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PRELIMINARY EXPERIENCE OF USING HIGH FLOW NASAL OXYGEN (HFNO) IN BRONCHIOLITIS

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Background: Bronchiolitis is a common cause of hospitalisation in infants. Respiratory support in severe bronchiolitis is provided by nCPAP or by invasive ventilation. High flow nasal cannula oxygen (HFNO) is a relatively new therapy that has been used for bronchiolitis in PICU settings. We report our preliminary experience of using HFNO on a general paediatric ward working to a strict protocol.

Aim: To assess if HFNO is a suitable alternative to nCPAP for infants with bronchiolitis.

Methods: This was a prospective study, undertaken between Oct 2010 and March 2011, on children presenting with bronchiolitis. Patients who met the criteria (SaO2 < 90% in Fi02 of 0.4, RR ≥ 60 breaths/minute) were offered a trial of HFNO.

Results: 86 patients were admitted with a diagnosis of bronchiolitis in this period. 2/86 (2.3%) were transferred to PICU as intubated on arrival. 3/86 (3.5%) required nCPAP and transferred to HDU.

8/86(6.88%) patients, (4 male, 4 female , median age 14.5 weeks (4 weeks - 15 months) were started on HFNO. Median pH on initiation of HFNO was 7.28 (7.17 - 7.37); $pC0_2$ 7.4 (6.2 - 9.5). Blood gases after 4 hours of HFNO improved in 7 children with a median pH 7.31 (7.26 - 7.41) and $pC0_2$ 6.2 (5.0 - 8.8) .1 child on HFNO required nCPAP because of clinical deterioration.

Conclusions: HFNO can be safely delivered on a ward provided strict guidelines are adhered to. There are significant clinical and economic benefits, with less need to transfer patients to HDU for nCPAP.