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Second Stage Cesarean Sections Dilemmas and Difficulties

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Abstract: ***Aims and Objectives: To analyze the second stage cesarean sections that took place with respect to indications, morbidity and mortality in the mother and neonate. Materials and Methods: A retrospective analysis was conducted to assess all second stage cesarean sections over 2 years [July 2016 to June 2018] in terms of indications, intraoperative complications, maternal and perinatal outcome. Results: Total 6267 confinements took place of which 4035 were vaginal deliveries and 2232 were cesarean sections. LSCS rate was 35.61%, second stage CS were 86, 3.85% of which 70% second stage CS were done for nonprogress of labour. There were no maternal deaths, but 1 FSB, 4 NND, 18 NICU admissions. Conclusion: Second stage cesareans are must know in modern day obstetrics. A close watch on the progress of labour with partographic monitoring will help to pick up nonprogress of labour early.***

Keywords: Second stage cesarean sections, cesarean sections at full dilatation, Obstetric dilemmas and difficulties, Obstetric challenges

1. Introduction

Incidence of Cesarean section has widely risen over the past 2 decades. The overall rate of cesarean section delivery in India increased from 8.5% in 2005-06 to 17.2% in 2015-16 [1, 2]. WHO has suggested the national cesarean section rate should lie between 10% to 15%. Little attention has been paid to the rise in cesarean section rates, particularly the second stage cesareans sections [3].

Aims and Objectives

To analyze the second stage cesarean sections that took place, in our institute with respect to indications, morbidity and mortality in the mother and the neonate. Intra operative complications like PPH, extensions of uterine incisions, intraoperative blood transfusions, methods of delivery of head of baby, postoperative maternal complications like wound infections, febrile illness, fetal complications like NICU admissions and mortality were analyzed.

2. Materials and Methods

This retrospective study was conducted at tertiary teaching institute in Mumbai to assess all second stage cesarean sections. We analyzed second stage cesarean sections in single cephalic pregnancies ≥ 34 weeks with data collected from our database for 2 years [July 2016 to June 2018].

3. Results

Total confinements during this period were 6267 of which 4035 were vaginal deliveries and 2232 were cesarean sections, making the Cesarean rate 35.61%. Among the 2232 cesarean sections during this period 86 were done in the second stage of labour [3.85%]. It is worthwhile to note the 156 interventions that were attempted in the second stage of labour during the same period included 70 instrumental deliveries, of these 54 were forceps applications and 16 were vacuum deliveries.

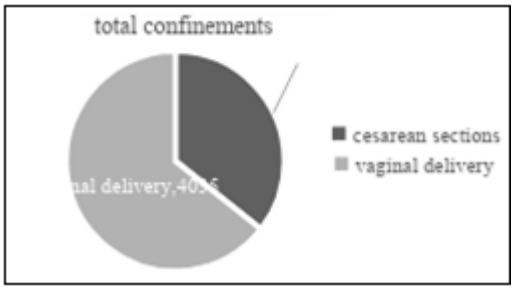

Figure 1: Total no of confinements over a period of 2 years

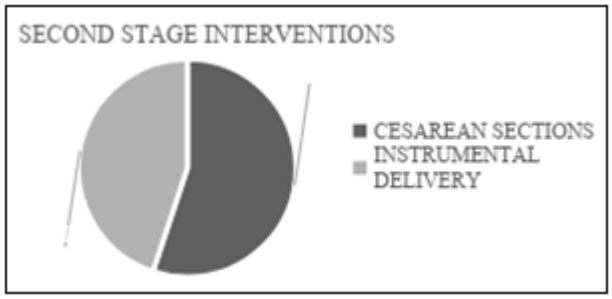

Figure 2: Interventions those were attempted in second stage of labour

11 cesarean sections were for done for deep transverse arrest, 15 were done for fetal distress while 60 were done for non-progress in the second stage of labour. It is worthwhile to note the most common indications for non-progress were fetal head malposition [occipito-posterior, or occipito-transverse], deflexed head and failure of descent of fetal head due to cephalopelvic disproportion.

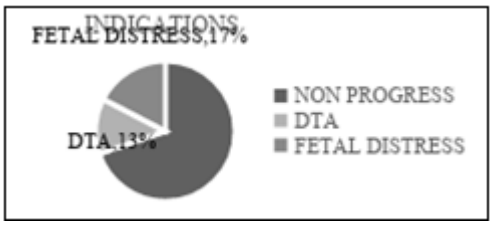

Figure 3: Indications of second stage cesarean sections

In this study 45 patients belonged to the age group of 20 to 25 [52.32%], 36 belonged to age group of 26 to 30 [41.86%], and 5 were from the age group 30 to 35 [5.8%]. Most common age group was 20 to 25 years, the median age being 20 years. In this study its observed that 69 of the 86 cesarean sections done were in primigravida [80.23%] and 17 in multigravidas [19.76%]; 7 of which had previous vaginal deliveries, 4 had previous cesareans, 6 had previous medical termination of pregnancy or an abortion.

In this study its observed that 18 out of 86 [20.93%] needed general anesthesia, while 68 out of 86 [79.06%] second stage CS were done under regional[spinal] anesthesia. Baby was delivered by vertex in 69 and by Patwardhan's maneuver [4] in 17 of 86 cesarean sections.

Table 1: Intraoperative complications

Intraoperative complications	*Nos of patients*	*Percentage*
Atonic PPH	05	5.81%
Blood transfusion	02	2.32%
Extension of uterine incision	08	9.30%
Injury to bladder	01	1.16%

The most commonly observed complication was extension of uterine incision, which was seen in 9.30% of the cesarean sections. Post-operative complications seen were febrile illness in 5.81% of the patients, need for transfusion of blood or blood products in 3.48% and wound infection was encountered in 5.81% of the patients.

The neonatal outcome of cesarean sections in second stage was 85 live births and 1 still birth. The mean birth weight was 2.8 kgs. 67 of 85 live births were healthy and had a good APGAR score at birth and were with mother since birth. 18 babies needed NICU care after birth. Total NICU admissions in this period were 758, 12.09% of the total confinements. 12% of the admissions were after LSCS for any cause. Out of the 18 NICU admissions after second stage, 4 babies died of birth asphyxia related complications, 13 went home after a brief NICU stay and 1 had residual Hypoxic ischemic injury.

4. Discussion

A cesarean section is a life-saving surgical procedure when certain complications arise during pregnancy and labour. A cesarean section at full dilatation occurs when a mother requires delivery in the second stage of labour and cannot be dealt with by assisted vaginal delivery. The incidence of cesarean sections performed at full dilatation is increasing. A cesarean section in second stage of labour has additional associated risks for both the mother and fetus due to the nature of these emergency situations [5]. Delivery at full dilatation can be technically challenging due to fetal impaction into the pelvis and may be associated with greater maternal and fetal morbidity even without failed attempt at vaginal delivery.

A prolonged second stage of labour increases attenuation of lower uterine segment and impaction of fetal head which gives rise to thin, easily lacerated lower uterine segment and cervix, which is predisposed to more extensions while delivering fetal [6], also increased hemorrhage and infections [7]. Operative vaginal deliveries can be seen as a solution to this situation, hence residents must be taught instrumental delivery so that at least some of second stage CS can be avoided. However instrumental [operative] vaginal deliveries are dying a slow death. Several cohort studies demonstrate that an attempt of instrumental vaginal delivery prior to CS does not result in increased rates of immediate maternal morbidity [maternal hemorrhage [8,9,10], wound infection or intraoperative trauma [9,10]] or no increase in neonatal trauma or sepsis has been demonstrated [9,10] compared to CS without attempt of operative vaginal delivery. Also no significant difference in rates of urinary or bowel complications a year after delivery following an attempt of instrumental delivery prior to CS compared to immediate CS [11]. It is therefore imperative that in modern day obstetrics, every obstetrician is familiar with a second stage cesarean section.

5. Conclusion

Incidence of second stage cesarean sections is more in primigravida [80%] than in multigravidas [20%] due to mild to moderate cephalopelvic disproportion, rigid perineum. Most common indication of second stage cesarean section was nonprogress of labour. Maternal morbidity and Perinatal mortality rate is significantly more in second stage cesarean sections compared to cesarean sections overall and instrumental deliveries.

6. Declarations

Funding: None

Conflict of interest: None declared

Ethical approval: As it was a retrospective study conducted, ethics committee approval was not sought for.

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