

Rising Trends of Cesarean Section - Fetal Sake: A Retrospective Study

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Abstract

Introduction: Cesarean section rates are increasing worldwide. The proportion of cesarean section at the population level is a measure of the level of access to and uses this intervention. At the same time, rising cesarean section rates is a matter of concern.

Purpose: The purpose of this study is to find the primary cesarean section rate and to find out the most frequent indications for primary cesarean section.

Materials and Methods: Retrospective study conducted at Government Medical College and ESI Hospital, Coimbatore in Department of Obstetrics and Gynecology from January 2016 to December 2016.

Results: During the 1-year study, there were 354 deliveries of which 251 delivered by cesarean section. Primary cesarean rate is 54.18%. 92.64% are emergency cesarean of which most frequent indications are fetal distress which accounts for 68.25% followed by cephalopelvic disproportion. The elective primary cesarean rate is 7.35%.

Conclusion: Most primary cesarean sections are done for fetal sake.

Key words: Cesarean section, Elective, Emergency, Fetal distress, Primary cesarean

INTRODUCTION

Cesarean delivery has become a commonly used measure for delivery of fetus. Rates of both primary and repeat cesarean section have been on rise.¹ Cesarean section is recommended when the life of mother or fetus is at risk. One of the main goals of every medical team dealing with childbirth is performing safe delivery. The primary cesarean section is when it is performed for the first time on pregnant women. According to 1985WHO, International Health-care Community has considered the ideal rate of cesarean section to be between 10% and 15%. However, every effort should be made to provide cesarean section to women in need, rather than to achieve a specific rate. The proportion of cesarean

section at the population level is a measure of the level of access to and uses this intervention. Determining the adequate cesarean section rate at the population level, that is the minimum rate for medically indicated cesarean section while avoiding medically unnecessary operation is a challenging task. In this study, we will discuss the common indications of the primary cesarean section and most frequent indications contributing to rise in cesarean section.

MATERIALS AND METHODS

It is a retrospective study conducted at Government Medical College and ESI Hospital, Coimbatore in Department of Obstetrics and Gynecology from January 2016 to December 2016 among antenatal women attending for delivery. Information about all the cesarean section was obtained from the parturition register. At our hospital, non-progress of labor diagnosed by partogram, abnormal fetal lie and placental position by clinical signs and confirmation by ultrasonogram, fetal distress by fetal heartbeat count and sometimes with meconium stained liquor. Hospital does not use cardiotocography.

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Those patients with a single indication for lower segment caesarean section are grouped under primary indication, and those with multiple indications are grouped under additional indications.

A study done to look at the trends for cesarean section at our hospital and find out common indications for primary cesarean section.

RESULTS

There were 354 deliveries during the study of which 251 delivered by a cesarean section giving cesarean section rate of 70.90%. Among 251 cesarean deliveries, 136 is primary cesarean section giving primary cesarean section rate of 54.1% and remaining is repeat cesarean section with 45.8%. Results are shown in Tables 1-10.

Table 1: Distribution of patients according to age

Age group years	Number of patients (%)
<20	9 (6.61)
20-35	118 (86.76)
Above 35	9 (6.61)

Table 2: Distribution of patients according to education

Education	Number of patients (%)
Completed school education	73 (53.67)
Completed college education	63 (46.32)
Illiterate	Nil

Table 3: Distribution of patients according to employment

Employment status	Number of patients (%)
Employed	82 (60.29)
Unemployed	54 (39.70)

Table 4: Distribution of patients according to elective and emergency cesarean section

Nature of cesarean section	Number of patients (%)
Elective	10 (7.35)
Emergency	126 (92.64)

Table 5: Distribution of patients according to parity

Parity	Number of patients (%)
Primi	93 (68.38)
Multi	43 (31.61)

DISCUSSION

Globally, cesarean section rates have increased during last decades. There is no general agreement on optimal cesarean section rate. In our study, primary cesarean section rate is 54.1%. Among primary cesarean section, 93 are nulliparous with 68.38%, and 43 are multipara with 31.61%. This is comparable with study of Moni *et al.*² where cesarean section rate in primigravida is 82.7% and in multigravida is 17.3%.

Table 6: Indications in elective cesarean section

Indication	Number of patients (%)
CPD 2 degree	7 (70)
Placenta previa	1 (10)
Malpresentation	1 (10)
Twins	1 (10)

CPD: Cephalopelvic disproportion

Table 7: Indications in emergency cesarean section

Indications	Number of patients (%)
Primary indication	45 (35.71)
Additional indication	81 (64.28)

Table 8: Distribution of primary indications

Indication	Number of patients (%)
Non progress of labor	17 (37.77)
Fetal distress on admission	12 (26.66)
CPD 2 degree in obstructed labor	5 (11.11)
Malpresentation	5 (11.11)
Twins	4 (8.88)
Previous myomectomy in labor	2 (4.44)

CPD: Cephalopelvic disproportion

Table 9: Distribution of additional indications

Additional indications	Number of patients (%)
Fetal distress	74 (91.35)
Failed induction in pre eclampsia	7 (8.64)

CPD: Cephalopelvic disproportion

Table 10: Distribution of indications in multiparous

Emergency indications	Number of patients (%)
CPD	12 (30.76)
Oligoamnios	7 (17.94)
Failed induction	6 (15.38)
Fetal distress	6 (15.38)
Non progress of labor	5 (12.82)
Malpresentation	1 (2.56)
Previous myomectomy	2 (5.12)

CPD: Cephalopelvic disproportion

Furthermore, study by Boyle *et al.*³ where primary cesarean section rate is 30.8% in primi and 11.5% for multigravida.

Regarding age group, most common is 20-35 years. This is the age group where women complete the family.

Furthermore, cesarean increased in educated and employed group than the counterpart.

Among total 251 cesarean sections, 158 are multipara of which 43 is primary cesarean with 27.21% and 115 are repeat cesarean with 72.78%.

Among primary cesarean in multigravida, most frequent is cephalopelvic disproportion (CPD) (30.23%) followed by oligoamnios (16.27%), failed induction (13.9%), and fetal distress (13.9%). This is comparable with the study of Rao and Rampure.⁴ Study of the primary cesarean section in multi where most frequent indication is malpresentation (33.5%) followed by CPD and fetal distress.

In a study by Desai *et al.*,⁵ most frequent indication of primary cesarean in multigravida is fetal distress (25.58%) and antepartum hemorrhage (22.09%).

Among primary cesarean, elective is 7.35%, and emergency is 92.64%. This is comparable with study of Moni *et al.*² in the study of obstetric profile of mothers undergoing primary cesarean where the emergency cesarean rate is 88.7%, and the elective rate is 11.3%.

Among emergency cesarean, most are performed to benefit the fetus 68.25%. Except for 4 babies all babies had APGAR score of 8/10 and above. Studies on rising cesarean section and studies by saga and choudry show majority of emergency cesarean done to benefit the fetus.

Studies by Luis-Sanchoz *et al.*⁷ and studies by Ehrenthal *et al.*⁸ show most indications that lead to emergent cesarean section is fetal factors - fetal distress, non-reassuring fetal heart rate, malpresentation.

Cesarean done for maternal sake is mainly for pre-eclampsia is 5.5%. According to Kuklina *et al.*,⁹ preeclampsia is increased as an indication for cesarean section.

CONCLUSION

Indication for performing cesarean section have changed a lot in recent years and keep on changing for varied circumstances. Low cesarean rate might indicate poor access to cesarean section when obstetric complication occurs while high rate increased risk of maternal and neonatal morbidity. It is acknowledged that when cesarean access is increased in areas where access is limited, maternal and neonatal mortality rate decrease. In this study, primary cesarean mainly done for fetal distress and neonatal mortality is reduced.

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