

The Impact of Out-of-Working-Hours Timing of Cesarean Sections on the Decision-to-Incision Interval

Sucheta Yalanavar, MB* Maimoona Liaqat, FCPS** Fajer Alammadi, MD***
Nayla Bushaqer, Saudi & Arab Board in OB/GYN and Infertility & IVF Fellowship****
Nawal Dayoub, MD, MRCOG, MSc*****

Background: The decision-to-incision (D-I) interval in cesarean sections is clinically relevant and has detrimental effects on neonatal outcomes when the procedure is delayed.

Objective: To evaluate the effect of decision timing (during or outside of working hours) on the D-I interval on emergency cesarean sections and neonatal outcomes.

Design: A Retrospective Cohort Study.

Setting: Bahrain Defence Force Hospital, Bahrain.

Method: Patients who underwent emergency cesarean sections from January 2018 to June 2018 were reviewed and divided into two groups: those whose cesarean sections occurred outside of working hours (Group I) and those that occurred during working hours (Group II). The following were documented: maternal age, parity, gestational age, time of the decision to perform the cesarean, time of anesthesia, time of actual skin incision, delivery time, baby weight, gender, Apgar score, Neonatal Intensive Care Unit (NICU) admission, and length of stay in the NICU. The D-I interval of emergency cesarean sections was our primary outcome and the neonatal outcome was our secondary outcome. Data were analyzed using StatsDirect software. A P-value of less than 0.05 was considered statistically significant.

Result: One hundred eighty-nine patients were delivered by emergency cesarean section; 138 (73%) patients were in Group I and 51 (26.9%) were in Group II. Anesthesia duration was 7 minutes in Group I and 8 minutes in Group II ($P=0.23$). The mean duration of surgery in Group I was 58.3 minutes, whereas in Group II it was 52.9 minutes ($P=0.21$). Thirty-eight (27.5%) patients in Group I and 16 (31.4%) in Group II were category 1 indications. Surgery for category 2 indications took longer in Group II than in Group I, 37.9 minutes compared to 26.9 minutes, ($P=0.0004$). Similarly, the time interval for category 3 was longer in Group II compared to Group I; however, this difference was not statistically significant ($P=0.09$). The birth weight, NICU admission, length of stay in the NICU, and Apgar score values were similar between the two groups.

Conclusion: The D-I interval did not differ between the category 1 cesarean deliveries that occurred during working hours and those that occurred outside of working hours; however, category 2 cesareans were delayed during working hours. There were no differences in neonatal outcomes.