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RISK FACTORS ASSOCIATED WITH BRONCHOPULMONARY DISPLASIA (BPD) IN EXTREMELY LOW GESTATIONAL AGE NEWBORNS (ELGAN)

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Aims: To analyse influence of perinatal data and early morbidity on moderate-severe BPD in ELGAN with birth weight(BW)< 1000g.

Methods: This is a retrospective cohort of all ELGAN with BW< 1000g alive at 36w postmenstrual age born between 2004-2009 in our unit. BPD was defined as moderate-severe following NICHD-NHLBI workshop definitions.

Results: 201 infants were included. Moderate-severe BPD prevalence was 41.7%. BPD group had lower gestational age(GA) and BW(25.5±1.1 vs 26.2±1w p=0.000; 749±123.3 vs 830.4±116.7g p=0.000) and higher rate of male sex(59.5 vs 47% p=0.039) and vaginal delivery(45.2 vs 22.7% p=0.012). We didn't find differences in antenatal steroids or chorioamnionitis. BPD patients needed more delivery room intubation(75 vs 55.5% p=0.006), higher oxygen(0.52±0.24 vs 0.41±0.21 p=0.000) and had lower initial PEEP(4.2±0.6 vs 4.4±0.6H₂Ocm p=0.01). They had higher rates of RDS, early hypotension, symptomatic PDA and PDA requiring surgery(86.9 vs 76% p=0.044; 60.7 vs 27.3% p=0.000; 66.6 vs 56.4% p=0.000; 46.4 vs 11.9% p=0.000). In BPD group *Ureaplasma urealitycum* bronchopneumonia was higher without significance(19 vs 6.8% p=0.06). Late sepsis and pneumonia(76.1 vs 58.9% p=0.000; 70.2 vs 18.8% p=0.000), severe HIV and hemorrhagic periventricular infarction rates were more frequent(8.3 vs 1.7% p=0.000; 5.9 vs 1.7% p=0.000).

More days on mechanical ventilation and oxygen therapy were observed in BPD group(29.8±20.5 vs 11.2±12.9 p=0.000; 102.2±29.8 vs 47.2±20.8 p=0.000; 6.6±7.1 vs 3±2.8 p=0.001).

Conclusion: Low GA and BW, male sex, early respiratory morbidity, respiratory infection, symptomatic PDA are risk factors for BPD in ELGAN. Could we design new strategies controlling these factors to prevent BPD development?

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RSV INFECTION IN INFANTS ADMITTED TO PAEDIATRIC INTENSIVE CARE UNIT

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Objectives: Description of RSV infection in infants below two months old admitted to Paediatric Intensive Care Unit (PICU).

Methods: Descriptive and retrospective study of infants less than two months old admitted to PICU with the diagnosis of RSV infection from January-2004 to December-2010.

Results: 53 children below two months of age were admitted to PICU hospital during the period of study with diagnosis of RSV infection. 25 from the emergency department and 28 from the paediatric floor. The causes of admission were apnoea (in 21,4% of the cases) and respiratory distress (in 78,6% of the cases). 30,1 % of these children were preterm.

94,3 % of the infants admitted developed bronchiolitis, 17 % presented apnoea. 76,9% were treated with epinefrine and 32,7% with albuterol. 26,4% required antibiotics.

Ventilatory assistance was needed in 65% of the patients (CPAP in 50% and ventilatory support in 15%). They required a mean FiO₂ of 30.8+/-16.1% for a period of 3.85+/-3.54d. Mean PCO₂ was 57.4+/-14 mmHg. A chest X-ray was performed in 75.5% of the children and showed pneumoniae or atelectasia in 43,2% of the cases.

Discussion: Patients with a diagnosis of RSV infection admitted to PICU develop bronchiolitis in a high percentage. Epinefrine was the main treatment used. Mainly 50% of these infants required respiratory assistance.