

Original research article**Feto-maternal outcome in primary caesarean section in multigravida****¹Eslavath Lavanya Bai, ²Sahana PR, ³Chandana MH, ⁴Chandrashekar K, ⁵Vijaya Harsoor**¹Consultant in RDT hospital Bathalapalli, Karnataka, India²Assistant Professor, Department of OBG, RIMS, Raichur, Karnataka, India³Assistant Professor, Department of Anesthesiology, VIMS, Ballari, Karnataka, India⁴Assistant Professor, Department of OBG, VIMS, Ballari, Karnataka, India⁵Retired Professor, Department of OBG, VIMS, Ballari, Karnataka, India**Corresponding Author:**

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Abstract

Caesarean section is one of the widely performed surgical procedure across the world. Despite remarkable improvements in the safety, caesarean section is associated with increased risk of maternal morbidity and mortality. A Prospective study of 115 cases of primary caesarean section in multigravida admitted in Department of Obstetrics and Gynecology for a period of 1 year. Resuscitative Measures out of 21 babies admitted in NICU 36.4% were intubated, 36.4% were Tactile stimulated and 27.3% were Ambu done. In Perinatal Morbidity distribution, the most common Perinatal Morbidity is Meconium Aspiration Syndrome and mortality was preterm.

Keywords: Feto-maternal outcome, primary caesarean section, multigravida

Introduction

Caesarean section defines as the delivery of a alive or dead fetus, through an abdominal route by an incision made on the uterus after 28 weeks of gestation, which excludes ruptured uterus and extra uterine pregnancy ^[1].

Primary caesarean section in Multigravida means first time undergoing caesarean section in patients who had delivered vaginally once or more.

Caesarean section is one of the widely performed surgical procedure across the world. Despite remarkable improvements in the safety, caesarean section is associated with increased risk of maternal morbidity and mortality ^[2].

Safety of caesarean section has improved over decades due to improved anesthetic techniques.

The rate of caesarean section is increasing beyond the recommended level of 5-15% by WHO ^[3]. There are many factors that contribute to the variation in CS rates, such as practice culture, practice style, hospital environment, source of payment, patient's preference and socioeconomic status ^[4].

Multiparity is a problem associated with poverty, illiteracy, ignorance, lack of knowledge of the available ANC and family planning methods. A Multipara who has earlier delivered vaginally may still require a CS for various reasons and safety delivery ^[4].

The major causes of maternal mortality among these women were rupture uterus, hypertensive vascular disease, placenta previa, and malpresentations ^[8].

In a paper entitled "The dangerous multipara" published in 1934, Dr. Bethel Solomon stated "My object in writing this paper and giving it a sensational title is to remove if possible once and for all, from the mind of the reader, the idea that a primigravida means difficult labour, but a multipara means an easy one. The primigravida gives the impression of difficulty just because she is an unknown entity and more attention is focused on her than the women who have "done it before" but it is altogether a mistake to suppose in child bearing "practice makes perfect" ^[6].

Feeny preferred the term unpredictable multipara for such women.

Feeny was of view that the problems associated with these patients should be emphasized periodically in the literature, as too often complacency on the part of both the doctor and the patient resulted in an unavoidable tragedy ^[7].

Eastman in 1910, called attention not only to the increased mortality among women of high parity but in addition noted the increase in perinatal mortality among infants born to these women ^[8].

It is a common belief among the public that once a mother delivers normal vaginally, all her subsequent deliveries will be normal, as a result such multiparous mothers often neglect routine ANC. Due to these factors, the multiparous woman pass through the stage of pregnancy and labour in a subnormal state of

health and in a busy maternity unit, these patients get expert supervision only when unforeseen emergencies arise either during pregnancy or labour with potential risk when cesarean section has to be performed.

Methodology

Study setting and period

A Prospective study of 115 cases of primary caesarean section in multigravida admitted in Department of Obstetrics and Gynecology, VIMS, Ballari for a period of 1 year(2020 – 2021).

Study Design

A Prospective observational Study

Inclusion criteria

- All Multigravida undergoing primary caesarean section

Exclusion criteria

- Women with previous caesarean section
- Scarred uterus

Sample size estimation

We have enrolled all the cases that fulfilled inclusion/exclusion criteria in to the study over a study period.

Totally 115 cases were enrolled and all were study subjects/parameters.

Results

Table 1: Stage of delivery

Stage of delivery	Frequency	Percentage
No	2	1.7
Latent	72	62.6
Active	23	20.0
Total	115	100.0
Second	18	15.7

The above table and figure shows Stage of delivery distribution were 1.7% is Not in labour,62.6% is Latent, 20.0% is Active, 15.7% is Second stage of labour.

In all cases of second stage labour, 16 cases were second stage arrest and 2 cases were transverse lie and fetal distress were indication.

Table 2: Intra Operative Maternal Complications

Intra OP Maternal Complications	Frequency	Percentage
PPH	5	4.34
Angle extension	3	2.60
Peripartum hysterectomy	2	1.74
Bladder injury	2	1.74

The most common Intra Operative Maternal Complication was PPH (4.34%).

The cause for the two cases of bladder injury was obstructed labour.

Table 3: Post-operative Maternal Morbidity

Post OP Maternal Morbidity	Frequency	Percentage
Puerperal pyrexia	8	6.95
Wound infection	4	3.47
UTI	2	1.74
Paralytic ileus	0	0.0
Secondary PPH	0	0.0

The most common Post-Operative Maternal Morbidity was Puerperal pyrexia (6.95%).

Table 4: Blood Transfusion (BT) in pints

BT in pints	Frequency	Percentage
0	104	90.4
1.0	8	7.0
3.0	2	1.7
6.0	1	.9
Total	115	100.0

The above table shows BT in pints distribution, maximum blood transfusion were 6 pints in case of abruption placenta.

Table 5: Maternal Outcome

Maternal Outcome	Frequency	Percent
Stable	114	99.1
Unstable	1	0.9
Total	115	100.0

The above table and figure shows Maternal Outcome distribution in which 99.1% Patients were Stable. 1 case was unstable because of post-partum convulsions.

Table 6: Neonatal Outcome

Neonatal Outcome	No of babies(Twins 4)	Percentage
Alive	112	94.1
ENND	3	2.5
IUFD	3	2.5
Still Birth	1	0.9
Total	119	100.0

The above table shows Neonatal Outcome distribution in which 112 (94.1%) babies were alive, 3 babies were ENND, 3 were IUFD and 1 was still birth.

Cause for still birth was referred case with obstructed labour, severe perinatal asphyxia with meconium aspiration.

Table 7: Distribution based on Birth weight

Birth weight	No of babies (twins 4)	Percentage
1.6 - 2.0 kgs	10	8.4
2.1 - 2.5 kgs	29	24.4
2.6 - 3.0 kgs	47	39.5
3.1 - 3.5 kgs	24	20.2
3.6 - 4.0 kgs	8	6.7
> 4 kgs	1	0.8
Total	119	100.0

The above table and figure shows Birth weight distribution in which majority of babies were 2.6-3.0kgs (39.5%), 2nd most common is 2.1-2.5kgs (24.4%).

Table 8: NICU Admission

NICU Admission	No of babies	Percentage
No	98	82.4
Yes	21	17.6
Total	119	100.0

The above table and figure shows NICU Admission 98 (82.4%) babies were not admitted and 21(17.6%) babies were admitted.

Out of 21 babies admitted in NICU, 3 were ENNDS and 18 babies were shifted to mother side.

Table 9: Incidence of Perinatal Morbidity

Perinatal Morbidity	Frequency
1Mecounium aspiration syndrome	12
Birth asphyxia	09
Respiratory distress syndrome	07
Sepsis	04
Preterm	03
ENND	03

The above table and figure shows Perinatal Morbidity distribution in which the most common Perinatal Morbidity is Meconium Aspiration Syndrome and mortality was preterm.

Table 10: Resuscitative Measures distribution

Resuscitative Measures	Frequency	Percentage
Intubation	4	36.4
Tactile stimulation	4	36.4
Ambu	3	27.3
Total	11	100.0

The above table and figure shows Resuscitative Measures distribution in which 36.4% was Intubation, 36.4% was tactile stimulation, 27.3% was Ambu.

Table 11: Cause of neonatal death

Cause	Number
MAS with BA	1
Preterm with RDS and Sepsis	1
Preterm with RDS and BA	1

Out of 3 ENNDS two were preterm, third one was meconium aspiration syndrome (MAS) with severe birth asphyxia.

Discussion

Table 12: Most common intra operative and post-operative complications:

Study	Intra op complication	Post op complication
Sharmila G, <i>et al.</i> (2016) ^[2]	PPH (1%)	Puerperal pyrexia (6.3%)
MD Munusamy, <i>et al.</i> (2018) ^[3]	PPH (16.77%)	Puerperal pyrexia (20.8%)
Rajput N, <i>et al.</i> (2017) ^[4]	-	Puerperal pyrexia (10.36%)
Himabindu P, <i>et al.</i> (2014) ^[9]	PPH (14%)	Puerperal pyrexia (18.27%)
Present study	PPH (4.34%)	Puerperal pyrexia (6.95%)

In majority of studies most common intra operative complication was PPH and post-operative complication was Puerperal pyrexia.

Extension of uterine wound and bladder injuries were seen mainly in obstructed labour and prolonged labour cases, who were reported very late.

In my study no maternal mortality because of good intra operative, post-operative care with adequate blood and blood products availability.

Most common perinatal morbidity was meconium aspiration syndrome and perinatal mortality was preterm and prematurity.

Table 13: Cause of Perinatal morbidity and mortality

Study	Cause for Perinatal Morbidity	Cause for Perinatal mortality
Sharmila G <i>et al.</i> ^[2] (2016)	Birth asphyxia	Preterm
MD Munusamy <i>et al.</i> ^[3] (2018)	MAS	-
Rajput N <i>et al.</i> ^[4] (2017)	Birth asphyxia	Birth asphyxia
Himabindu P <i>et al.</i> ^[9] (2015)	Preterm	MAS
Present study	MAS	Preterm

In most of studies perinatal morbidity and mortality were because of preterm and prematurity leading to perinatal asphyxia and meconium aspiration syndrome ^[10].

Conclusion

- Nil maternal mortality in our study because of good intra operative, post-operative care with adequate blood and blood products availability.
- Neonatal Outcome distribution-majority of babies 94.1% were Alive.
- NICU Admission - Out of 119babies (Twins4) 98(82.4%) were not admitted in NICU, 21(17.6%) Babies were admitted in NICU.
- Majority cases were with Birth weight of 2.6-3.0kgs (39.5%).
- Meconium aspiration syndrome was most common perinatal morbidity and second most common was Respiratory distress syndrome.
- Resuscitative Measures out of 21 babies admitted in NICU 36.4% were intubated, 36.4% were

Tactile stimulated and 27.3% were Ambu done.

- Most common cause of perinatal mortality was preterm and prematurity of the babies.

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