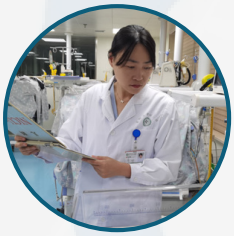

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Prefeeding Interventions to Enhance Oral Feeding in Preterm Infants

Abstract:

Preterm infants often face challenges in oral feeding due to immature oral-motor coordination and disorganized sucking, swallowing, and breathing patterns, which can delay their growth and discharge readiness.This randomized controlled trial investigated the effects of three prefeeding interventions-oral stimulation (OS), non-nutritive sucking (NNS), and combined tactile/kinesthetic (T/K) interventions on feeding outcomes in 140 preterm infants (gestational age <32 weeks). Infants were divided into three groups: Group 1 (n = 46) is Control group, received only nasal feeding according to the normal procedure. Group 2 (n = 40) received OS and NNS additional to Control group. Group 3 (n = 44) received T/K interventions additional to Group 2. Key outcomes included time to full oral feeding (FOF), feeding efficiency, and weight gain velocity. Group 3 achieved the shortest median time to FOF (14 days vs. 21 days in Group 2, $p < 0.01$) and the highest weight gain velocity (15 g/kg/day vs. 12 g/kg/day in Group 2, $p < 0.05$). Group 1 only showed intermediate improvements, indicating a partial benefit of caregiver involvement. These results underscore the effectiveness of comprehensive prefeeding interventions in enhancing feeding skills, promoting growth, and reducing hospital stays in preterm infants. Future research should investigate the long-term neurodevelopmental outcomes associated with these interventions.

Keywords: preterm infants, oral stimulation (OS), non-nutritive sucking (NNS), tactile/kinesthetic (T/K) interventions, feeding outcomes

Biography: Dr. Gaoyan Chen serves as the Deputy Director of the Department of Pediatrics and Director of the Neonatal Intensive Care Unit (NICU) at Xiangyang Central Hospital, affiliated with Hubei University of Arts and Science. She received her medical degree in Clinical Medicine from Wuhan University School of Medicine in 2014. Her clinical expertise lies in the management of neonatal and pediatric respiratory diseases.

With over a decade of experience, Dr. Chen has demonstrated exceptional proficiency in treating neonatal critical illnesses and improving long-term outcomes. Her clinical focus includes pediatric asthma, bronchiolitis, and pneumonia. She also leads a dedicated NICU team committed to advancing strategies for the assessment and management of sucking dysfunction and feeding difficulties in preterm infants.

Dr. Chen's current research centers on the mechanisms and therapeutic strategies of acute lung injury in neonates. She has led or participated in several national and provincial-level scientific research projects, including one funded by the National Natural Science Foundation of China. Over the past five years, she has published five SCI-indexed articles as first or corresponding author. Her academic mission is to integrate fundamental research and evidence-based practices into clinical care to improve long-term health outcomes for premature infants.

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