Prevalence of Hypoglycemia and Treatment Outcomes in Infants At Risk

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Abstract

Background: Neonatal hypoglycemia is a common problem in newborn infants, especially those identified as being at risk for hypoglycemia. The duration and severity of hypoglycemia that associated with poor neurological outcomes is controversial. Management of asymptomatic infants with hypoglycemia has been controversial.

Objectives: To study the prevalence of neonatal hypoglycemia in infants at risk and short-term outcomes of treatment in asymptomatic infants.

Materials and methods: This was a cross-sectional observational study in infants at risk of hypoglycemia, including infants of diabetic mother, large for gestational age, small for gestational age and late preterm infants. Demographic data of mothers and infants, and clinical course of infants were recorded.

Results: The study period was between November 2016 and March 2017. We recruited 420 eligible infants but 398 infants were included in the analysis. The prevalence of neonatal hypoglycemia in infants at risk was 11%. All asymptomatic infants received first oral feed within 1 hour after birth before having POCT glucose screening 30 minutes after the feed. There were 19 infants with asymptomatic hypoglycemia and received 3 treatment options: 14 infants in re-feeding group, 3 infants in intravenous glucose (IVG) group and 2 infants in feeding plus IVG group. All 19 infants had normal POCT glucose after the treatment. Three infants in re-feeding group had recurrent hypoglycemia but hypoglycemia resolved within 1 hour of IVG. Compared to IVG group, refeeding group had shorter length of stay (median 25.8 h, range 12.6-132 h and median 50.4 h, range 30.4, 73 h, respectively; *p*-value 0.2) and less number of venipuncture (median 4, range 3-11, median 5, range 4-8, respectively; *p*-value 0.44).

Conclusion: Our prevalence of hypoglycemia in infants at risk is likely to be underestimate. For asymptomatic hypoglycemia, refeeding is a preferred intervention compared to IVG, due to less venipuncture and shorter length of stay in the high-risk nursery while giving similar results.

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