

## Original Research

## Assessment of maternal complications of caesarean section

<sup>1</sup>Dr Ravikant Kumar, <sup>2</sup>Dr Namita Kumari<sup>1</sup>Assistant Professor, Department of General Surgery, Venkateshwara Institute of Medical Sciences, Gajraula, Uttar Pradesh, India;<sup>2</sup>Assistant Professor, Department of Obs & Gyane, Venkateshwara Institute of Medical Sciences, Gajraula, Uttar Pradesh, India**ABSTRACT:**

**Background:** In the presence of maternal or fetal complications, caesarean delivery can effectively reduce maternal and perinatal mortality and morbidity. The present study was conducted to assess maternal complications of caesarean section. **Materials & Methods:** 76 cases of caesarean section were enrolled. Parameters such as parity, BMI, gestation age, intra-partum and post- partum risk factors were recorded. **Results:** The mean age was 28.4 years, parity 0 was seen in 15, 1 in 40, and >2 in 21. BMI >25 was seen in 36. The common post- partum complications were fever in 12, blood transfusion in 11, hypertension in 7, renal insufficiency in 4, chest disease in 2, death in 3 and admission into intensive care in 25 cases. The difference was significant ( $P < 0.05$ ). **Conclusion:** Common post- partum complications were fever, blood transfusion, hypertension, renal insufficiency, chest disease, death and admission into intensive care.

**Key words:** blood transfusion, hypertension, post- partum complications

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**Corresponding author:** Dr Namita Kumari, Assistant Professor, Department of Obs & Gyane, Venkateshwara Institute of Medical Sciences, Gajraula, Uttar Pradesh, India**This article may be cited as:** Kumar R, Kumari N. Assessment of maternal complications of caesarean section. J Adv Med Dent Scie Res 2019;7(1):200-202.**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.<sup>1</sup> 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.<sup>1</sup>

Even though caesarean section is considered a “safe” surgical procedure because of quality of dedicated anesthesia, consolidated surgical technique, prevention and care of post-operative infections, its related morbidity and mortality is higher than vaginal delivery (VD), the associated maternal mortality rate

being as high as 0.05/1000.<sup>3</sup> Morbidity is a far more frequent event than mortality.<sup>4</sup> On this aspect, data about caesarean section versus vaginal delivery are ill defined.<sup>5</sup> Even though the former is obviously more frequently associated with complications than the latter, virtually any study is biased by the factors inherent in surgical procedure indications, and a specific survey of caesarean section adverse events and risk factors is lacking.<sup>6</sup> The present study was conducted to assess maternal complications of caesarean section.

**MATERIALS & METHODS**

The present study comprised of 76 cases of caesarean section. All enrolled women were informed regarding the study and written consent was obtained.

Demographic profile of each subject was recorded. Parameters such as parity, BMI, gestation age, intra-partum and post- partum risk factors were recorded. Factors such as blood transfusion, number of days in hospital after the intervention, admission to intensive care, fever ( $> 38.8$  degree C, hypertension, thrombosis, embolism, infection, trauma and

pulmonary, intestinal, or renal problems were also reported. Results of the study were compiled and analysed statistically using Mann Whitney U test. P value less than 0.05 was considered significant.

**RESULTS**

**Table I Assessment of parameters**

Parameters	Value	P value
Age (years)	28.4	-
Parity 0	15	0.05
1	40	
>2	21	
BMI >25	36	-

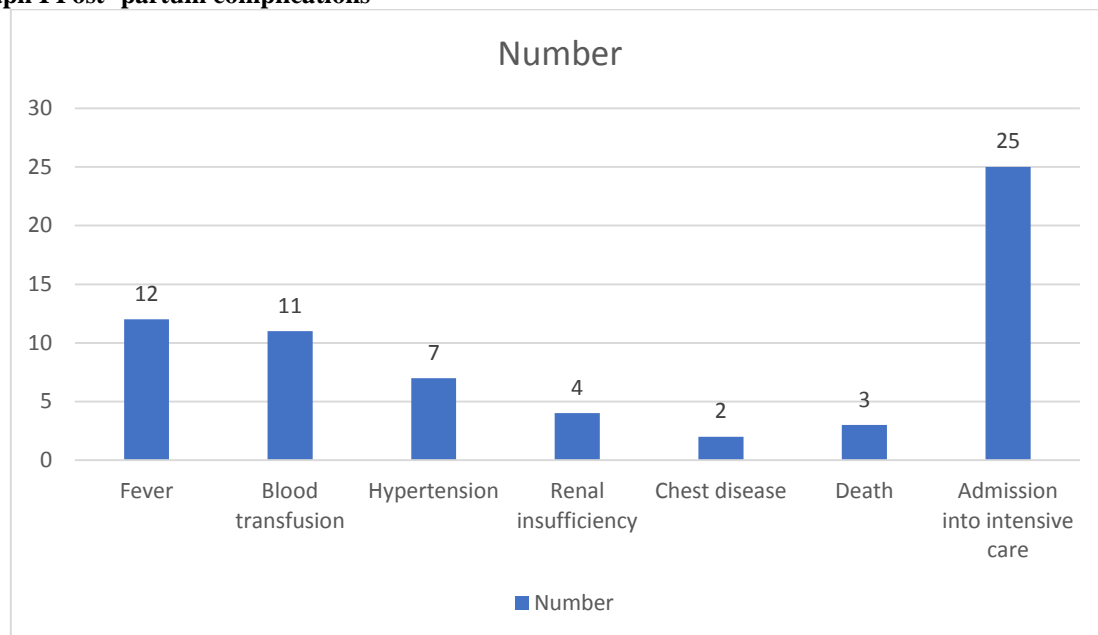
Table I shows that mean age was 28.4 years, parity 0 was seen in 15, 1 in 40, and >2 in 21. BMI >25 was seen in 36. The difference was significant (P< 0.05).

**Table II Post- partum complications**

Complications	Number	P value
Fever	12	0.02
Blood transfusion	11	
Hypertension	7	
Renal insufficiency	4	
Chest disease	2	
Death	3	
Admission into intensive care	25	

Table II, graph I shows that common post- partum complications were fever in 12, blood transfusion in 11, hypertension in 7, renal insufficiency in 4, chest disease in 2, death in 3 and admission into intensive care in 25 cases. The difference was significant (P< 0.05).

**Graph I Post- partum complications**



**DISCUSSION**

Properly performed caesarean sections that follow an accurate medical indication are life-saving procedures.<sup>7</sup> However, on the one hand, the provision of safe and timely caesarean 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 caesarean sections without clinical indication.<sup>8</sup> 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. Caesarean sections (CSs) are classified as elective, urgent or emergency.<sup>9</sup> Elective or planned CSs are performed according to an antepartal indication and at a time to suit the patient and the maternity team.<sup>10</sup> The present study was conducted to assess maternal complications of caesarean section.

In present study, mean age was 28.4 years, parity 0 was seen in 15, 1 in 40, and >2 in 21. BMI >25 was seen in 36. Loverro et al<sup>11</sup> assessed the prevalence of caesarean 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. 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 ( $p < 0.05$ ).

We found that common complications were fever in 12, blood transfusion in 11, hypertension in 7, renal insufficiency in 4, chest disease in 2, death in 3 and admission into intensive care in 25 cases. Hager et al<sup>12</sup> in a prospective population-based cohort study, rates of predefined types of complications from 2751 caesarean 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  $> \text{ or } = 1$  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 (odds ratio, 2.39; 95% CI, 1.77-3.22;  $P < .001$ ). Caesarean 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.

## CONCLUSION

Authors found that common post-partum complications were fever, blood transfusion, hypertension, renal insufficiency, chest disease, death and admission into intensive care.

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