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Incidence, risk factors, and adverse short term perinatal and maternal outcomes associated with singleton breech presentation at delivery in Northern Tanzania

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Objective

Breech presentation has been associated with adverse perinatal and maternal outcomes. However, the incidence and associated perinatal and maternal outcomes has not been fully explored in Tanzania. This study aimed to determine the incidence, risk factors and adverse short term perinatal and maternal outcomes associated with singleton breech presentation at delivery at Kilimanjaro Christian Medical Centre (KCMC) hospital.

Approach

This was a retrospective study involving 47,626 singletons deliveries between 2000 and 2014, using maternally-linked KCMC Medical Birth Registry. Adjusted odds ratios (ORs) with 95% CI for risk factors and adverse short term perinatal and maternal outcomes were estimated using multiple logistic regression models.

Results

There were a total 8761 women who had subsequent singleton deliveries during this study period. The incidence of breech delivery was 0.8%. Advanced maternal age (>30 years) (AOR 1.3 95% CI 1.1-1.6), delivery of low birth weight infant (AOR 3.4, 95% CI 2.8-4.1) and malformed child (AOR 8.0, 95% CI 3.6- 17.8) were associated with increased risk of breech delivery. Breech presentation was associated with an increased risk of delivering an infants with Apgar score of less than 7 at 5 minutes (AOR 4.6, 95% CI 3.7-5.6), low birth weight (AOR 3.5, 95% CI 2.9-4.3), congenital malformation (AOR 9.3, 95% CI 4.2-20.3) and perinatal death (AOR 6.3, 95% CI 5.1-7.9). Breech presentation was also associated with high risk of preeclampsia/eclampsia (AOR 1.6 95% CI 1.2-2.3) as compared

to cephalic presentation. In addition, vaginal breech delivery increase women's likelihood of delivering infant with Apgar score of less than 7 at 5 minutes (AOR 4.4, 95% CI 2.5-6.6), low birth weight (AOR 3.4, 95% CI 2.3-5.0) and perinatal death (AOR 5.1, 95% CI 3.1-8.4).

Conclusions

Breech delivery was associated with adverse perinatal and maternal outcomes as compared to cephalic presentation. Vaginal breech delivery was associated with unfavorable perinatal and maternal outcomes as compared to cesarean breech delivery. Early identification of these risk factors and provision of appropriate management during delivery such as caesarian-section when needed may reduce the poor perinatal and maternal outcomes.

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