

Neonatal hypocalcemia and its relation to vitamin D and calcium supplementation

Abstract

Objectives: To assess the prevalence of hypocalcemia in outpatient clinic neonates and its relation to vitamin D and calcium supplementation.

Methods: This cross-sectional analytical study was conducted at the University Teaching Hospital from May to October 2016. Data were collected from 100 neonates by interviewing mothers using a structured questionnaire; which included socio-demographic information, maternal and neonatal history; in addition to investigations of serum calcium total and ionized and serum vitamin D level.

Results: The prevalence of hypocalcemia was 76%, late hypocalcemia represent 52% of hypocalcemic neonates. The prevalence of hypovitaminosis D was 38%. Hypocalcemia was found more prevalent among neonates with no history of vitamin D supplementation (98.7%), no history of maternal calcium supplementation (57.9%), while they had a history of neonatal jaundice on phototherapy (46.1%) which increased to 53.8% with late hypocalcemia.

Conclusion: Neonatal hypocalcemia is widely prevalent in Fayoum governorate with significant association with a history of neonatal jaundice on phototherapy, not receiving maternal calcium or neonatal vitamin D supplementation.