

ABSTRACT

Introduction

Globally, WHO estimates birth asphyxia to be responsible for 23% of all neonatal deaths per year, two thirds of which are in sub-Saharan Africa. In Uganda Birth asphyxia accounts for 48% of neonatal deaths every year. There is still inadequate data about prevalence and factors associated with birth asphyxia in Uganda and at Mbarara Regional Referral Hospital, a reason this study was done.

Methods

This was a cross-sectional study among 427 neonates systematically sampled at MRRH over a 3-month period. Umbilical artery blood PH was determined within one hour of life while the Apgar score was determined at 5 minutes. The diagnosis of birth asphyxia was made if a 5-minute APGAR score was less than 7 and arterial cord blood PH was <7.15 . Analysis was done using STATA version 17 in which modified Poisson regression was used to determine the factors associated with birth asphyxia.

Results

The prevalence of birth asphyxia was 16.9% (95% CI: 13.6-20.7). The factors independently associated with birth asphyxia among neonates delivered at MRRH were non-use of a labor care guide, use of uterotonics, meconium-stained amniotic fluid and macrosomia (birth weight ≥ 4000 gram). Neonates born to women whose labor was not monitored on labor care guide were 1.9 times more likely to have birth asphyxia compared to those born to women whose labor was monitored on labor care guide (aPR: 1.92; 95% C.I [1.15, 3.21], $p=0.013$). Use of uterotonics was about 3 times associated with birth asphyxia compared with non-use (aPR: 2.97; 95% C.I [1.85, 4.77], $p<0.001$). Meconium staining of liquor was 2.4 times associated with birth asphyxia compared to no meconium-stained amniotic fluid (aPR: 2.44; 95% C.I [1.41, 4.24], $p=0.002$). Neonates with birth weight ≥ 4000 gm were about 2.4 times more likely to have birth asphyxia compared to normal weight neonates ($2.5-<4000$ gm), (aPR: 2.24; 95% C.I [1.29, 3.87], $p=0.004$).

Conclusion

Prevalence of birth asphyxia is high. Patogram should be used to monitor all mothers in labour and more close monitoring should be given to mothers who have been given uterotonics, those with meconium staining of amniotic fluid and those in whom high fetal weight is estimated in order to reduce the rate of birth asphyxia.

