EVALUATION OF ACCELERATED ADVANCEMENT OF ENTERAL FEEDINGS IN VLBW INFANTS

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Background: To improve growth and intestinal maturation, and to reduce risks associated with parenteral nutrition, we gradually accelerated enteral feeding advancement in very low birthweight (VLBW) infants admitted to our NICU.

Objectives: Retrospective cohort analysis of the effects of accelerated enteral feeding advancement on the time to full enteral feeds in VLBW infants and on the frequency of necrotizing enterocolitis (NEC) and focal intestinal perforation (FIP).

Methods: VLBW infants born between 1/1/2006 and 31/12/2007 were compared with infants born 1/1/2010-30/6/2010. Feeding policy in 2006/07 was to start enteral feeds on day 1 with 10-15ml/kg/d and advance them at 15-20ml/kg/d, in 2010 enteral feeds were initiated with 20ml/kg/d and advanced by 25-30ml/kg/d, if clinical status permitted. Full enteral feeds were defined as ≥ 140 ml/kg/d. Data are presented as median (P25-P75).

Results: Gestational age and birth weight were similar ($28+0/7$ wk ($25+3/7$ - $30+2/7$) in 2006/07 vs. $28+1/7$ wk ($26+2/7$ - $30+4/7$) in 2010, and 945 g (680-1400) vs. 1100 g (711-1310)). Time to establish full enteral feeds was shorter in 2010: 6d (5-7d) vs. 8d (7-10d) ($p < 0.001$). The Incidence of NEC was 2.9% in 2006/07 and 2.6% in 2010, the incidence of FIP was 4.3% in 2006/07, and 0% in 2010.

Conclusion and discussion: The new approach was associated with a significantly shorter period to establish full enteral feeds. An increase in the incidence of FIP or NEC was not observed. However, the study was underpowered to detect group differences in the proportion of infants with NEC or FIP.