USE OF POSTNATAL STEROIDS IN VENTILATOR DEPENDANT PRETERM INFANTS

Background and aim Bronchopulmonary Dysplasia (BPD), results in prolonged hospitalisation, poor growth and adverse neurodevelopment outcome. Postnatal steroids may decrease prolonged ventilation, one of the risk factors for BPD. However, there are concerns about adverse effects of steroids.

The aim of the study was to assess the safety and efficacy of hydrocortisone in ventilator dependant preterm infants, thus ensuring safe practice and improve the quality of care given.

Methods The study was a retrospective analysis over 17 months (Jan 2012–May 2013) in preterm infants less than 32 weeks gestation. Demographic data along with data on adverse effects related to hydrocortisone was collected.

Results Fifteen percent (42/281) of preterm infants received hydrocortisone starting at dose of 5 mg/kg/d to aid extubation. The mean gestation was 25.17 weeks with a mean birth weight of 696 g. Forty-six percent had more than one failed extubation, median weight at intubation of recruited infants was 1195 g. Thirty-three percent of babies deteriorated with X-ray changes. One baby died. All 9 survivors developed clinically significant PDA requiring treatment. (1 duct ligation, 8 managed medically).

Conclusions All affected babies had a combination of risk factors for pulmonary haemorrhage. In addition they all exhibited a rapid improvement in ventilatory requirements lending weight to the theory that falling pulmonary vascular resistance with increased pulmonary blood flow is a causative factor.

VIDEOARYNGOSCOPY AS AN INTUBATION TRAINING TOOL FOR NEONATAL TRAINEES – A RANDOMISED CONTROLLED TRIAL

Background and aims Endotracheal intubation is a mandatory skill for neonatal trainees. However, it is difficult to learn and junior trainees have success rates <50%. Videolaryngoscopy allows the instructor to share the same view of the pharynx as the trainee. We compared intubations guided by an instructor watching a videolaryngoscope screen with the traditional method where the instructor does not have this view.

Methods An unblinded randomised, controlled trial (ANZCTR number 12613000159752) at a tertiary neonatal centre commenced March 2013. Eligible intubations were those performed on infants in the delivery room or in the neonatal intensive care unit, by trainees with less than six months of tertiary neonatal experience. Nasal intubations, intubations in infants with facial, oral or airway abnormalities and intubations carried out by more experienced doctors were excluded. Intubations were randomised to the videolaryngoscopy screen being visible or covered (control). A sample size of 206 had an 80% power to demonstrate an absolute difference of 20% in the success rate between intervention and control groups. Primary outcome was first attempt intubation success rate confirmed by colorimetric detection of expired carbon dioxide.

Results 190 intubations have been randomised since March 2013 (80% of all eligible intubations since trial commencement). Median weight at intubation of recruited infants was 1195 g (range 504–4804 g), median corrected gestation 29 weeks post menstrual age (range 24–41). Recruitment will be complete by May 2014 and data analysis by July 2014.

Conclusions To follow up completion of the trial.