

THE PHARMA INNOVATION

Evaluation of maternal complications in women undergoing cesarean sections: A retrospective study

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Background: Caesarean section is one of the commonest operations performed all over the worlds and its incidence is increasing. As such, there are a number of immediate and delayed complications that may be encountered and the obstetrician must be familiar with and able to rectify these. Hence; we planned the present study to assess the maternal complications associated with cesarean sections.

Materials & Subjects: The present study included assessment of women undergoing cesarean sections. A total of 200 cesarean sections were assessed who were admitted to the hospital for delivery. Complete data records of all the subjects along with clinical and demographic details were recorded. Complications occurring in the subjects were recorded by assessing their follow-up records. All the results were compiled and analysed by SPSS software.

Results: 40 percent of the subjects belonged to the age group of 20 to 25 years. Wound infection was the most commonly encountered complication in the present study. Urinary tract infection occurred in 5 percent of the cases.

Conclusion: Considerable amount of complications are associated with subjects undergoing cesarean sections.

Keyword: Cesarean, Complication, Section

INTRODUCTION: Caesarean section is one of the commonest operations performed all over the worlds and its incidence is increasing. In addition to the increasing rates in developed countries,

rates are increasing in some developing countries [1, 2]. The majority of these proceed smoothly and safely; however, caesarean section is a major, open abdominal procedure, often performed in an emergency setting. The incidence of re-laparotomy after caesarean section is 0.12–1.04%, the most common indications being intra-abdominal bleeding, intra-abdominal abscess or bladder and bowel complications [3, 4]. As such, there are a number of immediate and delayed complications that may be encountered and the

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obstetrician must be familiar with and able to rectify these.⁵Hence; we planned the present study to assess the maternal complications associated with cesarean sections.

Materials & Methods

The present study was planned and conducted in the department of gynaecology of the medical institute and included assessment of women undergoing cesarean sections. Ethical approval was taken from institutional ethical committee and written consent was obtained after explaining in detail the entire research protocol. A total of 200 cesarean sections were assessed who were admitted to the hospital for delivery. Complete data records of all the subjects along with clinical and demographic details were recorded. Exclusion criteria for the present study included:

- Patients with any other systemic illness,
- Patients undergoing second caesarean section,
- Patients less than 20 years of age,
- Patients more than 35 years of age,
- Patients with preterm deliveries.

Data records of the subjects who matched the exclusion criteria were excluded from the present

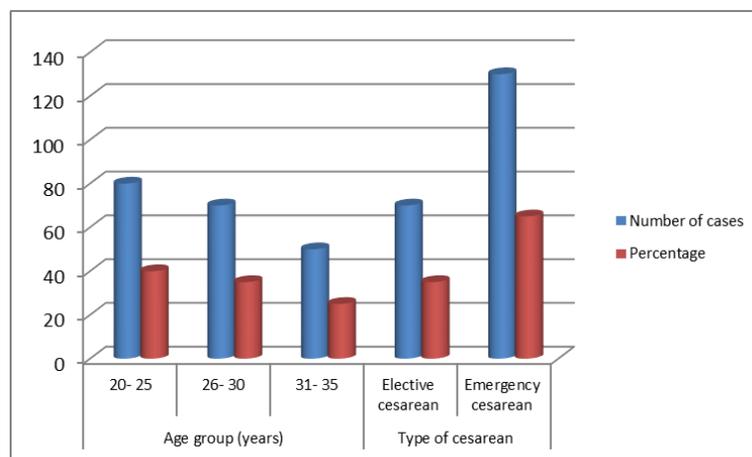
study. Complications occurring in the subjects were recorded by assessing their follow-up records. All the results were compiled and analysed by SPSS software. Uni- variate regression curve were used for assessment of level of significance.

Results

A total of 200 subjects were included in the present study. 40 percent of the subjects belonged to the age group of 20 to 25 years (Table 1). 35 and 25 percent of the subjects belonged to the age group of 26 to 30 years and 31 to 35 years respectively (Graph 1). Out of 200 cases, elective cesarean occurred in 35 percent of the cases while emergency cesarean occurred in 65 percent of the cases (Table 1). Wound infection was the most commonly encountered complication in the present study (Table 2). Urinary tract infection occurred in 5 percent of the cases while post-surgical fever was present in 4 percent of the subjects. Only six cases showed presence of post-operative headache.

Table 1: Demographic and clinical details of the subjects

| Parameter | Number of cases | Percentage |
|-------------------|--------------------|------------|
| Age group (years) | 20- 25 | 40 |
| | 26- 30 | 35 |
| | 31- 35 | 25 |
| Type of cesarean | Elective cesarean | 35 |
| | Emergency cesarean | 65 |



Graph 1: Descriptive values of demographic and clinical details of the subjects

Table 2: Complications occurring in subjects

| Complications | Number of subjects | Percentage of subjects |
|-------------------------|--------------------|------------------------|
| Haemorrhage | 3 | 1.5 |
| Bladder injury | 1 | 0.5 |
| Wound infection | 12 | 6 |
| Urinary tract infection | 10 | 5 |
| Post-surgical fever | 8 | 4 |
| Headache | 6 | 3 |

Discussion

In the present study, we observed that wound infection was the most commonly encountered post-surgical complication in subjects undergoing cesarean sections (Table 2). compare the outcome of subarachnoid block (spinal anesthesia) and general anesthesia in Cesarean delivery for women with severe pre-eclampsia. A retrospective study of women with severe pre-eclampsia requiring Cesarean section from January 2005 to June 2009 was carried out. Maternal age, parity, gestational age at delivery, booking status, Apgar scores, maternal and perinatal mortality of the sub-arachnoid block group were compared with those of general anesthesia group using χ^2 , Student t-test and Fischer exact test. There were no significant difference between the two groups in overall maternal mortality (5.4% vs. 11.9%, $P=0.5$) and perinatal mortality (2.7% vs. 11.9%, $P=0.15$). The general anesthesia group had significantly more birth asphyxia than the spinal group (55.9% vs. 27.0%, $P=0.0006$). There was no significant difference in the maternal and perinatal mortality outcome of cesarean delivery between women with severe pre-eclampsia who had regional anesthesia and those that had general anesthesia. There was significantly higher proportion of birth asphyxia in babies of women who received general anesthesia [6-9]. Chumpathong S *et al.* determined an actual incidence and characteristics of complications in cesarean section for severe pre-eclampsia (PE) by analysis of a large cohort from a single tertiary care center according to two choices of anesthesia. Electronic medical records of pregnant women complicated with severe PE delivered by cesarean section from January 2002 to December 2011 were retrospectively reviewed.

Medical records of their corresponding neonates were also identified and reviewed. A total of 701 women and 740 neonates (28 twin pairs) were identified. Anesthetic techniques were spinal anesthesia (SA) (88%) and general anesthesia (GA) (12%). Total maternal and neonatal deaths were 0.3% and 1.2%, respectively. Patients in GA group had a higher incidence of coagulopathy, immediate postpartum hemorrhage, intensive care unit admission, renal failure, respiratory complications, and death ($p < 0.05$). Neonates born from women in GA group had a higher incidence of lower birth weight, birth asphyxia, prematurity, neonatal intensive care admission, respiratory complications, and death ($p < 0.05$). Spinal anesthesia can be safely administered to severely pre-eclamptic parturients undergoing cesarean section. General anesthesia is associated with more untoward outcomes, as it has been chosen in patients with more severity of the disease [10]. Nwafor MI *et al.* evaluated perinatal outcome in preterm cesarean sections conducted under general anesthesia (GA) and subarachnoid block (SAB) with the aim to ascertain any difference in outcome between the two methods. Data entry and statistical analysis utilized the SPSS statistical package for the social sciences, 2008 version 15.0 for windows (SPSS Inc, Chicago IL, USA). Chi-square test was done to determine statistical significance and $P \leq 0.05$ were considered to be significant at 95% confidence interval. The delivery characteristics were compared by logistic regression analysis to ascertain any associated confounding effect on perinatal outcome in those exposed to either anesthetic technique. More preterm babies delivered under SAB were discharged from the New Born Special Care Unit within 10 days of

delivery ($P = 0.006$). Hypertensive disorders, though not statistically significant was the most common indication for preterm cesarean delivery among those with GA and SAB. No maternal death occurred during the study period. The study inferred a strong association between anesthetic technique and immediate Apgar scores and outcome of resuscitation following preterm cesarean section. This however, failed to translate into higher differences in perinatal mortality.¹¹

Conclusion

Considerable amount of complications are associated with subjects undergoing cesarean sections. Therefore proper care should be taken while performing cesarean sections.

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