STUDY ON MATERNAL MORBIDITY, MORTALITY AND NEONATAL OUTCOME OF LOWER SEGMENT CAESARIAN SECTION CASES CONDUCTED AT TERTIARY CARE HOSPITAL, RANCHI

ABSTRACT

Introduction: Caesarean section is the most common surgical procedure all over the world, this study was conducted to determine the maternal and neonatal outcome and complications in caesarian sections, so that measures can be taken to reduce further mortality and morbidity in near future.

Material and method: All patients who delivered after 28 weeks in Rajendra Institute of Medical Sciences, Ranchi by caesarean section were included to calculate incidence of Lower Segment Cesarean Section and their fetomaternal outcome. The Incidence of Lower Segment Cesarean Section, post-operative complications, causes of maternal morbidity and mortality after Lower Segment Cesarean Section, still births, perinatal deaths, early neonatal deaths and neonatal morbidity were assessed.

Result: With increased incidence of Lower Segment Cesarean Section, maternal morbidity, mortality and poor neonatal outcome has increased significantly with postpartum haemorrhage, eclampsia and other causes. Still births are mostly having history of ante partum eclampsia and ante partum haemorrhage in mother, also respiratory distress syndrome, congenital anomalies and birth asphyxia are the leading causes of early neonatal deaths.

Conclusion: The decision to do delivery by caesarean section should be clear and justified. Improvement in antenatal care is required in villages of Jharkhand where tribals live, also there should be early identification of high risk pregnancies, adoption of integrated approach to improve health status of women along with health education and proper counselling about baby birth. There should be special care of neonates born through Lower Segment Cesarean Section especially emergency caesareans.

KEYWORDS:
Fetomaternal outcome, Lower Section Caesarean Section, maternal morbidity, still birth, early neonatal deaths.

I. INTRODUCTION

Caesarean delivery is defined as birth of viable fetus through incision in abdominal wall (laparotomy) and through uterine wall (hysterotomy). Earlier caesarean section was performed only to save mother’s life but with introduction of modern anaesthesia, blood transfusion, facilities, and higher antibiotics, the indications of caesarean delivery are liberalized. New modern technology in labour rooms along with several other medical, social, economic and medicolegal factors have lead to alarmingly high rate of caesarean section in all obstetric medical facility. Among the cesarean sections, emergency caesarean sections are those with identified as high risk pregnancy and elective ones are those with no clear medical reasons. Low rate of Lower Segment Cesarean Section might indicate poor access to Lower Segment Cesarean Section when obstetric complications occur, while high rate increases the risk of maternal and neonatal morbidity. Lower Segment Cesarean Section is a procedure that often is life saving, but it is not without risk and can also become life-threatening for both mother and child. The incidence of immediate complications after Lower Segment Cesarean Section is reported to be around 21%. Anaesthetic complications, infection and lower breastfeeding rates are some important early complications. In a long term perspective, women with previous Lower Segment Cesarean Section are at risk of chronic pain, infertility, bowel obstruction, uterine rupture and abnormal placentalation.

The consensus recommendation for optimal cesarean section rate of 10-15% was made by WHO in 1985. Proportion of caesarean section to the total births is considered as one of the important indicators of Emergency Obstetric Care (World Health Organization, 2009). A figure below 5% implies that a substantial proportion of women do not have access to surgical obstetric care; on the other hand a rate higher than 15% indicates overutilization of the procedure for other than life saving reasons World Health Organization ,(1985; World Health Organization,1993). The caesarean delivery rate in United States in 1970 was 5.5 percent. In India also the rate of caesarean has increased significantly with postpartum haemorrhage, eclampsia and other causes. Still births are mostly having history of ante partum eclampsia and ante partum haemorrhage in mother, also respiratory distress syndrome, congenital anomalies and birth asphyxia are the leading causes of early neonatal deaths.

II. MATERIALS AND METHODS

The present study was a prospective and observational study carried out in the department of Obstetrics and Gynaecology, Rajendra Institute Of Medical Sciences, Ranchi during April 2015 to October 2016. All patients who delivered after 28 weeks in Rajendra Institute Of Medical Sciences, Ranchi, by caesarean section were included to calculate incidence of lower segment cesarean section and their fetomaternal outcome. Those patients were excluded who had classical cesarean section or were admitted after getting their lower segment cesarean section done outside Rajendra Institute Of Medical Sciences. Detailed history and examination was done and the incidence of caesarean section, Information regarding post-operative morbidity was collected. Consent from the subject was obtained prior to collection of any data. No interventions were made in this study. The outcome studied were Incidence of lower segment caesarean sections, post-operative complications, still births, natal deaths, early neonatal morbidity and mortality and causes of maternal morbidity and mortality and fetal death. Duration of hospital stay of more than 10 days was considered as an indicator for post-operative morbidity. The study was approved by the Institutional Ethics Committee of Jharkhand Medical University.

Table no.1 Showing incidence of caesarean section

<table>
<thead>
<tr>
<th>Total no. Of deliveries</th>
<th>No. Of caesarean sections</th>
<th>percentage</th>
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<tbody>
<tr>
<td>10828</td>
<td>4472</td>
<td>41.30%</td>
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</table>

Table 2- Showing incidence of elective or emergency LSCS
Lower Segment Caesarean Section | No. of cases | Percentage
--- | --- | ---
Emergency | 3706 | 82.86%
Elective | 766 | 17.14%
Total | 4472 | 100%

Out of 4472 cases, 3706 (82.86%) cases underwent emergency LSCS, 766 (17.14%) cases had elective LSCS.

Table no-8 Neonatal outcomes

S no. | Neonatal outcome | No.of fetuses | Percentage
--- | --- | --- | ---
1 | Weight <2.5 kgs | 551 | 12.44%
2 | Neonates requiring immediate NICU care(ventilation,phototherapy) | 200 | 4.5%
3 | APGR score <7 at 5 min. | 80 | 1.8%
4 | Hyperbilirubinemia | 983 | 22.2%
5 | Congenital anomalies | 8 | 0.18%
   a)Mild hydrocephalus | 4 |
   b)Meningomyelocle | 1 |
   c)Cleft lip+cleft palate | 2 |
   d)ICTV | 1 |

Table no.9 LBW (<2.5 kg) neonates were further classified as term (IUGR) and preterm

<table>
<thead>
<tr>
<th>No.of foetuses</th>
<th>Percentage</th>
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| IUGR | 452 | 82%
| PRETERM | 99 | 18%
| TOTAL | 551 | 100%

Among the LBW babies 452 (82%) cases were IUGR and 99 (18%) cases were preterm.

III. DISCUSSION

In the present study majority of cases, 3706 (82.8%) cases underwent emergency LSCS and 766 cases (17.2%) had elective LSCS.

About (22.4%) 1002 cases had to stay >10 days at hospital following caesarean delivery due to some morbidity. In my study 376 (37.5%) cases had puerperal pyrexia after caesarean delivery. Second most common cause of maternal morbidity was anaemia seen in 257 (25.6%) of cases. 204 cases had wound infection, 95 had urinary infection or needed prolonged bladder drainage (Foley’s). 77 early neonatal deaths. According to my study, antepartum eclampsia was the leading cause of still births, 46.5% (20) followed by ante partum haemorrhage (12) i.e. 28%. 5 (11.6%) still births were due to ante partum eclampsia. The second most common cause was obstructed labour leading to septicaemia and DIC. 2 patients of central placenta previa bled profusely to death during operation even after blood transfusion. There was 1 death due to severe anaemia leading to cardio-respiratory failure. In my study there was no death due to sepsis.

In the present study, the MMR at Rajendra Institute of Medical Sciences is 226. But out of 4472 cases who underwent LSCS, 10 patients died so that maternal mortality was only 0.22%. It reflects efficient obstetrical care at RIMS. As many patients coming here and undergoing LSCS are unbooked and present here with various complications. In my study maximum number of deaths was due to antepartum eclampsia. The second most common cause was obstructed labour leading to septicaemia and DIC. 2 patients of central placenta previa bled profusely to death during operation even after blood transfusion. There was 1 death due to severe anaemia leading to cardio-respiratory failure. In my study there was no death due to sepsis.

As per the SRS, Government of India, the overall PNM in India for 2009 was 35 per 1000 births. Perinatal Mortality Rate was 26.8 per 1000 births in the present study, 43 cases had still births and there were 77 early neonatal deaths. According to my study, antepartum eclampsia was the leading cause of still births, 46.5% (20) followed by ante partum haemorrhage (12) i.e. 28%. 5 (11.6%) still births were associated with obstructed labour. Still births due to cord prolapse was seen in 4 cases (9.4%), 2 cases (4.5%) were of fetal distress where the babies could not be survived even by the paediatrician.

Due to lack of proper ANC, still births because of ante partum eclampsia was still high (46.5%).

In my study maximum number of deaths in early neonatal period (<7 days) was due to RDS, 37 (13.5%). Congenital anomalies were identified in 15 deaths (19.5%), 13 deaths (16.4%) were due to birth asphyxia followed by meconium aspiration in (10) deaths i.e. (13.5%). 2 neonates died due to kernicterus (2.6%).

In the present study 551 babies were born with birth weight <2.5 kg (12.44%). These Low Birth Weight (LBW) babies were further studied.
as Term IUGR & Preterms. 82% of the LBW babies were IUGR and 18% were Preterm. These may be cases iatrogenic prematurity which happen even with repeated ultrasound scans, there are errors in judging when to do an elective CS causing the CS rates to rise, so do premature births.

About 4.5% i.e. 200 babies were admitted to NICU for CPAP, ventilation, phototherapy, exchange transfusion etc. 1.8% (80) of neonates had APGAR score <7 at 5 minutes. Hyperbilirubinemia was the most common morbidity seen in about 22.2% (983) neonates.

IV. CONCLUSION
The incidence of Lower Segment Cesarean Section is increasing all over India including Rajendra Institute of Medical Sciences with modernization of facilities and socio-economic plus medicolegal factors. The increased incidence of Lower Segment Cesarean Section has probably lead to high maternal and neonatal mortality and morbidity in such cases. The decision to do delivery by caesarean section should be clear and justified. Improvement in antenatal care is required in villages of state like Jharkhand where tribal are away from basic facilities of life, also there should be early identification of high risk pregnancies, adoption of integrated approach to improve health status of women along with health education and proper counselling about baby birth. There should be special care of neonates born through lscs especially emergency caesareans as they are prone of developing complications. Also, further studies are required for measures which are effective to improve the fetomaternal outcome of cesarean section.

V. REFERENCES
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