

ORIGINAL ARTICLE

Comparison of Neonatal Complications in Emergency (C.S) versus Elective C-Section

Israr Bashir Warraich

Affiliations

Dr. Israr Bashir Warraich,
Consultant Paeds, Govt. Sardar
Begum Teaching Hospital,
Sialkot

Corresponding Author:

Dr. Israr Bashir Warraich,
Consultant Paeds, Govt. Sardar
Begum Teaching Hospital,
Sialkot

Contact No. 0331-6695478
drwarraich007@gmail.com

Submission completed: Sept., 2025

Review began: Sept, 2025

Review ended; October, 2025

Acceptance: October, 2025

Published: December, 2025

Author contribution:

IB; conceptualization of project, data
collection, writing manuscript, stati-
stical analysis, drafting, revision and
final approval.

Abstract

Objectives: This study examines the neonatal complications of elective versus emergency cesarean sections.

Methodology: Research was done with mothers who gave birth through cesarean delivery. The type of cesarean planned (elective and emergency), newborn outcomes (respiratory distress, Apgar score and hospitalisation in the NICU), maternal circumstances, and previous history of cesarean section were documented. Comparison statistics were done to determine differences between elective and emergency procedures.

Results: The results indicated that an elective cesarean section occurred more frequently than an emergency (C.S). The frequency of neonatal complications like respiratory distress, low Apgar scores and NICU hospitali-
sations was higher i.e. 20% seen in emergency C-Sections and 5% in
elective procedure C-Sections, but 95% newborns of electives and 80% new-
borns of emergency cases were discharged within a day, as the postnatal
care appeared to be well-coordinated.

Conclusion: Neonatal complications are less with elective cesarean section
than it is with emergency cesarean section. Neonatal outcomes can be
improved and emergency procedures can be minimized by early risk
detection and prompt intervention.

Keywords: Cesarean section, elective cesarean, emergency cesarean,
neonatal complications, Apgar score, NICU admission

Cite this Article as: Warraich I.B.; Comparison of Neonatal Complications in Emergency
(C.S) versus Elective C-Section. SIAL J Med. Sci. Dec-2025 V-4 (Issue-14): 38-40

Introduction

The C-section (caesarean section) is a common surgery in obstetric practice, which may be elective and emergency surgery. As valuable as cesarean delivery has been in enhancing maternal and fetal outcomes, it does not come without its risks, especially as related to neonates. Whether cesarean birth occurs in due course and under what conditions can have dramatic impacts on neonatal outcomes.¹

Elective C-section is a surgery performed and scheduled in advance of labour and typically under medical supervision in the controlled conditions with adequate pre-operative care. An emergency C-section, by contrast, is not planned and typically follows

complications in labour that threaten mother and fetus¹. It has been demonstrated that neonatal complications, including respiratory distress, birth asphyxia, low Apgar scores, requirement of neonatal intensive care unit (NICU) admission and even perinatal mortality rates are more prevalent among emergency C-sections than among elective procedures. Such a divergence is typically blamed on the relative neediness of the clinical scenario, poor pre-op preparation, and poor fetal health at delivery.¹

On the contrary, elective C-sections are typically performed during term pregnancies when the maternal and baby conditions are stable and may minimize risks of morbidity and the mortality in a neonate and a

Comparison of Neonatal Complications in Emergency (C.S) versus Elective C-Section.

mother¹. Regardless of these overall findings, the degree and the nature of the neonatal complications related to each form of the cesarean section are not consistent across populations and healthcare systems. It is thus of much importance to estimate and compare ratios of complications between elective and emergency C-sections to inform clinical decision-makers.¹

The increased rate of cesarean birth across the globe has caught the interest of the researchers on its effect on the immediate outcome of the neonatal process, especially when the mode of delivery is elective or emergency delivery. Cesarean delivery is typically planned in conditions of stability, and in many cases, the fetus will have matured lungs, which is linked with the decreased respiratory issues and elevated Apgar scores¹.

Conversely, the emergency births of cesarean section are often done under time-constrained and extenuated maternal-fetal circumstances that result in increased mortality of perinatal outcomes².

The necessity to act to address an emergency due to a combination of factors, such as obstructed labour, fetal distress, maternal complications, etc., may instead create an environment in which the results of neonatal care will have a negative rather than positive impact. These findings are used to highlight the importance of separating the settings of cesarean delivery in defining the risk to the neonates³.

Evidence of population-based studies also supports that emergency cesarean delivery is linked to an increased rate of neonatal intensive care unit hospitalisation, perineal asphyxia, and prolonged hospitalisation. Moreover, healthcare facility differences and access to prompt surgical care may also be measured as contributors to such discrepancies in outcomes, particularly in low- and middle-income countries.

Objectives:

This study examines the neonatal complications of elective versus emergency cesarean sections.

Methodology

This investigation was structured as a hospital-based Retrospective Observational Descriptive study conducted in the Gynaecology and Paediatrics department of Allamalqbal Memorial Teaching Hospital, from January 2024 to June 2025 with the following inclusion criteria: women aged 18-45 years undergoing a C-section and singleton pregnancies with gestational age ≥ 37 weeks. However following patients were excluded: multifetal gestation, known fetal anomalies, women with diseases (such as diabetes, HTN) and previous clinical c-section or uterine rupture and scar.

All patients admitted during the study period were included in the analysis. A total of 100 patients met the inclusion criteria and were included.

Results

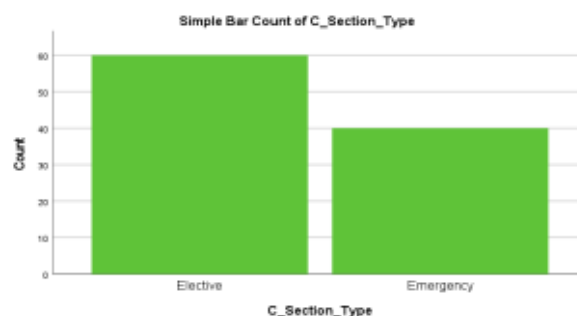
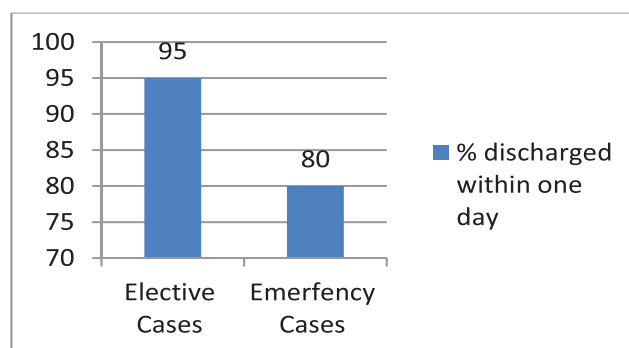
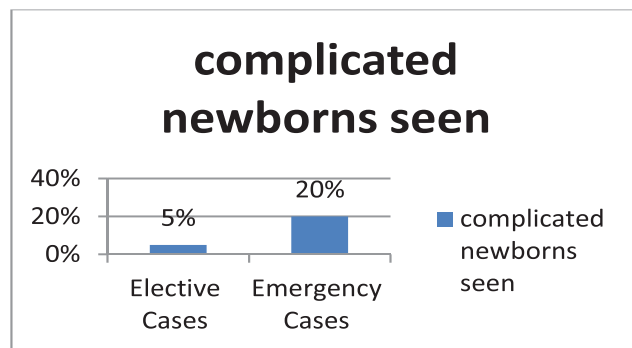


Figure 1: Shows the Elective Vs Emergency type

Elective C-sections had around 60 cases, as shown in the bar chart, and Emergency C-sections had 40 cases.



Comparison of Neonatal Complications in Emergency (C.S) versus Elective C-Section.



Discussion

This study was a comparison of neonatal complications of elective and emergency cesarean section. The findings indicated a higher proportion of elective surgeries relative to emergency surgeries, which can be considered paralleled by a similar global tendency toward an increase in the number of planned births. However, the frequency of such neonatal events as respiratory distress, low Apgar scores, and NICU hospitalization was higher in those who are born with the emergency (C.S).

Such procedures are likely becoming more common because these are probably forced (making treatment more difficult), coupled with the fact that the fetus is underdeveloped and may not be healthy.⁴

It was also found in the analysis that most patients were admitted to the hospital but were released within just a day. Though this is a sign of good postoperative management, studies warn that fast discharge should be done if it is safe.⁵

In other obstetric risk categories, such as gestational diabetes, placenta previa and PROM were not observed in this sample, and this may also have indicated that the majority of the cases were low-risk. Perhaps this is the reason why the relation of cesarean type and prior cesarean history turned out to be not significant, and this finding is not new in low-risk populations⁶.

All in all, the results shed light on the fact that elective cesarean sections are less complicated regarding complications associated with the neonatal outcome as compared to emergency sections⁷. The improved recognition of risks in the context of ante-

natal care and decision-making could also contribute to reducing the number of potentially required emergency-based interventions, particularly in resource constrained settings⁸.

Conclusion:

In this study, more elective than emergency cesarean sections were reported, along with fewer neonatal complications.

Recommendation

It means that the acceptable risk profile of the neonates may be associated with elective cesareans, but the context of the health system plays a crucial role in the result. Thus, emergency procedures and neonatal complications may be minimised by introducing strategies to improve the speed of risk detection and clinical readiness.

Disclaimer: None

Conflict of Interest: None

Source of Funding: None

Reference

1. Betrán AP, Ye J, Moller AB, Zhang J, Gülmezoglu AM, Torloni MR. The increasing trend in caesarean section rates: global, regional and national estimates, 1990–2014. **PLoS One**. 2016;11(2):e0148343. doi:10.1371/journal.pone.0148343
2. Czarny HN, Forde B, DeFranco EA, Hall ES, Rossi RM. Association between mode of delivery and infant survival at 22 and 23 weeks of gestation. **Am J Obstet Gynecol MFM**. 2021;3(4):100340. doi:10.1016/j.ajogmf.2021.100340
3. Khatun A, Khatun T, Rahman S, Khatun MS, Farhin KK, Sultana R, et al. Indications and outcomes of maternal and neonatal health among emergency cesarean section: a retrospective study. **Age (Dordr)**. 2023;21(5):500.
4. Lavender T, Hofmeyr GJ, Neilson JP, Kingdon C, Gyte GM. Caesarean section for non-medical reasons at term. **Cochrane Database Syst Rev**. 2012;

- (3):CD00 4660. doi:10.100 2/1465 18 58.CD004660.pub3
5. Blomberg M. Avoiding the first cesarean section: results of structured organizational and cultural changes. **Acta Obstet Gyne col Scand**. 2011;90 (10):1094–102. doi:10.1111/j.1600-0412.2 011.012 21.x
 6. Tura AK, Pijpers O, De Man M, Cleveringa M, Koopmans I, Gure T, Stekelenburg J. Analysis of caesarean sections using Robson 10-group classification system in a university hospital in eastern Ethiopia: a cross-sectional study. **BMJ Open**. 2018;8 (4):e 0 205 20. D oi:10.1136/bm jope n -2017-020 520
 7. Dimassi H, Alameddine M, Sabra N, El Arnaout N, Harb R, Hamadeh R, AlArab N. Maternal health outcomes in the context of fragility: a retrospective study from Lebanon. **Confl Health**. 2023;17(1):59. doi:10.1186/s13031-023-00577-4
 8. Neuman M, Alcock G, Azad K, Kuddus A, Osrin D, More NS, et al. Prevalence and determinants of caesarean section in private and public health facilities in underserved South Asian communities: cross-sectional analysis of data from Bangladesh, India and Nepal. **BMJ Open**. 2014 ;4(12) :e0059 82. doi: 10 .1136 /bmj open-2014-005982..