarean delivery but elective section may reduce neonatal complication.[11] Liu S et al assessed the maternal mortality and severe morbidity associated with low-risk planned cesarean delivery. Healthy women who underwent a primary cesarean delivery for breech presentation constituted a surrogate "planned cesarean group" considered to have undergone low-risk elective cesarean delivery, for comparison with an otherwise similar group of women who had planned to deliver vaginally. The planned cesarean group comprised 46,766 women v. 2,292,420 in the planned vaginal delivery group; overall rates of severe morbidity for the entire 14-year period were 27.3 and 9.0, respectively, per 1000 deliveries. The planned cesarean group had increased postpartum risks of cardiac arrest, wound hematoma, hysterectomy, major puerperal infection, anesthetic complications, venous thromboembolism and hemorrhage requiring hysterectomy, and stayed in hospital longer than those in the planned vaginal delivery group, but a lower risk of hemorrhage requiring blood transfusion. Absolute risk increases in severe maternal morbidity rates were low. The difference in the rate of in-hospital maternal death between the 2 groups was nonsignificant. Although the absolute difference is small, the risks of severe maternal morbidity associated with planned cesarean delivery are higher than those associated with planned vaginal delivery.[12]

CONCLUSION

This retrospective analysis highlights the pattern of maternal complications following cesarean deliveries at a tertiary teaching hospital. From the above results, it can be concluded that CS is associated with certain maternal complication, and therefore, it should be done only when indicated.

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