RESEARCH PAPER

Elective Caesarean Section and Maternal and Perinatal Outcomes: An Observational Study from a Tertiary Care Hospital

Dr Srividya Punyala [1], Dr Ramesh Babu S [2], Dr Ravindra S Pukale [3], Venkata Ravi Kiran Reddy Punyala [4]

[1] Junior Resident, Department of Obstetrics & Gynaecology, Adichunchanagiri Institute of Medical Science, Adichunchanagiri University, BG Nagara, Karnataka, India.

[2] Professor, Department of Obstetrics & Gynaecology, Adichunchanagiri Institute of Medical Science, Adichunchanagiri University, BG nagara, Karnataka, India.

[3] Professor & Unit chief, Department of Obstetrics & Gynaecology, Adichunchanagiri Institute of Medical Science, Adichunchanagiri University, BG nagara, Karnataka, India.

[4] Software Engineer, Veridic Solutions LLC, USA. M.S. in Computer Engineering, University of Houston–Clear Lake, Houston, Texas, USA.

Received: 11th May, 2026; Revised: 22th Jun 2026; Accepted: 14th Jul, 2026; Available Online: 26th Jul, 2026

ABSTRACT

Introduction: Elective caesarean section (CS) has contributed substantially to the rising global caesarean rates. Although planned delivery allows controlled perioperative management, absence of labour-related physiological adaptations may influence early neonatal transition. This study evaluated maternal and perinatal outcomes following elective CS in a tertiary care hospital.

Materials and Methods: This prospective observational study was conducted over 18 months from May 2024 to October 2025 in a tertiary care teaching institution in Karnataka, India. A total of 350 women undergoing elective CS were enrolled. Maternal demographic, obstetric, intraoperative, and postoperative variables were recorded. Neonatal outcomes including Apgar score, respiratory morbidity, NICU admission, and hospital stay were assessed. Data were analyzed using SPSS version 26.

Results: ost women were aged 26–30 years 157 (44.86%) and multigravida 207 (59.14%). Early-term delivery (37–38 weeks) occurred in 241 (68.86%). Previous lower segment CS was the commonest indication 192 (54.86%), followed by maternal request 111 (31.71%). Postpartum haemorrhage occurred in 14 (4.00%), wound infection in 17 (4.86%), and blood transfusion was required in 24 (6.86%). No complications were observed in 319 (91.14%). Apgar score 7–10 at 1 minute was seen in 315 (90.00%) and at 5 minutes in 323 (92.29%). NICU admission was required in 43 (12.29%). Respiratory distress syndrome occurred in 28 (8.00%), transient tachypnoea in 15 (4.29%), hypoglycaemia in 17 (4.86%), sepsis in 13 (3.71%), and ventilatory support >24 hours in 8 (2.29%).

Conclusion: Elective CS in a tertiary care setting demonstrated favourable maternal and neonatal outcomes, with low postoperative morbidity and predominantly transient neonatal complications.

Keywords: Elective Caesarean Section; Perinatal Outcomes; Neonatal Morbidity; NICU Admission; Tertiary Care Hospital.

How to cite this article: Punyala S, Babu S R, Pukale R S, Punyala V R K R, Elective Caesarean Section and Maternal and Perinatal Outcomes: An Observational Study from a Tertiary Care Hospital. Int J Drug Deliv Technol. 2026;16(70s): 623-629. DOI: 10.25258/ijddt.16.70s.63

Source of support: Nil

Conflict of interest: None

INTRODUCTION

Caesarean section (CS) is one of the most frequently performed surgical procedures in obstetric practice worldwide, and its rate has increased substantially over recent decades in both high-income and low- and middle-income countries [1]. While the World Health Organization recommends an optimal CS rate of 10–15% to balance maternal and neonatal outcomes, many countries now report rates exceeding 30–60%, raising concerns regarding overutilization and associated perinatal implications [2,3]. This rising trend has prompted growing scrutiny of the indications, timing, and consequences of

caesarean delivery, particularly in cases performed without clear medical necessity [3].

A significant contributor to the escalating CS rate is elective caesarean section, defined as a planned surgical delivery conducted before the onset of labour in the absence of an immediate maternal or fetal emergency [4]. Common indications include previous caesarean section, malpresentation, maternal request, perceived obstetric safety, and medicolegal considerations [5]. Although elective procedures allow for optimized scheduling and controlled perioperative conditions, they bypass the physiological processes associated with spontaneous labour, which play a critical role in neonatal adaptation to extrauterine life [6].

The perinatal period represents a vital phase of physiological transition characterized by pulmonary fluid clearance, cardiovascular adjustments, metabolic stabilization, and thermoregulation [7]. The onset of labour induces a surge of fetal catecholamines and glucocorticoids that promote lung fluid absorption through activation of epithelial sodium channels, thereby enhancing pulmonary compliance and facilitating respiratory adaptation [8]. In elective caesarean section performed prior to labour, these hormonal and mechanical stimuli may be absent, potentially leading to delayed pulmonary fluid clearance and compromised neonatal respiratory transition [6]. Several large cohort and registry-based studies have demonstrated higher rates of respiratory morbidity including transient tachypnoea of the newborn, respiratory distress syndrome, need for ventilatory support, sepsis, hypoglycaemia, and increased neonatal intensive care unit (NICU) admissions among neonates delivered by elective caesarean section compared to vaginal birth [9-11].

Furthermore neonatal outcomes improve with advancing gestational age, with the lowest respiratory and NICU admission rates observed when elective caesarean section is performed at or beyond 39 weeks of gestation [12]. Neonates delivered between 37 and 38 weeks exhibit comparatively higher risks of respiratory morbidity and lower Apgar scores than those delivered after 39 weeks [13]. In addition to physiological consequences, elective caesarean section has been associated with altered early neonatal care practices, including delayed skin-to-skin contact and breastfeeding initiation, which may adversely affect thermoregulation, glycaemic control, immune development, and maternal–infant bonding [14]. Although emergency caesarean section is often linked with greater maternal morbidity, elective caesarean delivery is not without neonatal risk, particularly in relation to respiratory outcomes and NICU utilization [9]. Evidence from developing countries further suggests that increasing CS rates do not necessarily correlate with proportional improvements in perinatal survival [15].

Despite extensive literature, there remains a need for context-specific evaluation of perinatal outcomes following elective caesarean section, particularly in tertiary care settings. Therefore, the present study aimed to evaluate maternal and perinatal outcomes in neonates delivered through elective caesarean section.

MATERIALS AND METHODS

This prospective observational study was conducted in the Department of Obstetrics and Gynaecology at Sri Adichunchanagiri Hospital and Research Centre, Adichunchanagiri University, Mandya district, Karnataka, a tertiary care teaching institution catering to a diverse obstetric population. The study was carried out over a period of 18 months from May 2024 to October 2025. The objective was to evaluate maternal and perinatal outcomes following elective caesarean section without introducing any intervention beyond routine clinical care. All eligible women undergoing elective caesarean section during the study period were prospectively enrolled and followed until discharge, including completion of the early neonatal period.

The sample size was calculated using the single population proportion formula based on the incidence of caesarean section reported by Sunitha C et al. [961 (37.34%)] [16]. Assuming a 95% confidence level and an absolute precision of 5.1%, the minimum required sample size was determined to be 350 participants. Women of any parity undergoing elective caesarean section were included. Exclusion criteria comprised gestational age below 24 completed weeks, known bleeding disorders, neonates requiring immediate separation from the mother for major congenital anomalies or critical illness, and refusal to provide informed consent.

Data were collected using a structured proforma after obtaining Institutional Ethics Committee approval and written informed consent. Baseline maternal variables included age (categorized into 20–25, 26–30, and 31–35 years), socioeconomic status (classified into upper, upper middle, middle, lower middle, and lower), booking status (booked or unbooked), gravida status (primigravida or multigravida), and body mass index calculated as weight in kilograms divided by the square of height in meters and categorized as normal (18.5–24.9 kg/m²), overweight (25.0–29.9 kg/m²), and obese (≥30 kg/m²) [17].

Obstetric variables included gestational age at delivery, defined as early term (37–38 weeks) and full term (39–40 weeks), and indication for elective caesarean section (previous lower segment caesarean section, caesarean delivery on maternal request, breech presentation, placenta praevia, transverse lie, or combined indications) [18]. Maternal medical history such as hypothyroidism, gestational diabetes mellitus, gestational hypertension, asthma, and epilepsy was also documented.

Intraoperative variables included operative time (defined as duration from skin incision to skin closure, measured in minutes) and estimated blood loss (measured in milliliters based on suction collection and surgical swab assessment) [19]. Maternal hemodynamic parameters including heart rate, systolic blood pressure, and diastolic blood pressure were recorded pre-delivery and post-delivery. Hemoglobin levels were measured preoperatively and within the immediate postoperative period to assess hematological changes. Postoperative maternal outcomes assessed included requirement for blood transfusion, postpartum haemorrhage (defined as blood loss ≥1000 ml or clinically significant bleeding requiring intervention), wound infection, and duration of maternal hospital stay in days [20].

Neonatal variables included birth weight measured in kilograms, Apgar score at 1 and 5 minutes, immediate cry at birth, need for neonatal intensive care unit admission, and neonatal length of hospital stay [21]. Early neonatal complications were systematically recorded, including respiratory distress syndrome, transient tachypnoea of the newborn, hypoglycaemia, sepsis, and requirement of ventilatory support for more than 24 hours. All participants underwent routine antenatal and preoperative investigations as part of standard institutional protocol. Data were entered into a structured database and analyzed using SPSS version 26. Continuous variables were expressed as mean ± standard deviation, and categorical variables as frequencies and percentages and analysed using t-test. A p-value <0.05 was considered statistically significant.

RESULTS

The study included 350 women undergoing elective caesarean section. The majority were aged 26–30 years, 157 (44.86%), followed by 31–35 years, 103 (29.43%). Most participants belonged to the lower middle socioeconomic class, 180 (51.43%). A large proportion were booked cases, 309 (88.29%), and delivered at early term (37–38 weeks), 241 (68.86%). Multigravida women constituted 207 (59.14%). With respect to body mass index, 170 (48.57%) were overweight and 74 (21.14%) were obese, indicating that nearly two-thirds of the cohort had excess body weight (Table 1).

Table 1. Baseline Maternal Characteristics (n = 350)

Variable		n (%)
Age (years)	**20–25**	90 (25.71)
	26–30	157 (44.86)
	31–35	103 (29.43)
Socioeconomic Status	**Upper**	12 (3.43)
	Upper Middle	30 (8.57)
	Middle	56 (16.00)
	Lower Middle	180 (51.43)
	Lower	72 (20.57)
Booked Cases	**Yes**	309 (88.29)
Period of Gestation	**Early Term (37–38)**	241 (68.86)
Gravida Status	**Multigravida**	207 (59.14)
Body Mass Index (kg/m²)	**Normal**	106 (30.29)
	Overweight	170 (48.57)
	Obese	74 (21.14)

Previous lower segment caesarean section was the most common indication for elective caesarean delivery, accounting for 192 (54.86%) cases. Caesarean delivery on maternal request was the second most frequent indication, 111 (31.71%). Other indications such as breech presentation, 22 (6.29%), breech with previous caesarean, 15 (4.29%), placenta praevia, 7 (2.00%), and transverse lie, 3 (0.86%), were comparatively less common (Table 2).

Table 2. Indications for Elective Caesarean Section

Indication for Elective Caesarean Section	n (%)
Previous LSCS	192 (54.86)
Caesarean Delivery on Maternal Request	111 (31.71)
Breech Presentation	22 (6.29)
Breech + Previous LSCS	15 (4.29)
Placenta Praevia	7 (2.00)
Transverse Lie	3 (0.86)

The mean operative time was 47.95 ± 7.69 minutes, and the mean estimated intraoperative blood loss was 605.63 ± 113.29 ml, reflecting a relatively uniform intraoperative profile among participants (Table 3).

Table 3: Intraoperative Parameters

Parameter	Mean ± SD
Operative Time (minutes)	47.95 ± 7.69
Estimated Blood Loss (ml)	605.63 ± 113.29

A significant reduction in mean haemoglobin levels was observed post-delivery (11.01 ± 0.59 g/dL pre-delivery vs 10.28 ± 0.55 g/dL post-delivery; $p < 0.001$). Additionally, heart rate and blood pressure parameters increased significantly following delivery. Mean heart rate rose from 83.09 ± 7.42 bpm to 89.95 ± 8.75 bpm, systolic blood pressure from 119.43 ± 5.88 mmHg to 127.88 ± 7.39 mmHg, and diastolic blood pressure from 77.75 ± 4.70 mmHg to 82.54 ± 4.68 mmHg (all $p < 0.001$) (Table 4).

Table 4: Maternal Hemodynamic and Hematological Changes

Parameter	Pre-delivery	Post-delivery	p-value
Haemoglobin (g/dL)	11.01 ± 0.59	10.28 ± 0.55	<0.001
Heart Rate (bpm)	83.09 ± 7.42	89.95 ± 8.75	<0.001
Systolic BP (mmHg)	119.43 ± 5.88	127.88 ± 7.39	<0.001
Diastolic BP (mmHg)	77.75 ± 4.70	82.54 ± 4.68	<0.001

Postoperative maternal complications were infrequent. The majority of women, 319 (91.14%), experienced no complications. Blood transfusion was required in 24 (6.86%) cases. Postpartum haemorrhage occurred in 14 (4.00%) women, and wound infection was noted in 17 (4.86%). The mean maternal hospital stay was 5.86 ± 0.80 days (Table 5).

Table 5. Maternal Postoperative Outcomes

Outcome	n (%) / Mean ± SD
Blood Transfusion Required	24 (6.86)
Postpartum Haemorrhage	14 (4.00)

Wound Infection	17 (4.86)
No Complication	319 (91.14)
Maternal Hospital Stay (days)	5.86 ± 0.80

Neonatal outcomes were largely favourable. The mean birth weight was 3.04 ± 0.27 kg. Most neonates achieved APGAR scores of 7–10 at 1 minute, 315 (90.00%), which further improved at 5 minutes, 323 (92.29%). Immediate cry at birth was observed in 326 (93.14%) neonates. NICU admission was required in 43 (12.29%) cases. The mean neonatal hospital stay was 3.47 ± 1.59 days (Table 6).

Table 6. Neonatal characteristics

Variable	n (%) / Mean ± SD
Birth Weight (kg)	3.04 ± 0.27
APGAR 7–10 at 1 minute	315 (90.00)
APGAR 7–10 at 5 minutes	323 (92.29)
NICU Admission	43 (12.29)
Immediate Cry at Birth	326 (93.14)
Neonatal Hospital Stay (days)	3.47 ± 1.59

Among neonatal complications, respiratory distress syndrome was the most common, occurring in 28 (8.00%) neonates. Hypoglycaemia was reported in 17 (4.86%), transient tachypnoea of the newborn in 15 (4.29%), and sepsis in 13 (3.71%). Prolonged ventilatory support beyond 24 hours was required in 8 (2.29%) neonates, indicating an overall low rate of significant neonatal morbidity (Table 7).

Table 7. Neonatal Complications

Complication	n (%)
Respiratory Distress Syndrome	28 (8.00)
Hypoglycaemia	17 (4.86)
Transient Tachypnoea of Newborn	15 (4.29)
Sepsis	13 (3.71)
Ventilatory Support >24 hours	8 (2.29)

DISCUSSION

The present prospective observational study evaluated maternal and neonatal outcomes among 350 women undergoing elective caesarean section in a tertiary care setting, providing a comprehensive overview of real-world perinatal profiles. The demographic characteristics of the cohort were consistent with contemporary obstetric populations. The mean maternal age (28.01 ± 4.19 years) was comparable to that reported by Chaturvedi et al., whereas Riyami et al. documented a relatively higher mean age, likely reflecting regional differences in delayed childbearing [22,23]. A predominance of multigravida women (207(59.14%)) in the present study parallels findings by Neelofer et al., where prior caesarean delivery was a major contributor to elective procedures [24]. Similarly, previous LSCS emerged as the leading indication (192(54.86%)), aligning closely with Riyami et al. and Neelofer et al., reinforcing the cumulative impact of rising primary caesarean rates on repeat operative deliveries [23,24]. The substantial proportion of caesarean delivery on maternal request (111(31.71%)) further reflects evolving maternal preference and medico-legal influences in obstetric decision-making.

From a gestational perspective, early-term deliveries (241(68.86%)) exceeded full-term deliveries (109(31.14%)), a distribution broadly concordant with Chaturvedi et al., who reported a mean gestational age within the early-term window [22]. The respiratory complications such as RDS (28(8.0%)) and TTN (15(4.29%)), are comparable to Riyami et al. [23]. The relatively moderate NICU admission rate (43(12.29%)) in the present study is consistent with Chaturvedi et al. and Sunitha et al., suggesting reproducibility of short-term neonatal morbidity patterns across tertiary settings [16,22]. In contrast, Bhagat et al. reported slightly higher NICU admissions 683 (16.2%), possibly attributable to broader inclusion criteria and institutional admission policies [25].

Immediate neonatal adaptation was largely reassuring, with APGAR scores 7–10 observed in 315(90.0%) at 1 minute and 323(92.29%) at 5 minutes, demonstrating rapid postnatal stabilization and concordance with favourable APGAR trends reported by Chaturvedi et al. [22]. Birth weight distribution (mean 3.04 ± 0.27 kg) closely mirrored Al Riyami et al., indicating adequate fetal growth in planned term deliveries [23]. Although most neonates cried immediately at birth (326(93.14%)), a small subset required observation and supportive care, emphasizing the importance of neonatal preparedness even in elective settings. The mean neonatal hospital stay (3.47 ± 1.59 days) was short and comparable to Bhagat et al., suggesting that most complications were transient and amenable to early stabilization [25].

Maternal outcomes in the present study demonstrate a favourable safety profile of elective caesarean section under optimized conditions. Mean operative time (47.95 ± 7.69 minutes) and estimated blood loss (605.63 ± 113.29 ml) were nearly identical to those reported by Chaturvedi et al., supporting procedural efficiency in planned surgeries [22]. Postpartum haemorrhage occurred in 14(4.00%) and wound infection in 17(4.86%), markedly lower than rates reported by Al Riyami et al. and Neelofer et al., which may reflect differences in patient selection, anemia prevalence, and perioperative protocols [23,24]. The statistically significant but clinically modest decline in haemoglobin ($p < 0.001$) underscores expected perioperative blood loss without translating into high transfusion requirements, reinforcing the benefits of elective scheduling and antenatal optimization.

The key strengths of this study include its prospective observational design, which enabled accurate and real-time data collection, and a relatively large sample size of 350 consecutive elective caesarean sections, enhancing representativeness of routine tertiary-care practice. The comprehensive evaluation of maternal, intraoperative, and neonatal variables using standardized definitions and uniform institutional protocols adds to the internal validity of the findings. However, limitations include the single-center setting, which may limit generalizability, absence of a comparative group, and restriction to short-term maternal and neonatal outcomes. Potential variability in surgical expertise, anesthetic practices, and NICU admission policies may also have influenced outcomes.

CONCLUSION

The present study demonstrates that elective caesarean section performed in a well-equipped tertiary care setting is associated with favourable maternal and neonatal outcomes when conducted under standardized protocols and adequate antenatal optimization. Maternal morbidity was low, with acceptable operative duration, controlled blood loss, and minimal postoperative complications, while the majority of neonates exhibited reassuring Apgar scores, appropriate birth weight, and satisfactory immediate adaptation. Although a subset of neonates required NICU admission, predominantly for transient respiratory and metabolic complications, the overall neonatal course was short and uncomplicated. These findings highlight the importance of appropriate patient selection, optimal timing of delivery, and coordinated obstetric–neonatal care to optimize perinatal outcomes following elective caesarean section.

REFERENCES

1. Boatin AA, Ngonzi J, Ganyaglo G, et al. Cesarean delivery in low- and middle-income countries: A review of quality of care metrics and targets for improvement. Semin Fetal Neonatal Med. 2021;26(1):101199. doi: 10.1016/j.siny.2021.101199.
2. Boerma T, Ronsmans C, Melesse DY, et al. Global epidemiology of use of and disparities in caesarean sections. Lancet. 2018;392(10155):1341-1348. doi: 10.1016/S0140-6736(18)31928-7.
3. Alghamdi AS, Alyami JM, Althobaity NK, et al.Impact of C-Section Rates on Maternal and Child Health: Literature Review Study. Saudi J Nurs Health Care. 2025;8(12):314-323. https://saudijournals.com/articles/12241/
4. Ashiko A, Tilahun C, Geta T, et al. Factors associated with primary cesarean section delivery among women who gave birth at Wolaita Sodo University comprehensive specialized hospital, Southern Ethiopia. Sci Rep. 2025;15(1):37314. doi: 10.1038/s41598-025-21158-4.
5. Begum T, Rahman A, Nababan H, et al. Indications and determinants of caesarean section delivery: Evidence from a population-based study in Matlab, Bangladesh. PLoS One. 2017;12(11):e0188074. doi: 10.1371/journal.pone.0188074.
6. Ramachandrappa A, Jain L. Elective cesarean section: its impact on neonatal respiratory outcome. Clin Perinatol. 2008;35(2):373-93, vii. doi: 10.1016/j.clp.2008.03.006.

7. Morton SU, Brodsky D. Fetal Physiology and the Transition to Extrauterine Life. Clin Perinatol. 2016;43(3):395-407. doi: 10.1016/j.clp.2016.04.001.
8. Jain L, Eaton DC. Physiology of fetal lung fluid clearance and the effect of labor. Semin Perinatol. 2006;30(1):34-43. doi: 10.1053/j.semperi.2006.01.006.
9. Yeganegi M, Bahrami R, Azizi S, et al. Caesarean section and respiratory system disorders in newborns. Eur J Obstet Gynecol Reprod Biol X. 2024;23:100336. doi: 10.1016/j.eurox.2024.100336.
10. Doan E, Gibbons K, Tudehope D. The timing of elective caesarean deliveries and early neonatal outcomes in singleton infants born 37-41 weeks' gestation. Aust N Z J Obstet Gynaecol. 2014;54(4):340-7. doi: 10.1111/ajo.12220.
11. Wilmink FA, Hukkelhoven CW, Lunshof S, et al. Neonatal outcome following elective cesarean section beyond 37 weeks of gestation: a 7-year retrospective analysis of a national registry. Am J Obstet Gynecol. 2010;202(3):250.e1-8. doi: 10.1016/j.ajog.2010.01.052.
12. Tita AT, Landon MB, Spong CY, et al. Timing of elective repeat cesarean delivery at term and neonatal outcomes. N Engl J Med. 2009;360(2):111-20. doi: 10.1056/NEJMoa0803267.
13. Parikh LI, Reddy UM, Männistö T, et al. Neonatal outcomes in early term birth. Am J Obstet Gynecol. 2014;211(3):265. doi: 10.1016/j.ajog.2014.03.021.
14. Beiranvand S, Valizadeh F, Hosseinabadi R, et al. The Effects of Skin-to-Skin Contact on Temperature and Breastfeeding Successfulness in Full-Term Newborns after Cesarean Delivery. Int J Pediatr. 2014;2014:846486. doi: 10.1155/2014/846486.
15. Thomaidi S, Sarantaki A, Tzitiridou Chatzopoulou M, et al. The Rising Global Cesarean Section Rates and Their Impact on Maternal and Child Health: A Scoping Review. J Clin Med. 2025;14(22):8102. doi: 10.3390/jcm14228102.
16. Sunitha C, Sangwan A, Goel S, et al. Comparative study on maternal and fetal outcomes in emergency versus elective caesarean section. Indian J Obstet Gynecol Res. 2024;11(4):657-660. Doi: 10.18231/j.ijogr.2024.118.
17. Nuttall FQ. Body Mass Index: Obesity, BMI, and Health: A Critical Review. Nutr Today. 2015;50(3):117-128. doi: 10.1097/NT.0000000000000092.
18. ACOG Committee Opinion No 579: Definition of term pregnancy. Obstet Gynecol. 2013;122(5):1139-1140. doi: 10.1097/01.AOG.0000437385.88715.4a.
19. Sheldon WR, Blum J, Vogel JP, et al. Postpartum haemorrhage management, risks, and maternal outcomes: findings from the World Health Organization Multicountry Survey on Maternal and Newborn Health. BJOG. 2014;121:5-13. doi: 10.1111/1471-0528.12636.
20. Committee on Practice Bulletins-Obstetrics. Practice Bulletin No. 183: Postpartum Hemorrhage. Obstet Gynecol. 2017;130(4):e168-e186. doi: 10.1097/AOG.0000000000002351.
21. Apgar V. A Proposal for a New Method of Evaluation of the Newborn Infant. Originally published in July 1953, volume 32, pages 250-259. Anesth Analg. 2015;120(5):1056-1059. doi: 10.1213/ANE.0b013e31829bdc5c.
22. Chaturvedi N, Jamal I. A study to compare the maternal and perinatal outcomes between elective and emergency cesarean sections. Int J Med Pharm Res. 2025;6(6):145–149. https://ijmpr.in/article/a-study-to-compare-the-maternal-and-perinatal-outcomes-between-elective-and-emergency-cesarean-sections-1452/
23. Riyami NMA, Shereiqi SSA, Pillai SA. Comparative analysis of maternal and neonatal outcomes between elective and emergency caesarean section at a single tertiary hospital: a retrospective COHORT study. Int J Reprod Contracept Obstet Gynecol. 2023;12(9):2611-7. Doi: 10.18203/2320-1770.ijrcog20232713
24. Neelofer SM, Aparna J, Jyothirmayee B. Comparison of maternal and fetal outcomes in emergency over elective LSCS. Int J Acad Med Pharm. 2023;5(3):2196-2201. https://www.academicmed.org/Uploads/Volume5Issue3/432.%20%5B875.%20JAMP_Jafar%5D%202196-2201.pdf
25. Bhagat D, Sadavarte I, Patel M, et al. Maternal and neonatal outcome in elective versus emergency cesarean section in a tertiary healthcare centre in Ahmedabad, Western India. Int J Life Sci Biotechnol Pharma Res. 2025;14(11):818–823. https://ijlbpr.com/uploadfiles/127vol14issue11pp818-823.20251129042540.pdf