Perbandingan efektivitas continuous positive airway pressure dan nasal intermittent positive pressure ventilation pada neonatus dengan gawat napas = Effectiveness of continuous positive airway pressure versus nasal intermittent positive pressure ventilation to newborn with respiratory distress

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Abstrak

Latar belakang. Continuous positive airway pressure (CPAP) dan nasal intermittent positive ventilation (NIPPV) mengurangi intubasi dan ventilasi mekanik pada neonatus dengan gawat napas. Masih sedikit penelitian yang membandingkannya pada neonatus cukup bulan maupun kurang bulan.
Tujuan. Mengetahui kejadian intubasi, lama dukungan ventilasi non invasif dan pemakaian oksigen, bronchopulmonary dysplasia (BPD), dan kematian antara CPAP dan NIPPV pada neonatus dengan gawat napas.
Metode. Studi kohort retrospektif dilakukan terhadap neonatus dengan gawat napas, usia gestasi 28-40 minggu, lahir di Rumah Sakit Umum Daerah Kota Bekasi pada periode Januari 2013 - Juni 2015. Pengambilan subyek penelitian secara konsekutif, memenuhi kriteria inklusi, dan menggunakan bantuan napas dengan CPAP atau NIPPV, masing-masing 50 subjek.
Hasil. Neonatus dengan gawat napas menggunakan CPAP maupun NIPPV disebabkan karena respiratory distress syndrome , transient tachypnea of the newborn, pneumonia neonatal. Rerata usia gestasi dan berat lahir pada kelompok CPAP (34±3,11 minggu, 2018±659 gr) dan NIPPV [34 (28-40) minggu, 2050 (900-3900) gr]. Kejadian intubasi dan kematian berkurang, rerata hari dukungan ventilasi non infasif maupun pemakaian oksigen lebih lama pada NIPPV dibandingkan CPAP.
Simpulan. NIPPV mengurangi kejadian intubasi dan kematian pada neonatus dengan gawat napas dibandingkan CPAP.
.....Background. Continuous positive airway pressure (CPAP) and nasal intermittent positive ventilation (NIPPV) reduce intubation and mechanical ventilation. Still limited studies compare to CPAP and NIPPV in term and preterm infant with respiratory distress.
Purpose. To determine CPAP and NIPPV to the event of intubation, duration non-invasive ventilation and oxygen support, bronchopulmonary dysplasia, and death in neonate.
Methods. Retrospective cohort study was conducted to newborn with gestational age 28-40 weeks were born at General Hospital of Bekasi City, January 2013 - June 2015. Consecutive subjects and met inclusion criteria for CPAP and NIPPV group, each one 50 subjects.
Results. CPAP and NIPPV were support to neonate with respiratory distress due to respiratory distress syndrome, transient tachypnea of the newborn, and pneumonia. Mean gestational age and birth weight in CPAP group (34 ± 3.11 weeks, 2018 ± 659 gr) and NIPPV [34 (28-40) weeks, 2050 (900-3900) g]. Raduce rate of intubation and death, duration of non-invasive ventilation and oxygen support longer to NIPPV than CPAP in neonate.
Conclusion. NIPPV reduce intubation and mortality rate comparison to CPAP in neonate