Evaluation of Incidence of Adverse Events Associated with C Section

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Abstract

Background: Cesarean section, also known as a C-section, is one of the most common operations in the world. The present study was conducted to assess adverse events associated with C sections.

Materials and Method: The present study was conducted on 438 cesarean sections. Complications and adverse events associated with C section was recorded.

Results: Age group 18-28 years had 210 patients, 28-38 years had 186 and 38-48 years had 42 patients. The difference was significant (P< 0.05). Adverse events associated with C sections was abortion in 5 cases, fetal distress in 12, malpresentations of fetus in 7, disproportion of fetus in 16, oligohydramnios in 4, preterm labor in 3 and postpartum hemorrhage in 9 cases. The difference was significant (P< 0.05).

Conclusion: Authors found that common adverse events were abortion, fetal distress, malpresentation of fetus, disproportion of fetus, oligohydramnios, preterm labor and postpartum hemorrhage.

Keywords: *Cesarean section, oligohydramnios, preterm.*

Introduction

Cesarean section, also known as a C-section (CS), is one of the most common operations in the world. It is a surgical procedure that may be performed to deliver one or more newborns. Taking into consideration the rate of CS is important because it reflects the index of health care coverage. Nevertheless, an "optimal" cesarean section rate remains a point of debate. The World Health Organization (WHO) stated in 1985 that the optimum rate should always remain between 10 to 15 percent.[1]

The increasing caesarean section (C-section) has also been different in different countries, such that for developing countries it is much more than for developed ones. Rates of cesarean delivery continue to rise worldwide, with recent reported rates of 24.5% in Western Europe, 32% in North America and 41% in South America. Caesarean rate in Brazil, Chile and China has increased up to 40-42% while, the rate of cesarean in Iran been reported from 26- 66.5% by various studies and as 87% by some private centers. Cesarean delivery is carried out due to such various reasons as pregnancy at higher ages, lower number of a woman previous pregnancies, obesity, fetal distress, etc.[2]

In the presence of maternal or fetal complications, cesarean delivery can effectively reduce maternal and perinatal mortality and morbidity; however, an increasing proportion of babies are delivered by cesarean when there is no medical or obstetric indication.[3] The short-term adverse associations of cesarean delivery for the mother, such as infection, hemorrhage, visceral injury and venous thromboembolism, have been minimized to the point that cesarean delivery is considered as safe as vaginal delivery in high-income countries though in

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low and middle-income countries, there is an increased risk of adverse short-term maternal outcomes even with cesarean delivery without medical indication.[4] This notwithstanding, the long-term risks and benefits of cesarean delivery for mother, baby and subsequent pregnancies are less frequently discussed with women and there are few randomized controlled trials (RCTs) addressing the issue.[5] The present study was conducted to assess adverse events associated with C sections.

Materials and Method

The present study was conducted in the department of Gynaecology at Krishna Institute of Medical Sciences Deemed to be University, Karad, Maharashtra, India. It comprised of 438 cesarean sections done in the department. All patients were informed regarding the study and written consent was obtained. Ethical clearance was obtained from institutional ethical committee.

Data such as name, age etc. was reported. Complications and adverse events associated with C section was recorded. Results thus obtained were subjected to statistical analysis. P value less than 0.05 was considered significant.

Results

Table I Distribution of patients

Age Group (Years)	Number	P Value
18-28	210	0.01
28-38	186	
38-48	42	

Table I shows that age group 18-28 years had 210 patients, 28-38 years had 186 and 38-48 years had 42 patients. The difference was significant (P< 0.05).

Table II Adverse events with C sections

Events	Number	P value
Abortion	5	0.01
Fetal distress	12	
Malpresentations of fetus	7	
Disproportion of fetus	16	
Oligohydramnios	4	
Preterm labor	3	
Postpartum hemorrhage	9	

Table II shows that adverse events associated with C sections was abortion in 5 cases, fetal distress in 12, malpresentations of fetus in 7, disproportion of fetus in 16, oligohydramnios in 4, preterm labor in 3 and postpartum hemorrhage in 9 cases. The difference was significant (P< 0.05).

Discussion

The increase in the number of cesarean sections worldwide is related to the improvement of the access of women to this procedure when needed, but it is also related to the indiscriminate use without medical indication. This has culminated in the recent efforts to reduce these rates, while incorporating the obstetric preferences of women. 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.[6]

Cesarean delivery is carried out due to such various reasons as pregnancy at higher ages, lower number of a woman previous pregnancies, obesity, fetal distress, etc. Cesareans without indications, as compared to Normal Vaginal Delivery (NVD), would bring about many complications for both mother and the baby. Many people think there is more probability of newborns health in case of cesarean, while studies have shown that the risk of death in newborns by cesarean is 4 times as much as newborns born by NVD. The most serious complications for the babies born by cesarean are fetal respiratory problems such as Transient Tachypnea (TTN) and Respiratory Distress Syndrome (RDS), surgical blade cuts and increased rates of newborns admission in the neonatal intensive care unit. Also, experts believe that 1 min Apgar score of the newborns by cesarean is less that of the newborns by NVD.[7]The present study was conducted to assess adverse events associated with C sections.

In present study age group 18-28 years had 210 patients, 28-38 years had 186 and 38-48 years had 42 patients. Zgheib et al[8] determined the risk factors associated with the high cesarean section rates. This study is based on a sample of 29,270 Lebanese women who were pregnant between 2000 and 2015. Among these, 14,327 gave birth by cesarean section and 14,943 gave

birth vaginally. of the 29,270 pregnant women included in the study, 49% had cesarean sections while 51% gave birth vaginally. Repeat cesarean section accounted for 23% while vaginal birth after cesarean accounted for only 0.2% of deliveries. In addition, weekdays were associated with a preference of providers to carry out more cesarean sections.

We found that adverse events associated with C sections was abortion in 5 cases, fetal distress in 12, malpresentations of fetus in 7, disproportion of fetus in 16, oligohydramnios in 4, preterm labor in 3 and postpartum hemorrhage in 9 cases. Mascarelloet al[9]evaluated the presence of postpartum hemorrhage and its complications, such as hysterectomy and blood transfusion and they have found controversial results. Kamilya et al[10] found that the women with cesarean section, in the absence of complications and comorbidities, presented a 3.01 times higher death rate than women with vaginal delivery. When cesarean section was intrapartum, this chance was 4.86 (95%CI 2.47–9.56) and for cesarean section before labor, this chance was not significantly higher.

Conclusion

Authors found that common adverse events were abortion, fetal distress, malpresentation of fetus, disproportion of fetus, oligohydramnios, preterm labor and postpartum hemorrhage .

Conflicts of Interest: The author declare that there is no conflict of interest regarding the publication of this paper.

Source of Funding: Self

Ethical Clearance: Ethical clearance has been taken from Institutional Ethical Committee

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