



Pediatric Academic Societies Meeting

April 24 – May 1, 2019 | Baltimore, MD

April 24-26 • Pre-conference Events | April 27-30 • PAS 2019 Meeting | May 1 • Post-conference Events

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Non-invasive CPAP initiated in the delivery room and hospital death or BPD in very preterm infants: a pragmatic cohort study from a middle-income country (Board 228)

📅 Sat, April 27

📍 Convention Center Halls
D-G

📄 Poster Session

Part of:

1829 Global Neonatal & Children's Health 2

1:15 PM - 2:30 PM

Info

Background:

Non-invasive CPAP in the delivery room (DR) for preterm infants with respiratory distress after initial resuscitation has been widely incorporated as a standard practice, but it implies in availability of equipment in the DR and transport to NICU. The impact of this practice in infants born in non-highly developed countries has not been studied.

Objective:

To verify whether the use of CPAP initiated in the DR (DR-CPAP) decreases hospital deaths or BPD in very preterm infants that received positive pressure ventilation by mask at birth and responded well with a 5th minute Apgar score of 7-10.

Design/Methods:

Pragmatic prospective cohort study in 20 Brazilian public university hospitals. During 2011-2017, all inborn infants with gestational age 23-28 weeks and birth weight 400-1499g without malformations who received ventilation only with face mask at birth and had a 5th minute Apgar score of 7-10 were included. Intervention was the use of non-invasive CPAP after ventilation in the DR and at transport to NICU. CPAP was indicated if patients presented low O₂ saturation or respiratory distress after initial stabilization in the DR (Brazilian NRP 2011 guidelines). Comparison was made with infants that did not receive DR-CPAP. Main outcome was intrahospital death or BPD defined as oxygen use at 36 weeks. Stepwise logistic regression was applied for the outcome.

Results:

971 infants met the inclusion criteria and 750 (77%) received DR-CPAP. Use of DR-CPAP increased from 40% in 2011 to 92% in 2017. Characteristics and outcomes are shown in Tables. DR-CPAP was protective (OR 0.58; 95%CI 0.37-0.89) for NICU need of invasive mechanical ventilation adjusted for confounders. DR-CPAP was not associated with BPD or hospital death after logistic regression adjusted for confounders and center.

Conclusion(s):

In very preterm infants ventilated in the delivery room only with face mask and good vitality at 5 minutes after birth, initiation of non-invasive CPAP in the DR decreased the need of invasive ventilation at NICU but did not alter the critical outcome of hospital death or BPD. Allocation of resources to implement non-invasive CPAP in DR for preterm infants may not be a priority in non-highly developed countries.

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