

**Original article:**

## **Retrospective Evaluation of Maternal Complications in Patients Undergoing Cesarean Sections: A Hospital Based Study**

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### **ABSTRACT**

**Background:** The increase in the C-section around the world is related to improved access to medical services and also indiscriminate use of C-section for delivery without any indication. The present study was conducted to retrospectively analyze the Maternal Complications in Patients Undergoing Cesarean Sections.

**Materials and Methods:** The present retrospective study was conducted at the Department of Obstetrics & Gynecology, Zanana Hospital, R.B.M. Hospital, Bharatpur, and Rajasthan. Single surgeon performed all the C-sections to minimize the incidence of operator error. The complications occurring during the post partum period were recorded. All the observations were noted a pre designed proforma. The data thus obtained was analyzed using SPSS software. The results were expressed as percentage and frequency.

**Results:** A total of 90 subjects were enrolled in the study, there were 91.1% (n=82) subjects between the age of 15-30 years and 8.9% (n=8) subjects above 31 years of age. The most common complication was anemia, seen in 30% (n=27) cases. Gaping of wound was seen in 5.6% (n=5) cases. There were 4.4% (n=4) cases of puerperal pyrexia. Postpartum hemorrhage was seen in 27.8% (n=25) cases.

**Conclusion:** The most frequently encountered complication in our study was anemia followed by PPH and UTI.

**Keywords:** Anemia, Caesarean, complication, Gaping

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### **INTRODUCTION**

The cesarean section rates have significantly increased in recent years.<sup>1</sup> In the year 2008, there were 6.2 million cesarean sections performed worldwide; China and Brazil alone represented 50% of all C-sections that were without medical indication.<sup>2</sup> This increase in the C-section around the world is related to improved access to medical services and also indiscriminate use of C-section for delivery without any indication. Due to this there have been various efforts to reduce the rates and indiscriminate use of C-section in obstetric practice.<sup>3</sup> C-sections are basically lifesaving procedures that

should be followed with accurate medical indication. In cases where the maternal mortality rates are high, safe and timely C-section is still a challenge due to lack of adequate facilities.<sup>4</sup> Whereas there are certain regions where efforts have been made to minimize C-section without indication. Even though that this procedure is crucial and important, there are various maternal and fetal risks involved and it is necessary to bring up this issue with proper evidence.<sup>5</sup> In a study that compared C-section without indication and vaginal delivery has shown that C-section carried risk of respiratory complications to fetus.<sup>6</sup> The present study was conducted to retrospectively analyze the

Maternal Complications in Patients Undergoing Cesarean Sections.

### **MATERIALS AND METHODS**

The present retrospective study was conducted at the Department of Obstetrics & Gynecology, Zanana Hospital, R.B.M. Hospital, Bharatpur, and Rajasthan. The study included a total of 90 pregnant females who underwent emergency cesarean section. Subjects with hypertension, Diabetes, cardiac disorder and chronic inflammatory disorder were excluded from the study. The study was conducted for a period of 1 year. Ethical committee clearance was obtained from the institutional board. All the subjects were informed about the study and a written consent was obtained from all the subjects. Single surgeon performed all the C-sections to minimize the incidence of operator error. Matched blood was already kept before the initiation of C-section. All the subjects were carefully monitored during the entire procedure. Till the discharge, all the subjects were kept under keen observation. The complications occurring during the post partum period were recorded. All the observations were noted a pre designed proforma. The data thus obtained was analyzed using SPSS software. The results were expressed as percentage and frequency.

### **RESULTS**

A total of 90 subjects were enrolled in the study, there were 91.1% (n=82) subjects between the age of 15-30 years and 8.9% (n=8) subjects above 31 years of age. (Table 1)

Table 2, graph 1 shows the complications encountered during the study. The most common complication was anemia, seen in 30% (n=27) cases. Gaping of wound was seen in 5.6% (n=5) cases. There were 4.4% (n=4) cases of puerperal pyrexia. Postpartum hemorrhage was seen in 27.8% (n=25)

cases. Ileus and Obstetric hysterectomy were observed in 2.2% cases respectively. Urinary tract infection was observed in 20% (n=18) cases. There were 3.3% cases of perineal tear and 2.2% cases of cervical tear. Hematoma was observed in 3.3% (n=3) cases.

### **DISCUSSION**

The obstetrician will seldom be answerable for performing a cesarean section, while he/she can be sued for not it.<sup>7</sup> Cesarean section is the most frequent surgical procedure.<sup>8</sup> It is generally performed when the vaginal and assisted deliveries have failed and foetus and mother health is at greater risk.<sup>9</sup> Over the last few decades, the prevalence of cesarean procedure has increased which is of public health concern. In a study conducted by Hafeez et al to determine the prevalence and indication of C-section in Pakistan it was seen that 22.30% emergency cesarean section were done in emergency.<sup>10</sup> Maternal morbidity was significantly more amongst subjects having emergency C-section than elective C-section.<sup>11</sup> The incidence of the morbidities varies amongst countries, health care function, and surgeon, because of difference in perceptions of its benefits and risks by health care physicians as well as by pregnant females.<sup>12</sup> In a study conducted by Ghazi et al<sup>13</sup>, subjects undergoing emergency C-section, Anemia was seen amongst 32%, PPH amongst 24% and Urinary Tract Infection amongst 24%, prolonged catheterization amongst 18% females. In our study, the most common complication was anemia, seen in 30% (n=27) cases. Gaping of wound was seen in 5.6% (n=5) cases. There were 4.4% (n=4) cases of puerperal pyrexia. Postpartum hemorrhage was seen in 27.8% (n=25) cases. Ileus and Obstetric hysterectomy were observed in 2.2%

cases respectively. Urinary tract infection was observed in 20% (n=18) cases. There were 3.3% cases of perineal tear and 2.2% cases of cervical tear. Hematoma was observed in 3.3% (n=3) cases. According to a study by Tasneem A et al<sup>14</sup> maternal anemia was recorded in 82% of the cases, there were 66% cases of UTI which was quite high. As per a study by Ghazi A et al<sup>7</sup>, the incidence of urinary tract infection was 24%. According to a study by Ko SY et al,<sup>15</sup> operative morbidity due to blood loss was seen amongst 4% cases, haematoma in 3.5% cases, and urinary tract infection in 3%.

Among them post procedural hemorrhages were the major cause of maternal mortality. The few limitations associated with the study was small sample size and no control group was included in the study for comparison.

### CONCLUSION

Complications can occur during any surgery. C-sections are the most frequently performed surgical procedure and the incidence of elective C-sections are increasing at a rapid rate. The most frequently encountered complication in our study was anemia followed by PPH and UTI.

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Table1: Age distribution of the subjects

Age	Frequency	Percentage
15-30	82	91.1
31-47	8	8.9

Table 2: Complications encountered during the study.

COMPLICATIONS	FREQUENCY	PERCENTAGE
Wound Gape	5	5.6
Puerperal Pyrexia	4	4.4
PPH	25	27.8
Ileus	2	2.2
Obstetric Hysterectomy	2	2.2
Hematoma of episiotomy	3	3.3
Cervical tear	2	2.2
Perineal tear	3	3.3
Anemia	27	30
UTI	18	20

Graph 1: Complications encountered during the study.

