[2007] [8434.7] Clinical Characteristics of Patients Developing Bronchopulmonary Displasia

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BACKGROUND: 25 to 30% of our VLBW infants develop bronchopulmonary displasia (BPD), defined as oxygen requirement for more than 28 days. Controversies exist about the weight of each one of the clinical variables and neonatal morbidities described in the literature.
OBJECTIVE: To evaluate the clinical characteristics of patients developing BPD compared with a control group without BPD at 40 weeks of postmenstrual age.
DESIGN/METHODS: Case-control study. Inclusion criteria: in-born infants, postmenstrual age <30 weeks, birth weight <1500 g and surviving up to 40 weeks of corrected age. Exclusion criteria: major congenital malformations, intrauterine infections or being transferred to other hospital.
RESULTS: From january 2000 to november 2005, 178 children were eligible, 52 patients were excluded. 126 patients were evaluated, 67 (53.1%) developed BPD (table 1-2).
By multivariate analysis the following variables were predictive of BPD: male gender (OR: 3,25 CI 95% 1.082-9.75), RDS (OR: 5,34 CI 95% 1.37-20.76) and mechanical ventilation (OR: 42,32 CI 95% 12.93-139.61). The model has a good Hosmer-Lemeshow adjustment. It also shows good capacity of classification, with a cut point ≥0.25, 80% were correctly classified and a discrimination area under ROC curve of 0.908.

Clinical Characteristics			
	Non BPD.n=58	BPD.n=67	p
Postmenstrual age, median (range)	29 (26-29)	27 (26-29)	0.0000 *
Birth Weight, median (range)	1160 (710-1500)	940 (600-1380)	0.0000 *
Male sex, n (%)	24 (41.3)	43 (64.2)	0.011 **

* two sample Wilcoxon test. ** chi2

Population Clinical Characteristics.			
	Non BPD.n=58	BPD.n=67	p
Days on mechanical ventilation, median (range)	2 (0-22)	31 (0-137)	0.0000*
RDS, n (%)	35 (60.34)	61 (91)	0.000**
Surfactant, n (%)	37 (63.8)	54 (80.6)	0.035**
PDA, n (%)	27 (46.55)	49 (73.1)	0.002**
Score CRIB, median (range)	1 (0-7)	3 (0-12)	0.006*
Late onset sepsis, n (%)	10 (17.24)	32 (47.8)	0.000**

Maternal steroids, n (%)	38/58 (65.5)	26/64 (40.6)	ns

* two sample Wilcoxon test. ** chi2

CONCLUSIONS: In our population the predictive variables for BPD were mechanical ventilation, RDS and male gender.

E-PAS2007:618434.7

Tuesday, May 8, 2007 10:00 AM, Exhibit Hall E - Metro Toronto Convention Centre

Poster Session: Neonatal Pulmonology (10:00 AM - 2:00 PM)
Board Number: 324
Course Number: 8434