**014**

# A RANDOMISED CONTROLLED TRIAL OF PRONGS OR MASK FOR NASAL CONTINUOUS POSITIVE AIRWAYS PRESSURE (NCPAP) IN PRETERM INFANTS: THE POM TRIAL (ISRCTN43000196)

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**Objective:** To determine whether NCPAP given with nasal prongs compared to nasal mask reduces the rate of intubation and ventilation in preterm infants within 72 hours of starting therapy.

**Methods:** Infants < 31 weeks gestation given NCPAP with the Infant Flow Driver or SiPAP (Viasys Healthcare, Yorba Linda, USA) were randomized to either nasal prongs or nasal mask. Randomization was stratified for gestational age (< 28 weeks, 28-30 weeks); and according to whether NCPAP was started as a primary treatment for respiratory distress or post-extubation. Infants were intubated and ventilated if they met 2 or more of the failure criteria. The groups were treated the same in all other respects. We recorded relevant secondary outcomes and analyzed data using the intention-to-treat principle.

| | PRONGS N=62 | MASK N=58 | p value |
|---|---|---|---|
| Gestational age (w) | 28 (2) | 28 (2) | |
| Birth weight (g) | 1058 (297) | 1095 (300) | |
| Post-extubation, n(%) | 32 (52) | 31 (53) | |
| Intubation <72 hours, n(%) | 32 (52) | 16 (28) | 0.007 |
| Duration of ventilation (hours)(IQR) | 48 (4,147) | 30 (0,186) | 0.594 |
| Duration of NCPAP (hours)(IQR) | 240 (74,480) | 293 (129,643) | 0.332 |
| Oxygen therapy at 36 weeks PMA, n(%) | 6 (10) | 14 (24) | 0.11 |
| Pneumothorax, n(%) | 4 (6) | 1 (2) | 0.325 |
| Death before hospital discharge, n(%) | 7 (11) | 4 (7) | 0.415 |

*[Results]*

**Conclusions:** NCPAP given via a nasal mask was more effective than NCPAP given via nasal prongs for preventing intubation and ventilation within 72 hours of starting therapy.