

ABSTRACT

Association Between Time of Delivery and Immediate Adverse Perinatal Outcomes Among Neonates Delivered at Mbarara regional Referral Hospital

Introduction

Adverse perinatal outcomes after childbirth are a concern in obstetrics and Uganda has a high neonatal mortality rate at 19 deaths per 1000 live births. Delivery can take place at any time with studies done elsewhere showing that deliveries at night are associated with increased adverse perinatal outcomes. This study aimed to determine the association between time of delivery and immediate adverse perinatal outcomes among neonates delivered at Mbarara Regional Referral Hospital, this will guide the department in designing and putting interventions which will improve the quality of obstetric care during the times associated with immediate adverse perinatal outcomes.

Methods

This was a comparative cross-sectional study in which we compared neonates delivered during the day (7:00 to 19:00) to those delivered in the night (19:01-6:59). The adverse outcomes assessed were: Apgar score <7 at 5 minutes, fresh still birth, early neonatal death and admission to NICU. Data was analyzed using STATA version 17 with the chi squared test used to compare the proportions of immediate adverse perinatal outcomes with time of delivery. Modified Poisson regression was done to control for confounders and determine other factors associated with immediate adverse perinatal outcomes.

Results

Of the 1166 neonates recruited, 583 were day time deliveries and 583 night time deliveries. The mean age of the mothers was 26±6 years. Even though the proportion of adverse outcomes was higher among night time deliveries (26.6% versus 22.3%), no statistically significant difference was noted. Time of delivery was not associated with immediate adverse perinatal outcomes, other factors like low birth weight (aPR (95% CI):4.03[3.24,5.00]), macrosomia (aPR (95% CI): 3.79[2.91,4.92]) and antepartum hemorrhage (aPR (95% CI): 1.59[1.21,2.08]) were independently associated with adverse perinatal outcomes.

Conclusion

The proportion of immediate adverse neonatal outcomes was not different among night time and day time deliveries. Time of delivery was not associated with immediate adverse perinatal outcomes but Low birth weight, fetal macrosomia and Antepartum hemorrhage were independently associated with immediate adverse perinatal outcomes.