



Optimal Timing of Antenatal Corticosteroid Administration in Preterm Births

A Retrospective Study

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OBJECTIVES

To acknowledge the ideal corticosteroid administration to the birth interval associated with the maximum benefit in preterm babies born before 34 weeks.

DESIGN

Single-center retrospective study

METHODOLOGY

This is a retrospective record review of all women who underwent preterm delivery before 34 weeks between 2023 and 2024. Electronic records of case sheets were reviewed in women who underwent delivery before 34 weeks, and basic details were noted. Congenital anomalies in fetuses and women who did not receive corticosteroids were excluded. Steroid-to-birth interval and neonatal outcomes were compared.

RESULTS

OUTLINE

- A total of 720 women were included and divided into four groups based on administration to delivery interval
- Less than 48 hours - 423(58.7%),
- 48 hours to 7 days- 166(23%)
- 7 to 14 days - 55(7.6%)
- More than 14 days- 76 (10.5%)

BASELINE CHARACTERISTICS

- Age was significantly different, as 75.8% of the women belonged to the 18 to 35 years group.
- The most common indications to treat were preterm rupture of membranes (48.2%) and preterm labor (31.6%) among all the groups.

ADVERSE OUTCOMES

- All the adverse outcomes were not significantly different between the four groups, except for respiratory distress (p value =0.002)

DISCUSSION

- 63% of the babies developed respiratory distress in the less than 48 hours group compared to 50.6% in the 2 to 7 days group.
- Only 45.4% and 47.3% of babies developed respiratory distress in the 7-14 days and more than 14 days groups.
- Thus, our study's results were consistent with the findings of other studies ⁽¹⁻³⁾showing that at least 7-day interval from administration to delivery had an improvement in the respiratory outcome of newborns.
- More than a 14-day interval also conferred some benefit compared to a less than 48-hour interval.

CONCLUSION

The optimal timing of corticosteroid administration is essential to prevent respiratory morbidity in neonates. An interval of more than 14 days also confers some benefit compared to the widely accepted interval of 7-14 days.

REFEREMNCES

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