

**Cesarean Section in Primiparous Women in A Tertiary Care Centre in South Tamilnadu: A Retrospective Study**S S Gayathri<sup>1</sup>, Sumathi<sup>2</sup>, Sudha<sup>3</sup>, Swathisree<sup>4</sup><sup>1</sup>Associate Professor, Dept. of Obstetrics and Gynecology, Madurai Medical College, Madurai<sup>2</sup>Professor and HOD, Dept. of Obstetrics and Gynecology, Madurai Medical College<sup>3</sup>Associate Professor, Dept. of Obstetrics and Gynecology, Madurai Medical College, Madurai

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Conflict of interest: Nil

**Abstract:**

**Introduction:** Cesarean section is a life-saving commonest surgical procedure undertaken for medical reasons to save the lives of women and their babies. The primary cesarean section rate is drastically increasing over the last two decades. Aims and objectives: To determine the rate, antenatal risk factors, indications, intraoperative, and postoperative complications of cesarean delivery in primiparous women.

**Materials and Methods:** This is a retrospective study conducted from March 2022 to February 2023. The study included all primiparous women who were delivered by cesarean section after viable gestation. The information was collected from the records and then analyzed. Results: The total number of deliveries during the study period was 15192 out of which cesarean deliveries were 6994 (46.07%), and the number of primiparous women who underwent cesarean section was 3926 (25.84%). The most common age-group in the study group was 21–25 years (42.29%). Out of 3926 women, 459 (11.69%) were preterm, 2390 (60.87%) were term, and 1077 (27.43%) were postdated pregnancy. Most 3118 (79.41%) of them were referred from peripheral hospitals. The most common antenatal risk factors were hypertensive disorders 836 (21.29%), anemia 741 (18.87%) postdated pregnancy 1077 (27.43%). The most common indication of cesarean section was non-reassuring fetal heart rate (FHR) and fetal distress (31.61%) followed by Cephalopelvic disproportion (22.96%). Out of 3926 women, 3441 (87.64%) had undergone emergency cesarean section. 372 (9.47%) patients had postpartum haemorrhage, four (0.10%) had peripartum hysterectomy. There was two maternal mortality (0.05%) postoperatively during the study period.

**Conclusion:** Women who need cesarean section should be identified accurately to reduce the rate of cesarean section in primipara and also to reduce maternal and fetal complications.

**Keywords:** Cesarean, Primipara, Tamilnadu

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**Introduction**

Caesarean delivery is a lifesaving commonest surgical procedure done under some circumstances to save the lives of mother and baby.[1] The cesarean section on first time mothers is drastically rising over the last three decades. caesarean delivery on maternal request is also on the rise worldwide.

Caesarean delivery is associated with maternal and fetal complications that includes risks of anaesthesia, postpartum haemorrhage, infection, thromboembolic disorders for the mother and for the baby, increased risk of childhood asthma, obesity. Subsequent pregnancies may need repeat cesarean deliveries and there is increased risk of uterine rupture, placenta previa and accreta spectrum, peripartum hysterectomy [2].

Cesarean delivery on maternal request is also on the rise worldwide. Caesarean delivery on maternal request (CDMR) is defined as cesarean section done on maternal request provided there is no maternal or fetal indication.[3]

**Aims and Objectives**

To evaluate the primary cesarean rate, risk factors, indications, intraoperative, and postoperative complications of cesarean delivery in primipara.

**Materials and Methods**

This is a retrospective study, conducted in the Department of Obstetrics and Gynecology from March 2022 to February 2023.in Government Rajaji Hospital and Madurai Medical College, Madurai, Tamilnadu.

**Inclusion Criteria:**

1. Primigravida who underwent lower segment cesarean delivery after viability.

**Exclusion Criteria:**

1. Primigravida who had cesarean at less than 28 weeks of pregnancy
2. Previous uterine surgeries like uterine septal resection, myomectomy

Proforma formed and all the particulars of the mother like age, obstetric history, details of

referral, antenatal risk factors, rate, indication, types of cesarean section, intraoperative, and postoperative complications were collected from hospital records and then analyzed.

**Results**

The total number of deliveries in the study period was 15192; among 15192 deliveries 6994 (46.07%) were cesarean deliveries, and the total number of primigravida women who were delivered by cesarean was 3926 (25.84%).

**Table 1: Distribution of cases according to demographic factors**

Factor	Total Number of Cases	Percentage%
Age( years )		
<20	285	8.64
21-25	1394	42.29
26-30	1072	32.54
>30	545	16.53
Gestational age in weeks		
< 37	459	11.69
37 to 40	2390	60.87
>40	1077	27.43
Referral from other institutions	3118	79.43

About 1394 women (42.29%) who underwent cesarean section belonged to age 21 to 25 years. Of the 3926 women, 459 (11.69%) were delivered preterm, 2390 (60.87%) delivered at term, and 1077 (27.4%) were postterm pregnancy. Most of them (3118/79.43%) were referred from primary health centres and other district hospitals (Table 1) n

**Table 2: Antenatal risk factors**

Risk factor	N	Percentage %
Anaemia	741	18.87
hypertensive disorders	836	21.29
Postdated	1077	27.43
PROM	421	12.77
Oligohydramnios	357	10.83
IUGR	232	7.03
Rh negative pregnancy	101	3.06
Malpresentation	119	3.61
Multiple pregnancies	39	1.18
Cord prolapse	3	0.09

In the study group, common antenatal risk factors present were postdated pregnancy (1077/27.43%) hypertensive disorders (836/27.29%), anemia (741/18.87%), oligohydramnios (357/10.83%), and prelabour rupture of membranes (421/12.77%). Some mothers had more than one antenatal risk factors (Table 2).

**Table 3: Allocation of cases according to the type of caesarean section**

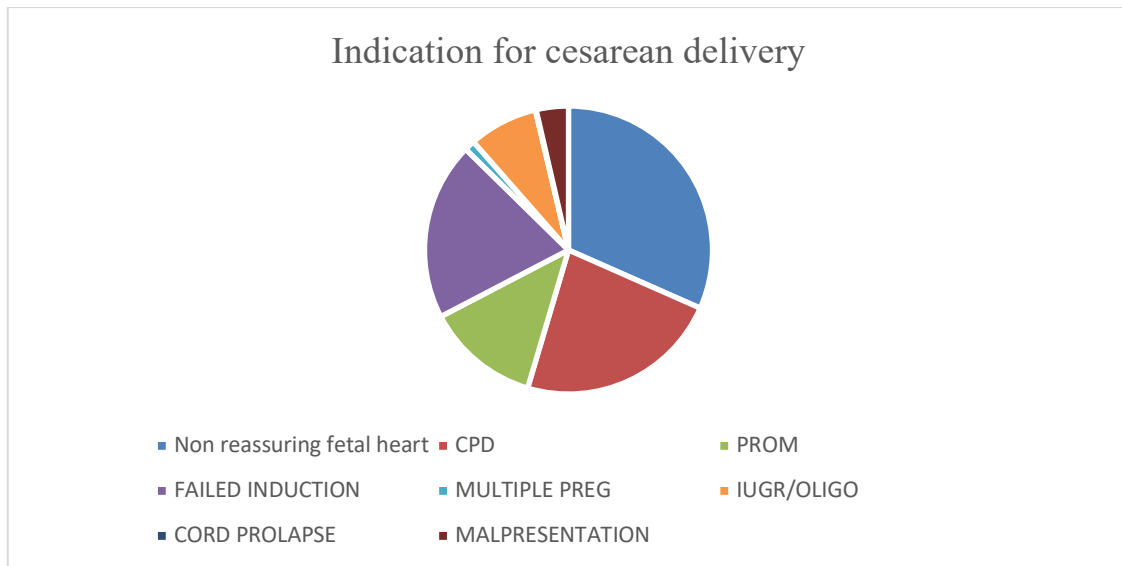
Type	N	Percentage %
Elective	485	14.71%
Emergency	3441	87.64%

The most common indication of cesarean delivery was nonreassuring FHR and fetal distress (1042/31.61%) followed by Cephalopelvic disproportion (757/22.96%) (Fig. 1). Out of 3296 cases, 3441 (87.64%) underwent emergency cesarean delivery, while 485 (14.71%) had an elective cesarean delivery (Table 3).

**Table 4: complications**

Complications	N	Percentage %
Postpartum haemorrhage	372	9.47
Hysterectomy	4	0.12

372/9.47% patients had postpartum hemorrhage (PPH) and four(0.12%) had underwent hysterectomy (Table 4). There were two maternal mortalities (0.05%) in the study period.



**Figure1: Indication for Cesarean Delivery**

#### Discussion:

Caesarean delivery is the commonest obstetric surgery. The rate of cesarean section in primiparous women in this study was (46.07%), and the number of primiparous women who underwent cesarean section was 3926 (25.84%).

From the study conducted by saha et al.,[4] the median age-group of primigravida undergoing cesarean section was 20–25 years and the main indications were Fetal distress (35%) and pre-eclampsia (14%) which is almost similar to the present study, also majority of them underwent emergency cesarean section 70%. In this study, the maximum (60.87%) number of primipara undergoing cesarean section belonged to term pregnancy similar to the study by Gary.[5]

According to the study carried by Mahima jain et al.[6] shows anemia, oligoamnios and pre-eclampsia are the common antenatal risk factors and fetal distress is the common indication of cesarean section in primipara. In our study, anemia (18.87%) is one of the common antenatal risk factor, and non-reassuring FHR is the commonest (31.61%) indication of cesarean section. In our study 372(9.47%) patients had postpartum haemorrhage ; PPH was managed medically, four(0.10%) had peripartum hysterectomy. Postoperatively there was two (0.66%) maternal mortality during the study period, which was probably due to DIC associated with HELLP syndrome . Improved surgical skill, good anesthetic and surgical techniques, use of antibiotics preoperatively and postoperatively, availability of blood and blood products, and uterotonic drugs were the reason for the lesser rate of intraoperative

and postoperative complications. In this study, out of 3296 primiparas, 119 (3.61%) had malpresentation as the indication of lower segment cesarean section. In case of breech presentation, a trial of external cephalon version at 36 weeks for multigravida and 37 weeks for primigravida and a trial of vaginal delivery should be given along with strict monitoring and with the involvement of senior obstetrician . Even in the case of twin pregnancy, if first of twin is in vertex presentation, vaginal delivery can be offered [7]. Improving confidence in operative vaginal deliveries also can have a greater impact in reducing the cesarean sections.

In case of tocophobia, it is reasonable to inform the pregnant women about the potential risks of cesarean section at maternal request in the current pregnancy and also in the future pregnancies.[3]

Conclusion: When medically justified, caesarean sections can effectively prevent maternal and perinatal mortality and morbidity. However, there is no evidence showing the benefits of caesarean delivery for women or infants who do not require the procedure. Although caesarean section has become a very safe procedure in many parts of the world, it is not without risk. As with any surgery, caesarean section is associated with short- and long-term risks with potential implications in future pregnancies. These risks are higher in women with limited access to comprehensive obstetric care and in settings that lack the facilities and the capacity to properly conduct safe surgery and appropriately manage its complications. [8]

The obstetrician's role is to decipher the counselling to the mothers and to respect the

woman's autonomy in deciding the mode of delivery.

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