RTI Prominent Publication Summary

Early CPAP Versus Surfactant in Extremely Preterm Infants


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Data to inform early treatment of extremely low birth weight infants—specifically, the choice between continuous positive airway pressure (CPAP) or surfactant treatment—were limited prior to the Surfactant, Positive Pressure, and Oxygenation Randomized Trial (SUPPORT). SUPPORT was a randomized, multicenter trial involving 1,316 infants born between 24 weeks, 0 days and 27 weeks, 6 days of gestation. The infants were randomly assigned to intubation and surfactant treatment (within 1 hour after birth) or to CPAP treatment initiated in the delivery room, with subsequent use of a protocol-driven limited ventilation strategy. Infants were also randomly assigned to one of two target ranges of oxygen saturation in a 2-by-2 factorial design.

The rates of death or bronchopulmonary dysplasia did not differ significantly between the CPAP and surfactant groups. In secondary analyses, the CPAP strategy, as compared with early surfactant treatment, resulted in a lower rate of intubation (in both the delivery room and the neonatal intensive care unit), a reduced rate of postnatal corticosteroid use, and a shorter duration of ventilation without an increased risk of any adverse neonatal outcome. In addition, there was a significant reduction in the risk of death in the CPAP group among infants born between 24 weeks, 0 days and 25 weeks, 6 days of gestation, but not among infants born at a later gestational age. The results of this study support consideration of CPAP as an alternative to routine intubation and surfactant administration in preterm infants.

Link: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3071534/?tool=pubmed

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