C5-16: Test of a Feeding Protocol for Preterm Infants with Bronchopulmonary Dysplasia (BPD)

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Abstract:
Introduction: Preterm infants with bronchopulmonary dysplasia (BPD) have difficulty making the transition from gavage to nipple feeding because of respiratory distress including compensatory tachypnea and dyspnea. Achievement of nipple feeding is usually the last milestone that preterm infants must accomplish before hospital discharge into the full time care of their parents. The hypothesis was that preterm infants with BPD assigned to the experimental feeding protocol would require fewer days to attain nipple feeding and have a satisfactory weight gain compared with control infants receiving standard care. Framework: Barnard’s model of reciprocal interaction between caregiver and infant was used as the basis for the intervention. Nurses assigned to the experimental protocol used infant behavioral and cardio-respiratory responses to regulate frequency, length, and volume of feedings during the transition from gavage to nipple feeding in order to minimize feeding distress, fatigue, and hypoxemia. The control condition followed the standard care of gradually increasing scheduled nipple feedings.

Method(s): The setting was a 120 bed neonatal intensive care unit. A randomized, experimental design included 86 preterm infants with BPD who were assigned to the control condition (n = 42) (standard care) or the experimental protocol (n = 44). Mean gestational ages at birth and birth weights were 25 + 1.54 weeks and 784 gm for the control group, and 25 + 1.48 weeks and 787 gm in the experimental group.

Results: Experimental infants reached full, nipple feedings at a M = 5.93(0.74) days, while control infants took a M = 12.33 (0.82) days (F[1, 85] = 40.21, p < .0001). The average daily weight gain was satisfactory for both groups with control infants gaining 27 + 1.46 gm and experimental infants 25 + 1.48 gm.

Discussion & Conclusions: The use of the experimental feeding method holds promise for helping preterm infants with BPD transition from gavage to nipple feeding in a manner that uniquely considers the infant’s signs of chronic respiratory distress.

Abstract History:
This abstract has not been presented or accepted for presentation in whole or in part at the SNRS or other scientific meeting.

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