

Randomized trial of early bubble continuous positive airway pressure for very low birth weight infants

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Objective: To determine whether very low birth weight infants (VLBWIs), initially supported with continuous positive airway pressure (CPAP) and then selectively treated with the INSURE (intubation, surfactant, and extubation to CPAP; CPAP/INSURE) protocol, need less mechanical ventilation than those supported with supplemental oxygen, surfactant, and mechanical ventilation if required (Oxygen/mechanical ventilation [MV]). **Study design:** In a multicenter randomized controlled trial, spontaneously breathing VLBWIs weighing 800-1500 g were allocated to receive either therapy. In the CPAP/INSURE group, if respiratory distress syndrome (RDS) did not occur, CPAP was discontinued after 3-6 hours. If RDS developed and the fraction of inspired oxygen (FiO₂) was >0.35, the INSURE protocol was indicated. Failure criteria included FiO₂ >0.60, severe apnea or

respiratory acidosis, and receipt of more than 2 doses of surfactant. In the Oxygen/MV group, in the presence of RDS, supplemental oxygen wi