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Post discharge formula fortification of maternal human milk of low birth weight preterm newborns: An introduction of a feeding protocol at university hospital

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Objective: To study the growth parameters and nutritional biochemical markers and complications of fortification of human milk by post discharge formula of preterm low birth weight newborns (LBW).

Methods: Fifty Preterm infants less than 37 weeks with weight less than 1500 grams were enrolled in the study. They received parental nutrition and feeding according to our protocol. When enteral feeding reached 100cc/kg/day, infants were randomized into two groups: group I, Cases, n=25, where post discharge formula (PDF) was used for fortification, group II, Controls, n=25 with no fortification. Mothers' milk was expressed manually and infants of both groups were given 50% of their required enteral intake by premature formula. This protocol was used until newborn's weight reaches 1800gm. Daily weight; weekly length and head circumference were recorded. Hemoglobin, albumin, electrolytes and clinical complications were documented.

Results: Human milk fortification with PDF resulted in better growth with increase in weight 16.8 and 13.78 gm/kg/day ($P=0.0430$), length 0.76 and 0.58 cm/week ($P=0.0027$), and head circumference of 0.59 and 0.5 cm/week ($P=0.0217$) in cases and controls respectively. Duration of hospital stay was less in cases (22.76 versus 28.52 days in Controls), $P=0.02$. No significant changes were found in serum electrolytes, albumin or hemoglobin levels. There were no significant clinical complications.

Conclusion: Our feeding protocol of fortification of human milk with PDF in preterm LBW newborns resulted in better growth and decrease in length of hospital stay. The use of PDF could be an alternative option for fortification of mothers' milk for preterm LBW infants in developing countries with low resources.

Biography

Abeer El Sakka is an Assistant Professor of Pediatrics, Ain Shams University, Cairo, Egypt. She completed her Medical school at Ain Shams University, Faculty of Medicine, Cairo Egypt in 1988. She completed her Medical training as a Pediatric resident at Ain Shams University Pediatric Department from 1989-1993. She completed research in the past two years at University of Texas Health Science Center, San Antoni, TX. She is an instructor of NRP, STABLE program, PALS and APLS. She has published many articles in Nutrition. She is a reviewer at some prestigious journals.

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