

## Primary caesarean section in multiparous women: A clinical study from tertiary care centre in North East India

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### Abstract

**Introduction:** This study intends to analyse the primary caesarean section in multiparous women.

**Objectives:** To study the incidence, indications, maternal and fetal outcome in primary caesarean section in multiparous women.

**Materials and Method:** It is a prospective study of over 150 cases of primary caesarean section done in multiparous women with previous normal vaginal deliveries carried out in the department of Obstetrics and Gynecology at RIMS, Imphal, Manipur during the period from October 2010 to march 2012.

**Results:** Maximum incidence of caesarean section in parous women with previous vaginal deliveries was seen in 30-34 years age and majority were para 2. Malpresentations (23.3%), CPD (20%), antepartum hemorrhage (19.3%) and fetal distress (12%) were the main indications for primary caesarean section. The commonest intraoperative complication was Atonic PPH (6%) followed by extension of uterine incision (3.4%). Maternal morbidity was seen in 20 cases (13.3%). Febrile morbidity was the commonest postoperative morbidity followed by UTI. Perinatal morbidity was seen in 26 cases, common causes being meconium aspiration syndrome (5.19%) followed by birth asphyxia (4.5%) and perinatal mortality was seen in 13 cases. There were no maternal deaths in the present study.

**Conclusion:** Many unexpected complications occur in multiparous woman. Proper care during intra and postpartum period has reduced metrnal mortality and morbidity in our study. So multiparous women in labour should be managed with utmost precautions as that of primigravida.

**Keywords:** Primary, Multipara, Maternal morbidity, Neonatal outcome.

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### Introduction

Caesarean section is the most common and oldest obstetrical operation being indispensable even in modern obstetrics and is now increasing in incidence.<sup>(1)</sup> The primary caesarean section delivery defined as birth of a fetus delivered by caesarean section to the mother with no previous history of caesarean section.<sup>(2,3)</sup>

Multiparous women are one who has completed two or more pregnancies to the period of viability. Multi-parity is a problem associated with low age at marriage, low rate of literacy, low per-capita income, high perinatal mortality, preference for male child and ignorance about family planning measure.<sup>(4)</sup> Some multipara deliver with relative ease even in difficult labour presentations and this gives a false sense of security. Hence it invites laxity on part of inexperienced and junior obstetricians as well as patients. It is for these reasons that one attention has been directed to the indication for cesarean section in women who have previously delivered vaginally.<sup>(5)</sup>

### Aims and Objectives

The present study focuses on the indications, maternal and fetal outcome of primary caesarean section in multiparous women.

### Materials and Method

It is a prospective study of over 160 cases of caesarean section done for the first time in parous women with previous normal vaginal deliveries carried out in the department of Obstetrics and Gynecology at RIMS, Imphal, Manipur during the period from October 2010 to March 2012. Multipara of >28 weeks' gestation (gravida 2 and above), each of whom has had a previous vaginal delivery of viable neonate were included in the study.

Detailed case history including name, age, religion, parity, literacy, occupation, socioeconomic status, dietary habits, menstrual, obstetrical and gynecological history, family and personal history, medical and surgical history and the patient's chief complaints were recorded in the proforma. A thorough general physical examination was done. A through systemic examination including respiratory system, CVS and CNS examination were carried out. Proper obstetric examination done. Uterine contractions and its frequency and nature were noted in those patients with onset of labor. Auscultation of the fetal heart sound was carried out noting its rate and rhythm. Per vaginal examination was done (if no contraindication) and following were noted- Dilatation and effacement of cervix, status of the membrane, station of the presenting part, and pelvic assessment.

All the routine investigations including the complete hemogram, urine routine examination, bleeding time, clotting time, blood grouping and Rh typing, liver and kidney function tests, blood sugar estimation, serum electrolytes and sonography were done.

Details of operation were recorded including the intra-operative findings and complications. Postoperative complications both maternal and fetal were recorded. Information and clinical observations recorded were studied and analyzed. A pre-designed

proforma was used for recording and documentation of the cases included in the study.

### Results

Out of 15,170 deliveries during this period, around 4158 caesarean sections were done, which represented 27.40% of all deliveries. Incidence of primary caesarean section in parous women is 1.83% of all deliveries.

**Table 1: Incidence of Caesarean section**

Incidence	No of cases	Compared with total no of deliveries (%)	Compared with total no of caesarean section(%)
Total number of deliveries	15,169		
Total No. of caesarean section	4158	27.4%	
Incidence of primary CS in multiparous women	278	1.83%	6.68%

Most of the women undergoing primary cesarean sections were in 30-34 years age group (36.6%) and the lowest number were in above 40 years (2%).

In our study 50% of the patients belonged to gravida-2 followed by 3rd gravida with incidence of 24.4%. There were 19 grand multipara in this study, incidence is 12.2%.

Maximum number of cases were booked patients 62%, and 38% were unbooked patients. Cases were referred to as booked if they had atleast three antenatal checkups.

In 85.3% of women cesarean section was done when they were in labour. 22 women (4%) underwent elective caesarean section. The indication were being post term pregnancy (3 cases), gestational DM (2 cases), breech presentation.

**Table 2: Various indications for primary Caesarean section**

Type of operation	No of cases	Percentage
Emergency	128	85.3%
Elective	22	14.7%

Malpresentations (23.3%), CPD (20%), antepartum hemorrhage (19.3%) and fetal distress (12%) were the major indications for primary caesarean section. Among the antepartum hemorrhage placenta previa is more common than abruptio placenta.

**Table 3: Intraoperative complications**

Intra op complications	No of cases	Percentage
PPH	9	6%
Extension of uterine incision	5	3.4%
STH	3	2%
Broad ligament hematoma	1	0.7%
Placenta accreta	1	0.7%

Around 19 patients had intraoperative complications with an incidence of around 12.6%. These complications were commonly seen in patients with obstructed labour, and in patients with antepartum hemorrhage. Subtotal hysterectomy was done in three cases, two for atonic PPH and one for placenta previa. In 5 cases there was extension of uterine incision and was sutured.

**Table 4: Maternal morbidity: Postoperative complications**

Causes of morbidity	No of cases	Percentage
Fever	8	40%
UTI	5	25%
Paralytic Ileus	4	20%
RTI	2	10%
Wound gaping	1	5%

As shown in the table postoperative morbidity was present in 20 patients, among them febrile morbidity and UTI were more common and seen in 8 and 5 cases

respectively. The high postoperative morbidity is due to the fact that most of the cases referred from peripheral centers handled outside by untrained dhais.

**Table 5: Neonatal outcome**

Outcome	No of cases	Percentage
Live births	148	96.1%
Preterm	14	9.09%
Term	131	85.05%
Post term	3	1.9%
Still birth	6	4%

In the study there were 148 live births and 06 stillbirths. Out of 148 there were 14 preterm babies.

**Table 6: Neonatal morbidity**

NICU admission	No of cases	Percentage
MAS	8	5.19
Birth asphyxia	7	4.56
Prematurity	4	2.59
Sepsis and pyrexia	4	2.6
IUGR	2	1.3
Convulsion	1	0.64
Total	26	17.3

Out of 148 live births 26 babies were admitted in NICU and majority of them were for meconium aspiration syndrome and birth asphyxia.

## Discussion

In this incidence of primary cesarean section in multipara is 6.68% of all cesarean section. The results of the study have been compared with previous studies done on multiparous women by different authors. Incidence of caesarean section is high in our study (27.4%). But incidence of primary caesarean section in multipara (1.83) is comparable to the studies by Praag et al<sup>(6)</sup> (1.9), Palanichamy et al<sup>(7)</sup> (1.6) and Jacob et al<sup>(5)</sup> (2.06).

In our study 50% of multiparous women undergoing primary caesarean section were in the 30-34 years age group. Heija et al<sup>(8)</sup> in their study stated that the primary caesarean section rates in multiparous women less than 25, 25 to 34 and over 34 years of age were 3.1%, 6.4% and 9.5% respectively which was not comparable with our study.

In a study conducted by Ford J et al<sup>(9)</sup> primary cesarean section in multiparous women was comparable with our study, maximum number of cases were para two. The four main indications for cesarean section in our study were malpresentations, CPD, antepartum haemorrhage and fetal distress. Malpresentations were present in 23.3% of the cases which was comparable with the study by Jacob et al<sup>(5)</sup> it was high when compared to Sen et al.<sup>(10)</sup> The incidence of transverse lie increases with parity occurring 10

times more frequently in patients of parity four or more than in a primigravida. Relaxation of the abdominal wall with a pendulous abdomen allows the uterus to fall forwards deflecting the long axis of the birth canal into an oblique or transverse position. "Pelvic contraction" and placenta previa act similarly by preventing engagement.

In this study cephalopelvic disproportion was present in 20% of the cases which was comparable to the studies done by Duckman et al,<sup>(11)</sup> Vashishta et al<sup>(12)</sup> and Jacob et al.<sup>(5)</sup> From the above studies it is evident that disproportion does occur in multipara, though osteomalacia as an etiological factor may not be encountered in the present day. It is to be stressed that there is a tendency to allow even closely observed patients to go too long in a non-productive type of labour just because they are multipara.

In this study, incidence of fetal distress as an indication of cesarean section is 12% and which was higher than that shown in studies by Vashishta et al,<sup>(12)</sup> Praag et al,<sup>(6)</sup> Jacob et al<sup>(5)</sup> and Palanichamy et al<sup>(7)</sup> and lower than the study by Sikdar et al.<sup>(13)</sup> In a study by Praag et al<sup>(6)</sup> also, central placenta previa was common with an incidence of 38.24% and 28 patients with placenta previa and 16 patients with abruptio placentae received blood transfusions, 3 patients with abruptio placentae underwent cesarean hysterectomy. In the present study 26 patients with placenta previa and 3 patients with abruptio placentae received blood transfusion and 1 patient with placenta previa underwent cesarean hysterectomy.

Cesarean section is major operative procedure. There is potential for injuries to ureter, bladder, bowel, blood vessels and lacerations of cervix, vagina and broad ligaments. It also increases the risk of post partum hemorrhage, pulmonary embolism, paralytic ileus, urinary tract infections and other infections. In our study with good intra operative and post operative care there was no maternal mortality. The causes of maternal morbidity were fever, urinary tract infection, lung complications, paralytic ileus, wound infection and puerperal sepsis. The postoperative maternal morbidity in our study was less compared to studies by Jacob et al<sup>(5)</sup> and Sen et al.<sup>(10)</sup>

Perinatal mortality is very high when cesarean section is performed as an emergency procedure as in placenta previa, accidental hemorrhage, toxemia, cord prolapse and obstructed labour. Common causes of neonatal deaths are prematurity, fetal asphyxia and septicemia. In this study out of 154 babies there were 13 perinatal deaths (8.4%) which is comparable to the study by Praag et al<sup>6</sup> and is less compared to studies by Jacob et al<sup>(5)</sup> and Sikdar et al.<sup>(13)</sup>

## Conclusion

In multiparous women though primary caesarean section accounted for 1.99% of total deliveries, they were associated with high maternal and fetal morbidity.

After this study we may conclude that many unexpected problems occur in multiparous women who will undergo primary caesarean section. Appropriate care during intra and postpartum period have reduced maternal mortality and morbidity in our study. Increased maternal morbidity was noted due to unidentified cephalopelvic disproportion in referred cases resulting in obstructed labour.

This study highlights the importance of good antenatal practices and appropriate labor management. Difficult vaginal birth and obstructed labor have higher morbidity and mortality than an elective cesarean section. The availability of good services and improved surgical expertise has made cesarean section much safe.

### References

1. Cunningham GF, Leveno KJ, Bloom SL, Hauth JC, Gilstrap LC III, Wenstrom KD. Cesarean delivery and peripartum hysterectomy. In: Cunningham GF, Leveno KJ, Bloom SL, Hauth JC, Rouse DJ, Spong CY, et al. Editors Williams Obstetrics, 22<sup>nd</sup> ed. USA: Appleton & Lange; 2005. p. 587-604.
2. Hickl EJ. The safety of cesarean section. In: Popkin DR and Peddle LJ, Eds. Women's Health Today. London: Parthenon Publishers, 1994. P. 65-70.
3. Oumachigui, Asha. Rising rates of caesarean section: the way ahead. Indian J Med Res 2006;56(4):298-300.
4. Basak S, Lahiri D. Dystocia in Eutocic multigravidae. J Obstet Gynecol India 1975;25:502-7.
5. Jacob S, Bhargava H. Primary cesarean section in multipara. J Obstet Gynecol India 1972;22(6):642-50.
6. Ivan G, Praag V, Tovell HMM. Primary cesarean section in the multipara. J Obstet Gynecol 1968;32(6):813-24.
7. Palanichamy G. A study of 900 primary cesarean sections with special reference to 151 primary cesarean section in grand multiparas. J Obstet & Gynec India 1976;26:374-379.
8. Heija A A, Rasheed R, El-Qaraan O. Effect of age and parity on primary cesarean section rates. Clin Exp Obstet Gynecol 1998;25(1-2):38-9.
9. Ford J, Grewal J, Mikolajczyk F, Meikle S, Zhang J. Primary cesarean delivery among parous women in the United States, 1990-2003. Obstet and Gynecol. 2008;112(6):1235-41.
10. Sen SP. Primary cesarean section in multipara. J Obstet Gynecol India 1967 June;17:522-9.
11. Duckman S, Chen W, Gungor T, Bonura F. Disproportion in multipara, fact or philosophy. Am J Obstet and Gynecol 1968; 101:1001-05.
12. Vashishta K, Rekha L, Gupta N. Primary cesarean section in grand multipara. J Obstet Gynecol India 1972;26:651-57.
13. Sikdar K, Modak G. A clinical study of grand multiparas. J Obstet Gynecol India.1980;30:603-08.