

Prospective study of non-nutritive sucking and feeding skills in premature infants.

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Source

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Abstract

OBJECTIVE:

The aim of the present work was to assess the value of non-nutritive sucking (NNS) measures as predictors of oral feeding performance in comparison to other putative predictors of feeding skills: respiratory support, post-menstrual age (PMA) at birth and the neonatal oral motor assessment score (NOMAS).

METHODS:

This was a prospective, observational study. Cox proportional hazards and non-parametric rank sum tests were used to assess the relationship between NNS and feeding outcome measures. The setting was neonatal intensive care units (NICU) in rural/academic, urban/tertiary centres in the USA. In all, 51 premature infants born between 25 and 34 weeks' PMA, birth weight 1512.3±499.4 g, were included in this study. Interventions were measurement of NNS, standardised feeding advance schedule, performance of NOMAS, and standardised, permissive, oral feeding advance schedule.

MAIN OUTCOME MEASURES:

were transition time from first to full oral feeding (FOF) and gestational age at FOF.

RESULTS:

Higher NNS organisation scores predicted shorter transition to FOF ($p < 0.05$): infants with a more organised suck pattern reached independent oral feeding 3 days earlier (16 vs 13 day transition) than infants with more chaotic patterns of suck bursts. Consistency of the suck waves also corresponded with feeding milestones: infants with more regular suck wave pressure deflections became competent oral feeders approximately 3 days earlier than those with irregular suck pressure

waves. PMA at birth was inversely associated with PMA at FOF. NOMAS measures were not associated with outcome measures.

CONCLUSIONS:

Measures of NNS organisation and suck consistency constitute useful candidate predictors of feeding performance by premature infants. The results accord with previous findings linking PMA at birth with age at independent feeding.

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