The pathogenesis of pulmonary hypoplasia and congenital diaphragmatic hernia (CDH) is unknown. CDH represents a spectrum of lung hypoplasia and consequent pulmonary hypertension (PH) that leads to high morbidity and mortality of patients. We studied neuroendocrine factors and retinoic acid in order to achieve the relation underlying them.

At 13.5 days post-conception normal and CDH lungs were cultured in vitro during four days with DMSO, retinoic acid, bombesin, ghrelin, bombesin antagonist and ghrelin antagonist. Morphometric analysis were done after the culture and Western Blot (WB) was performed to quantify the protein levels of retinoic acid receptors (RAR). Immunohistochemistry (IHC) was performed as well on normal, nitrofen and CDH E17.5 lungs.

When compared with controls, CDH lungs presented higher expression of RAR in IHC and WB. Moreover in normal lungs after the administration of bombesin and ghrelin the expression of RAR also increases and in case of retinoic acid administration it decreases. Regarding bombesin and ghrelin antagonists administration, RAR expression decreases as it was expected. In terms of morphometry, treated groups showed an increase in branching, perimeter and area.

This study, shows for the first time that retinoic acid deficit on CDH lungs is associated with neuroendocrine factors overexpression. Furthermore, neuroendocrine factors such as ghrelin and bombesin sensitize for RAR expression.

**Background and aims** Although widely documented for use in adult intubation, there is paucity of literature available on the application of cricoid pressure (CP) during neonatal intubation. It is briefly mentioned in the NRP guideline, as a possible adjunct measure. This study was mounted to determine how widely the technique is used by paediatricians and neonatologists in clinical practice.

**Methods** A questionnaire was devised, consisting of eight questions. The questionnaire was distributed nationally to 40 consultants, 31 specialist registrars, 40 neonatal nurses, midwives and ANNNPs.

**Results** The overall response rate was 76% (n = 84). Findings summarised in table 1

**Conclusions** Almost all the healthcare professionals surveyed were aware of the cricoid pressure technique.

- The majority felt that cricoid pressure has a role in improving glottis visualisation.
- One half found that it facilitated intubation.
- A minority felt that it helped to open the vocal cords during intubation.
- The high response rate provides an accurate reflection of neonatal intubation practice in Ireland.
Background and aims Aetiology of BPD is multifactorial with prenatal and postnatal factors being involved. First, we aimed to evaluate the association between chorioamnionitis and BPD. Secondly, the effect of other perinatal factors on the risk of developing BPD were analysed.

Methods Retrospective analysis of all infants with GA < 32 weeks or BW < 1500 g admitted into our hospital between 2002–2010. 120 patients who died before 36 weeks of PMA were excluded.

Results The average GA was: 29.7 ± 3 s; 217/432 (50%) had any type of chorioamnionitis (histological or clinical); 75/432 (17.4%) met diagnostic criteria for BPD at 36 weeks.

Univariate analysis: lower GA, any type of chorioamnionitis, DAP and duration of mechanical ventilation (MV) were associated with an increased risk of BPD (p < 0.05).

Multivariate analysis: administration of antenatal steroids or chorioamnionitis did not independently modify the risk of BPD. But adding both, the effect became statistically significant protective for BPD (OR 0.52, 95% CI 0.03 to 0.79).

Days in MV is the only factor that independently increased the risk of BPD. Neither a lower GA nor the presence of PDA had significantance; but, the risk of BPD was higher in the presence of PDA and MV together: every day in MV increased the risk of BPD (OR 1.130, 95% CI 1.001-1.27).

Conclusions Chorioamnionitis in coexistence with antenatal corticosteroids decreases the risk of BPD. Mechanical ventilation is the main risk factor for BPD. In the presence of DAP, ventilation increases the risk of BPD.

PO-0758 LARYNGEAL MASK AIRWAY DEVICE PLACEMENT IN NEONATES

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Background Endotracheal intubation (EI) is currently required for surfactant administration. However, EI is associated with adverse physiologic effects, including bradycardia and hypoxia. The laryngeal mask airway (LMA) may provide a more practical and less invasive alternative to EI for surfactant administration.

Aim Determine feasibility of LMA placement in neonates by investigating the time, number of attempts and physiologic stability during placement of the device.

Methods Infants ≥1250 g who required surfactant administration were eligible. Videotape of the LMA placement procedure was reviewed to determine number of attempts, duration of attempts, total procedure time, and heart rate and oxygen saturation change from baseline.

Results Twenty-two infants were included in analysis. Mean total procedure time was 129 seconds (±187). Duration of attempts was 59 seconds (±81). Successful placement was achieved on the first attempt in 73% of cases. Two attempts were required in 14% of cases and all procedures were successful in ≤3 attempts. As compared to baseline, heart rate increased 3 beats per minute on average (±4, range: -3 to 11) and oxygen saturation decreased by 7% on average (±8, range: -24 to 1) as shown in Figure 1.