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Original Research Article

Study of primary caesarean section among multiparous women in tertiary care centre of Bastar region: a prospective study

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ABSTRACT

Background: In this study was to know the incidence of primary Caesarean section in multigravidas, its indications among these patients.
Methods: Prospective observational study. All deliveries at Late Baliram Kashyap Memorial Hospital and Govt Medical college Jagdalpur, Bastar, Chhattisgarh, India. 8729 deliveries during the period of 2 year from January 2022 to December 2023. Multigravida women admitted to hospital with pregnancy of >28 weeks gestation (gravida 2 and above), each of whom has had a previous vaginal delivery of >28 weeks gestation were included. Women with previous abortions and previous section were excluded. Indication of caesarean section, obstetric history, antenatal history.
Results: A total of 8729 deliveries were conducted in the institute Lt shri BRKM Govt Medical College Jagdalpur Chhattisgarh among which 2709 (31%) were caesarean sections and 6015 (68.9%) were conducted vaginally. Total number of primary CS in multiparous women were 642 about 23.6% of the total CS rate. The mean age is 26±4 years ranged from 18 – 40 years. Most of the patients were in the age group of 26-30 years (45.01%) followed by 21-25 years (26.01%) Out of 642 primary cs in multipara, 316 (50.6%) cases underwent emergency CS whereas rest 326 went elective CS. Maternal and fetal indications contributed 21% and 79%.
Conclusions: Many unforeseen complications occur in women who previously had a normal vaginal delivery. With this study we came to the conclusion that fetal distress is the major contributor of primary CS in multigravida. Thus, preventive measures should be taken to decrease the fetal distress and non-progress of labour.

Keywords: Primary caesarean section, Multigravida, Indication of caesarean section

INTRODUCTION

Caesarean section is one of the most widely performed surgical procedures in obstetrics worldwide. It was mainly evolved as a lifesaving procedure for mother and fetus during the difficult delivery.[1] The quick growth in the rate of CS delivery has been a worldwide problem, and research done throughout India have revealed an alarming increase in the frequency of CS deliveries.[2,3] Multiparous means those who had delivered once or more after the age of viability. It includes multipara (para 2, 3, 4) and grand multipara (para more than 4).[4] Primary caesarean section in the multipara means first caesarean section done in the patients who had delivered vaginally once or more. Mainly, the baby and the placenta are responsible for caesarean section in multipara. Multipara may still have cephalopelvic disproportion even having previously delivered a full-term child vaginally. Since the fetus increases in size with multiparity, the size of fetus and fetal head should be carefully estimated. In multiparous patients, malpresentations are favoured by a pendulous abdomen and lordosis of the lumbar spine and in any case that is usual for the head not to engage in the pelvis until the onset of labor.5 However, the main CS rate at teaching hospitals is increasing as a result of technical advancements such as ultrasound reporting of

oligohydramnios, cord around neck, and doppler studies of missing or reversed diastolic flow, infertility therapies, aberrant CTG, and on-demand CS from women and also the majority of unbooked patients live in rural regions and are frequently referred to maternity centres when issues emerge during pregnancy or labour.[6,7] There are several indications of caesarean sections, chiefly severe contraction of the pelvis, major degree of placenta previa, and severe preeclampsia and eclampsia.[8] The other indications include fetal distress, bad obstetric history (BOH) and difficult vaginal operative delivery, APH, PIH, Big baby, twin pregnancy, IUGR, induction failure, and post-dated pregnancy. However, the indications of caesarean section are not limited to the obstetrics and medical factors, but also extend to various socioeconomic, ethical, and medicolegal factor resulting in an alarming increase in caesarean section rate all over the world.[9] It is often held that if a mother delivers her baby normally, all subsequent births will be normal as well, leading to multiparous women ignoring standard pregnancy check-ups. It is also critical to investigate the CS indications and outcomes in women who have previously given birth vaginally.[10,11] Hence the present study was undertaken with the objective to know the incidence and indications of primary CS in multi-gravidas who had earlier delivered successfully by vaginal route.

METHODS

It was a prospective study of primary caesarean section in multigravida admitted at late Baliram Kashyap Memorial Hospital and Govt Medical College Dimrapal, Jagdalpur Bastar (Chhattisgarh, India) during the period of 2 year from January 2022 to December 2023. Multigravida women admitted to hospital with pregnancy of >28 weeks gestation (gravida 2 and above), each of whom has had a previous vaginal delivery of >28 weeks gestation were included. Women with previous abortions and previous section were excluded. For data collection, information was collected in a paper-based study pro forma about demographic profile, obstetric history, antenatal history, intraoperative details, maternal, and fetal outcome which were recorded from the case sheet/history documents. Various indications of LSCS according to case sheet were noted. All the selected cases were recorded in a master chart.

RESULTS

A total of 8729 deliveries were conducted in the institute Lt shri BRKM govt medical college Jagdalpur Chattishgarh among which 2709 (31%) were cesarean sections and 6015 (68.9%) were conducted vaginally. Total number of primary CS in multiparous women were 642 about 23.6% of the total CS rate. The mean age is 26±4 years ranged from 18-40 years. Most of the patients were in the age group of 26-30 years (45.01%) followed by 21-25 years (26.01%) as shown in Table 1.

Table 1: Age wise distribution of patients.

Age group (in years)	No. of patients
<=20	10
21-25	167
26-30	289
31-35	127
36-40	39
>41	10
Total	642

Table 2: Gravida.

Gravida	Frequency
G2	287
G3	197
G4	98
G5	35
G6	16
G7	6
G8	2
G9	1
Total	642

Table 3: Parity status of patients.

Parity	Frequency
P1	306
P2	190
P3	92
P4	33
P5	10
P6	7
P7	1
P8	1
Total	642

Table 4: Mode of delivery.

Mode of delivery		Frequency	Total
Vaginal	Preterm Term	1005 5010	6015
LSCS	Preterm Term	440 2269	2709

Table 4 shows the mode of delivery. In majority of cases, 6015 (68.9%) delivery was vaginal while 2709 (31%) patients underwent lower segment caesarean section.

Out of 642 primary cs in multipara, 316 (49.2%) cases underwent emergency CS whereas rest 326 went elective CS. Maternal and fetal indications contributed 21% and 79%. The most common maternal indications for caesarean section were nonprogress of labour/ failed induction 79 (12.2%) while 117 (18.2%) fetal distress was the commonest fetal indication for CS.

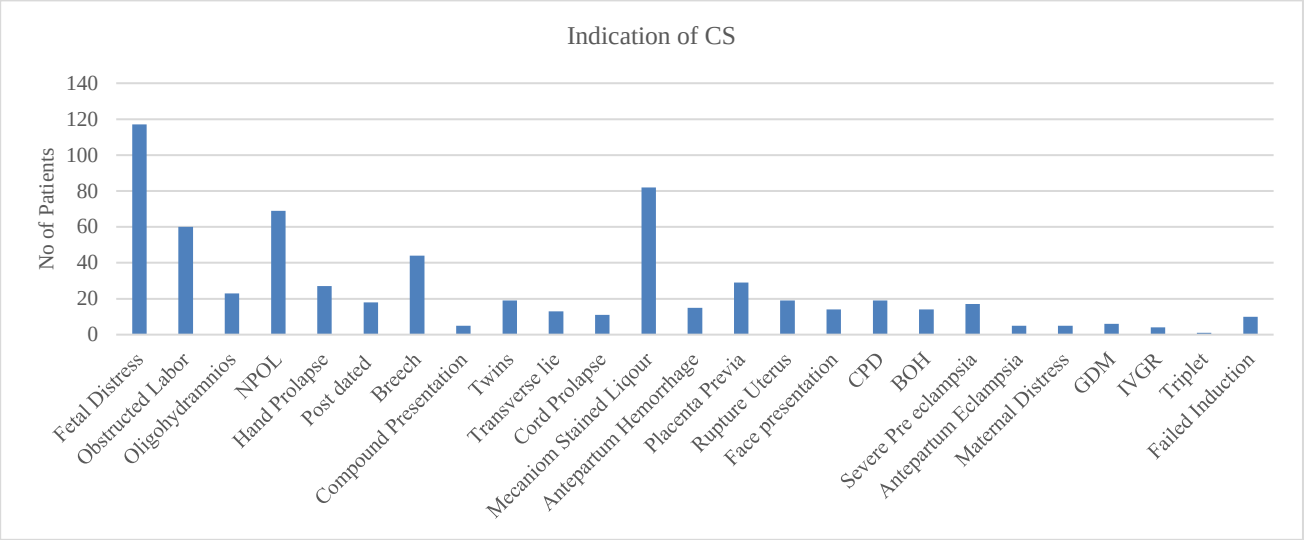

Figure 1: Maternal and fetal indication for caesarean section.

DISCUSSION

In the present study, majority of patients were from the age group of 26-30 years (45.01%) followed by 21-25 years (26.01%) which is comparable to previous studies.[12,13,24] Most of the patients (44.7%) were Gravida - 2 followed by Gravida-3 (30.68%) as similar to study conducted by Ramavath et al.[13,14] It reflects that in last few years' family size has been shifted from 4-5 children per couple to 2-3 children per couple. So, grand multiparity has been significantly reduced in the past few years.

A multipara who has earlier delivered vaginally may still require a CS for safe delivery4 and the incidence of primary CS in multigravida has naturally been increased. Total number of deliveries during the study period of 2 year was 8724 and the total number of primary CS in multipara was 642 the incidence of primary CS in present study was 23.6%. Boyle et al reported that the primary CS rate among the multipara was 11.5%.[15] However the reports from India showed that the primary CS rate range to 21.5% 262019-2021 (NHFS). The incidence of primary CS in elective and emergency cases was 50.6% and 49.4% respectively almost equal; this explains the higher number of elective CS in our study which is different from the comparable with the study done by Sree Sailaja et al.[18]

Majority of cases (45.01%) with primary CS belonged to 26- 30 years age group; this is comparable with the earlier studies.[19,20] There were only 127 (19.7%) cases in the age group of 31-35 years and 167 (26.01%) cases in the age group of 21-25 years. This observation is rather surprising because obstetric complications enhance considerably with advancing age, when operative delivery may be indicated but here operative delivery is more among the early age group. However, the risk of caesarean delivery increased with each 5 years age increase among women of 20 years age or older perhaps be explained by the fact that in our country most of the women complete their childbearing function by the age of 35 years. The incidence of primary CS in parity 1 (47.1%), parity 2 (29.5%), parity 3 (14.3%), parity 4 (5.14%), parity 5 (1.5%), parity 6 (1.09), parity 7 (0.15%), parity 8 (0.15%) still about 3% patients are grand multipara. This shows a decreasing incidence of CS as parity increases. It is difficult to pinpoint exactly one specific indication of the operation in all cases as most of the time CS was indicated because of several factors put together while preparing the tables, the cases with multiple indications were carefully scrutinized and the main indications were charted. In current study maternal and fetal indications contributed 21% and 79% of the total cases respectively. The fetal distress was a major contributor to primary CS in multigravida which was also the most common indication in other studies common indication was malpresentation accounting for 17.6% of cases as similar to study conducted by Ramavath al and Mallika et al.[21,22] Failed induction was the indication in (17.1%) cases forming the most common maternal indication of primary CS whereas it was 5.45% in a study by Khairun Nahar.[23] Majority of cases that underwent CS due to failed induction were hypertensive disorders (3.37%), post-date (2.8%) and IUGR (1.5%). Other indications of induction were BOH, oligohydramnios, antepartum haemorrhage. Obstructed labour was the next common maternal indication of primary CS (9.3%) which is correlated with the study conducted by Gibb et al.[24] There were 1 cases of triplet, rupture uterus 19 (2.9%), twins 19 (2.9%) among twins mostiy were DCDA. The point to observe here is that in this century also we are having about 19 cases for rupture uterus in unscarred uterus which indicates the peripheral referral system to be strengthened.

CONCLUSION

With this study we came to the conclusion that fetal distress is the major contributor of primary CS in multigravida. Thus, preventive measures should be taken

to decrease the fetal distress and non-progress of labour. Proper antenatal care with evaluation, early detection and management of high risk can reduce the risk of intrapartum fetal distress. The fetal distress can be reduced by proper antenatal care like ultrasonography for liquor status near term, antenatal steroids and neuroprotection in preterm fetus, FHR monitoring on CTG. FHR tracing in CTG along with fetal scalp pH will be confirmatory. Good clinical pelvimetry, pelvic examination for adequacy of pelvis to rule out CPD and contracted pelvis, assessing uterine contraction to rule out incoordinate uterus, detection of malposition and malpresentation which reduce intrapartum events of failed progress leading to caesarean section. And lastly the training of the peripheral staff to provide timely referral service which will lead to decrease in CS of obstructed labour and rupture uterus.

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Ethical approval: The study was approved by the Institutional Ethics Committee

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