Vol. 2 No. 2 (2025)

ONLINE ISSN :3007-309X
PRINT ISSN :3007-3081

Journal of Medical & Health Sciences Review

EXPLORING THE FREQUENCY AND INDICATIONS OF PRIMARY CESAREAN SECTION IN UNSCARRED MULTIGRAVIDA PATIENTS: INSIGHTS FROM A TERTIARY CARE HOSPITAL

Dr Mahrukh Manzoor[1*], Dr Erum Majid[2], Dr Mahrukh Hyder[3], Dr Fozia Razzaque[4], Dr Komal[5], Dr Sadia[6]

[1]FCPS Resident, Gynaecology & Obstetrics, MBBS, Ward 9B, Jinnah Post Graduate Medical Center (JPMC), Karachi, Pakistan
[2]Associate Professor, Gynaecology & Obstetrics, FCPS, MBBS, Ward 9B, Jinnah Post Graduate Medical Center (JPMC), Karachi, Pakistan
[3]Assistant Professor, Gynaecology & Obstetrics, FCPS, MBBS, Ward 9B, Jinnah Post Graduate Medical Center (JPMC), Karachi, Pakistan
[4]Senior Registar, Gynaecology & Obstetrics, FCPS, MBBS, Ward 9B, Jinnah Post Graduate Medical Center (JPMC), Karachi, Pakistan
[5]FCPS Resident, Gynaecology & Obstetrics, MBBS, Ward 9B, Jinnah Post Graduate Medical Center (JPMC), Karachi, Pakistan
[6]FCPS Resident, Gynaecology & Obstetrics, MBBS, Ward 9B, Jinnah Post Graduate Medical Center (JPMC), Karachi, Pakistan

ARTICLE INFO:

Keywords:

Caesarean section, Multigravida, Unscarred uterus, Fetal distress, Apgar score, Primary caesarean, Obstetric outcomes.

Corresponding Author:
Dr Mahrukh Manzoor,
Email:
mahrukhmanzoor890@gmail.com

Article History:
Published on 2 May, 2025

ABSTRACT

Objective: To determine the frequency and primary indications of caesarean section among unscarred multigravida patients and assess associated maternal and neonatal outcomes in a tertiary care hospital setting.

Methodology: This cross-sectional study was conducted at the Department of Obstetrics and Gynaecology, Jinnah Postgraduate Medical Centre, Karachi, from January 2024 to July 2024. A total of 189 unscarred multigravida women with singleton pregnancies and cephalic presentation were included through non-probability consecutive sampling. Patients with previous uterine surgery or infertility history were excluded. Data on maternal demographics, indications for caesarean section, and neonatal outcomes including Apgar scores and birth weights were collected and analysed using SPSS version 25.

Results: The mean maternal age was 28.94 ± 4.75 years. Most deliveries occurred at 36–40 weeks of gestation (69.31%). The most common indication for caesarean section was fetal distress (38.09%), followed by pathological cardiotocography (13.22%), non-progressive

labor (8.46%), and antepartum eclampsia (6.34%). Apgar score >6 at birth was observed in 54.49% of neonates, which improved to 80.42% after 5 minutes. Maternal complications included fever (10.36%) and urinary tract infections (8.29%). A significant proportion of patients were unbooked (77.72%) and presented in emergency situations (95.85%).

Conclusion: Fetal distress remains the leading cause of primary caesarean section among unscarred multigravidas. Early identification of risk factors, better antenatal care, and patient education can reduce unnecessary caesarean deliveries and improve maternal and neonatal outcomes.

INTRODUCTION*:*

Caesarean section (CS) still plays a central role in modern obstetrics, often used to prevent maternal end neonatal morbidity in the presence of risk factors for vaginal delivery. Though first pregnancy and scarred uterus are well studied, primary CS in an unscarred multigravida is an important clinical issue in the recent literature[1,2]. Recent South Asian evidence questions the belief that the unscarred multigravida pregnancy is a low-risk one. A study prospectively carried out in India from June 2022 to May 2024 concluded that the incidence of primary CS in multigravida patients was 39.5% with fetal distress (26.5%) and malpresentation (21.4%) being the commonest indications[3]. Likewise, the 2021 tertiary-care data from Meerut, India found that 10.4% multigravidas had indicators of primary CS, which was commonly malpresentation (26.9%) and oligohydramnios (18.6%)[4]. A cross-sectional audit in Nepal revealed 13.4% multipara women had primary CS and 96% were emergency for though (fetal) distress[5]. Similarly, another Bangladeshi study found fetal distress (22.1%) and malpresentation (18.3%) as common indications for CS among multigravida women[6].

A tertiary-level maternity hospital in Pakistan reported 70% of CS among multigravidas: 65% as elective and 27.3% as being for fetal distress[7]. Another report identified failed induction and fetal compromise as the most common indications for primary CS in multiparas[7,] In an Indian retrospective analysis in 2023, 58.5% of all CS were primary and were attributed to placental disease and labour dysfunction[8]. Even previously uneventful multigravida cases demanded antenatal and intrapartum induced precautions, as well was advocated from Coastal South India. Similarly, a provincial audit from Pakistan also recommended that proper CS protocols should be developed to decrease unnecessary surgeries.We sought to determine the incidence and indications of non recurrent CS in unscarred multigravida at a tertiary care hospital in this study. The comparison of these findings with the regional information will also be presented, as well as evidence-based interventions to help improve delivery practices and reduce unnecessary surgical births.

Material and Methods:

A cross-sectional study was conducted at the Department of Obstetrics and Gynecology, Jinnah Postgraduate Medical Center, Karachi. The institutional ethical review board approved the data collection to be conducted between January 2024 and July 2024. on 189 individuals. Inclusion patients were multiple pregnancies with a gestational age of 24 weeks or more, singleton pregnancies, and

cephalad presentation of the fetus. Patients were excluded if they had a previous history of uterine trauma or infertility. Data were obtained from the patients' medical records, including pregnancy history, clinical examination results, labor and delivery information, and neonatal outcomes. Routine examinations, such as hemoglobin levels, blood counts, Rh factor, and obstetric ultrasound, were performed to confirm pregnancy, assess fetal well-being, and identify factors contributing to the birth defects.The primary objective was to determine the frequency and rates of first-time cesarean delivery in patients with intact multiple pregnancies. Indications for cesarean delivery were divided into abnormal fetal cardiotocography (CTG), preterm labor, preeclampsia, placenta previa, meconium staining, placental abruption, and mental status. Secondary objectives were to assess infant outcomes such as Apgar score and 5-week birth weight. Data were analyzed using SPSS version 25. Continuous variables such as age and birth are presented in standard form, and categorical variables such as cesarean section and newborn are presented as frequencies and percentages.

Results:

All 189 patients were included in the study. The average age of the mother was 28.94 ± 4.75 years. The age of the women is shown in Table 1, and the most of it ranged from 24 to 28 (39.15%). At the delivery, the gestational age of pregnancy varied from 24 weeks up to over 40 weeks, and 69.31% of cases occurred between 36 and 40 weeks (Table 2). Most of the patients were multigravida with no history of previous C/S and 131 (69.31%) delivered at term. Distribution of gravida is shown in Figure 1; type of CS shows in Figure 2. Fetal pathological CTG was the most common indication for CS in 72 cases (38.09%) followed by non-reassuring CTG findings in 25 cases (13.22%) and non-progressive labour in 16 cases (8.46%). Antepartum eclampsia and placenta previa, 12 cases each (6.34%), were observed as causes. Other indications were meconium-stained liquor, placental abruption, and unstable maternal mental status (3.70% for each) (Table 3). Figure 3 displays neonatal birth weight distribution with most of the newborns being distributed between 2.5-3.5 kg. Apgar scores at 1 and 5 min are shown in Table 4, Table 5, respectively. The Apgar score >6 was noted in 103 (54.49%) neonates within 1 minute of birth and 152 (80.42%) at 5 minutes. This demonstrates good short-term neonatal outcomes despite caesarean delivery. A few numbers of neonates (13.22%) scored 5minute Apgar between 4 and 6, 2 (1.05%) between1 and 3 and 10 (5.29%) were scored

Table 1: Age wise distribution of cases

Age in Years	Number	Percentage
19-23	18	9.5
24-28	74	39.15
29-33	64	33.86
34-38	27	14.28
>38	6	3.17

Figure 1: Distribution Of Patients According to Gravida

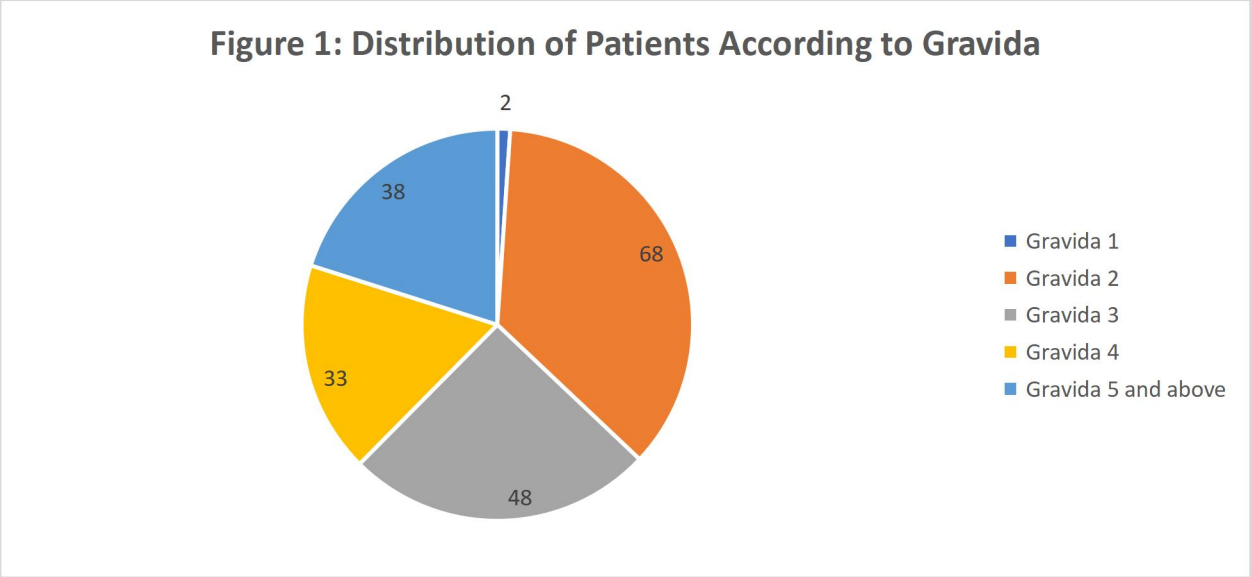

Table 2: Distribution of patients according to the age of gestation

Gestational age in weeks	Number	Percentage
24-28	5	2.64
28-32	6	3.17
32-36	27	14.28
36-40	131	69.31
>40	20	10.5

Figure 2: Shows Type Of Cesarean Section

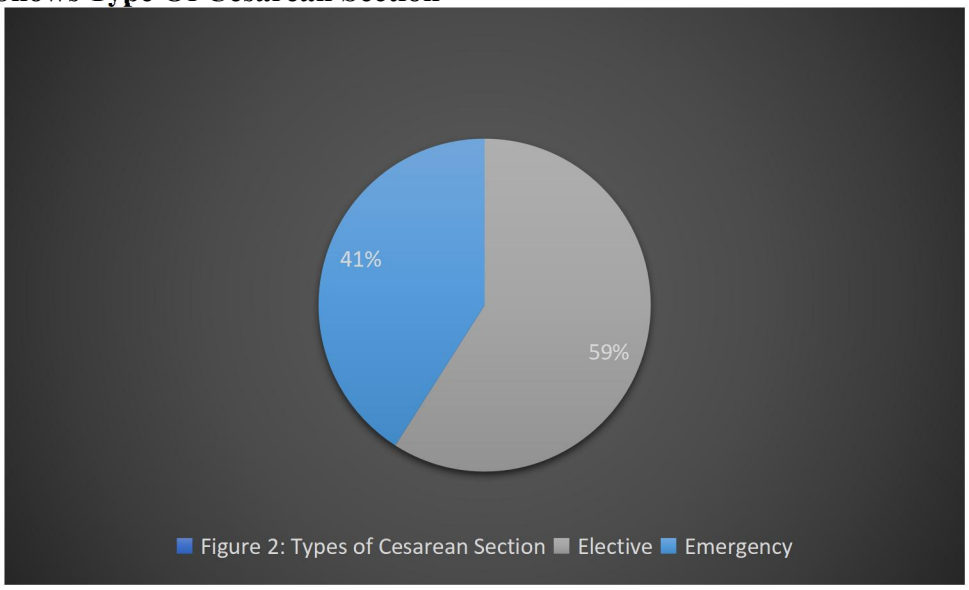

Table 3: Indication of Cesarean Section

Indications	Number	Percentage
Antepartum Eclampsia	12	6.34
Breech Presentation	5	2.64
Cardiac Disease	4	2.11
Chorioamnionitis	1	0.52
Cord Prolapse	2	1.05
Fetal pathological CTG	72	38.09
Good size baby	3	1.58
Meconium Stained liqour	7	3.70
Nil Liqour	3	1.58
Non progressive labor	16	8.46
non-reassuring CTG	25	13.22
Placental Abruption	7	3.70
Placenta Previa	12	6.34
Precious Pregnancy	3	1.58
Scanty Liqour	4	2.11
Transverse Lie	3	1.58
Unstable Mental Condition	7	3.70
Low AFI	1	0.52
Occiput Transverse Position	1	0.52
History of 4th Degree	1	0.52

Figure 3: Birth Weight Distribution Number

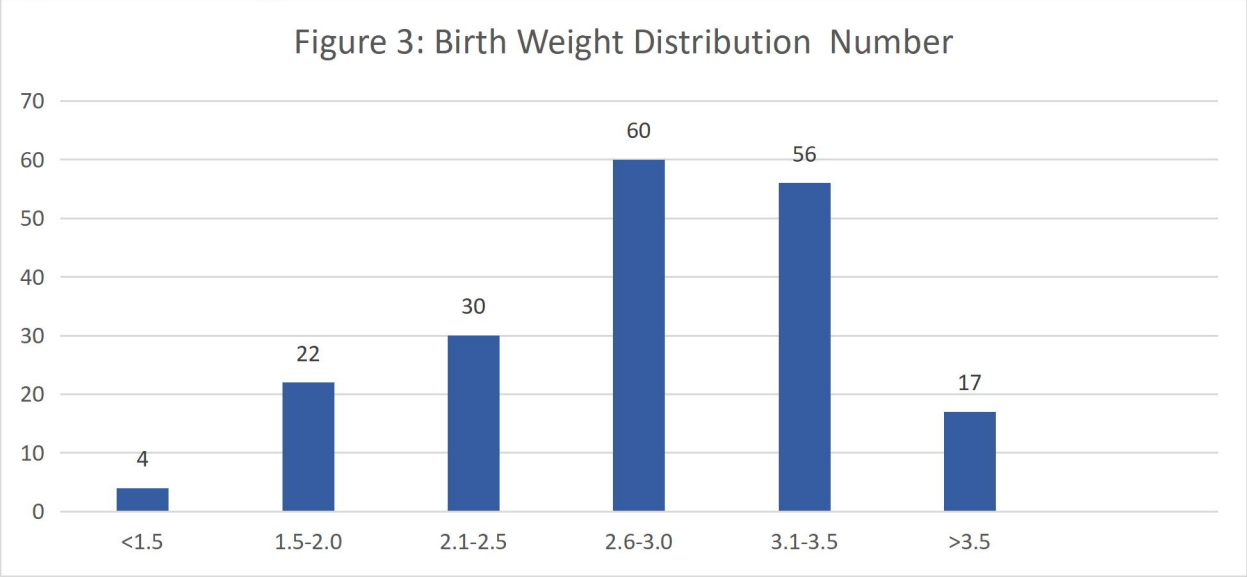

Table 4: Apgar Score at Birth

Apgar Score	Number	Percentage
0	10	5.29
1-3	2	1.05
4-6	74	39.15
>6	103	54.49

Table 5: Apgar Score at 5 minutes

Apgar Score	Number	Percentage
0	10	5.29
1-3	2	1.05
4-6	25	13.22
>6	152	80.42

Discussion:

The present study documented the occurrence and clinical indications of primary CS in unscarred multigravida. In this study fetal distress was the most common cause 38.09% of cases in this study. This has been observed by Bhattacharyya et al., who found in their tertiary care centre prospective study among multigravidas that fetal distress is one of the leading causes for doing a surgery even in a woman having prior uncomplicated pregnancies[13]. Placentation disorders: placenta previa, placental abruption accounted for 6.34% of the caesarean indications in our study. Qamar et al. and Asim et al. both detected a significantly increased frequency of such placental pathologies among multiparous women, mainly along with previous uterine surgeries or advanced maternal age[14,15]. These results raise awareness for a strict antenatal surveillance, primarily in women with history of multiple pregnancies. Pathological or non-reassuring cardiotocography (CTG) was noted in 13.22% of the cases indicating significant contribution in the CS decision. Gori et al. isolated a similar percentage of CTG-related CS- indications, that reflect its broad impact on Labor management[10]. Recent studies emphasize the need for a better interpretation of CTG to reduce false positive rates and avoid unnecessary health care access. Labour dystocia (mainly non-progressive labour) accounted for 8.46% of cases. Shah et al. also observed the same although they emphasized that monitoring by partogram as well as assessing labor progress individually would reduce avoidable caesarean deliveries to a great extent[11]. Fetal malpresentations (eg breech, transverse lie) were other common indications for CS in our study. Meena et al. and international literature are consistent with the association of fetal lie abnormalities with elevated CS rates in multiparas, particularly in emergencies[12]. We found a postoperative fever rate of 10.36% and a urinary tract infection in 8.29% for the maternal outcome. Sharma et al. associated such complications with unplanned and emergency it with better intrapartum preparation morbidity[13]. Neonatal outcomes in our study were encouraging with 80.42% neonates being born with an Apgar score of more than 6 at 5 minutes. This result was consistent with the

report of Tabassum et al. who also had proven that in emergency caesarean settings, short-term neonatal health also showed optimum the same even if it was not compromised with quick surgical interventions and care of the baby[14]. A few newborns 6 (5.29%) did not score (score = 0) at all, suggesting an urgent requirement to enhance the effective neonatal resuscitation protocols. Nearly three-quarters of our cases (77.72%) were unbooked, with 95.85% of them being emergency surgeries. These figures are like those reported by Shinwary etal, who observed that poor antenatal care and patient education were still a major contributor of late obstetric emergencies in South Asia1 6. Raising awareness and timely booking can help prevent such cases. Finally, a study by Post et al. are associated to increased persistent placenta previa among the multiparas with previous caesarean section at delivery[16]. This is indicative that every further CS contributes to increasing the complexity and risk in future pregnancies, which makes a case for reducing the occasional Caesarean section in primary delivery whenever possible through proper labour management and antenatal care.

Conclusion:

This paper underlines that CTG finding, foetal distress and nonprogress of labour are the major indications of primary Caesarean section in second gravida without scarred utreus. Quite a good number of cases were emergency LSCS for unbooked cases, highlighting the importance of antenatal checkup and monitoring of Labor. Placental pathology and malpresentation were also significant causes of high caesarean rate. Enhancing risk detection, enhancing intrapartum monitoring, and patient education for early booking can be useful for reducing unjustified deliveries. These results support optimising antenatal care in multigravida to improve maternal and neonatal outcomes

REFERENCES

1. Kaur K, Garg SS, Garg M, Grover S. Primary Cesarean Section in Multigravida Women: Trends and Outcomes in a Tertiary Care Setting. *Cureus*. 2025;17(6):e85517.
2. Srivastava S, Ajay D, Sreelatha S. Study of Primary Caesarean Sections in Multigravida. *Indian J Obstet Gynaecol*. 2024;4(1):18–23.
3. Shinwari L, Bukhari B, Irfan S, Faisal R. Comparison of the rate and indications of caesarean section in primigravida and multigravida in a maternity hospital of Pakistan. *Prof Med J*. 2024;31(7):1100–1105.
4. Tabassum S, Suman F, Tarin AU, et al. Primary Cesarean Section: A Gateway to Repeat Surgery. *Pak J Health Sci*. 2025;6(5):125–129.
5. Gori MI, Sharma J, Saxena R. Primary Caesarean Section in Multigravida: A Tertiary Center Study. *Int J Reprod Contracept Obstet Gynecol*. 2021;12(3):665–670.
6. Shah RK, Ansari S, Mushtaq R, et al. Primary Caesarean Section among Multiparous Pregnant Women Visiting a Tertiary Care Centre: A Descriptive Cross-sectional Study. *JNMA J Nepal Med Assoc*. 2022;60(254):848–852.
7. Meena N, Mondal A, Alam M. Study of Indications of Primary Caesarean Section in Multigravida in Bangladesh. *Asian J Med Sci*. 2022;13(7):145–148.
8. Begum T, Rahman A, Nababan H, Hoque DME, Khan AF, Ali T, et al. Indications and determinants of cesarean section delivery: evidence from a population-based study in Matlab, Bangladesh. *PLoS One*. 2017;12(11):e0188074.
9. Bhattacharyya D, et al. Prospective study of primary cesarean section in multigravida. *J Obstet Gynaecol Res*. 2023;49(2):128–135.
10. Qamar S, Kanwal R, Rasheed M, Zafar O. Placenta praevia with multiparity &

previous cesarean section. *Pak Armed Forces Med J*. 2019;69(1):43–46.
11. Asim M, et al. Investigating the frequency of placenta previa and associated risk factors. *Cureus*. 2025;17(6):e86053.
12. Hangarga US, Yattinamani B. Clinical study of primary caesarean section in multiparous women. *Gynecol Obstet Reprod Med*. 2020;4(1):87–91.
13. Naeem N, et al. Rate and indications of elective and emergency caesarean section: A study in tertiary care hospital Peshawar. *J Ayub Med Coll Abbottabad*. 2015;27(1):151–154.
14. Sharma S, Kumari S, Prasad R. Postoperative complications of cesarean section in unscarred multiparous women. *J Clin Diagn Res*. 2021;15(6):QC01–QC04.
15. Tabassum S, Suman F, Tarin AU, et al. Primary Cesarean Section: A Gateway to Repeat Surgery. *Pak J Health Sci*. 2025;6(5):125–129.
16. Post RJ, Chang J, Ziogas A, Chung JH. Risk factors and perinatal outcomes for persistent placenta previa. *Am J Obstet Gynecol MFM*. 2023;5(4):100789