

EARLY NONINVASIVE VENTILATION VERSUS SYNCHRONIZED INTERMITTENT MANDATORY VENTILATION IN VERY LOW BIRTH WEIGHT INFANTS WITH VISCERO-ABDOMINAL DISPROPORTION: A SINGLE-CENTER EXPERIENCE OF 22 CASES

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Objective: Randomized trial comparing early noninvasive ventilation (NIV) to synchronized intermittent mandatory ventilation (SIMV) in very low birth weight (VLBW) premature infants with *viscero-abdominal disproportion*.

Methods: Fifty infants weighing 501 to 1000 g, less than 4 hours of age, who had received one dose of surfactant and required ventilation with mean airway pressure > 4-6 cm H₂O and FiO₂ >0.25, and had an anticipated duration of ventilation greater than 48 hours.

Results: Data are presented for 12 NIV and 10 SIMV infants (two infants, twins, were withdrawn from the study at parent's request). 10 of the 12 NIV infants and 7 of the 10 SIMV infants survived to 36 weeks corrected age. Age at final extubation for survivors was 12,0 ± 7,2 (mean ± SD) days for NIV infants and 20,4 ± 9,1 days for SIMV infants. At 36 weeks corrected age, 7 of the 10 NIV survivors were extubated and in room air, whereas 3 required supplemental oxygen. In comparison, 3 of the 9 SIMV survivors were extubated and in room air, whereas 6 required supplemental oxygen. Grade III/IVIVH and/or periventricular leukomalacia occurred in 1 NIV and 3 SIMV patients.

Overall compliance with the ventilator protocols was 72% for the SIMV protocol, and 88% for the NIV protocol.

Conclusions: The protocols for the Early NIV vs. SIMV in VLBW with Infants ventilator management of VLBW infants, both with NIV and with SIMV were easily implemented and consistently followed, and are presented here.