

## PREDICTORS OF BRONCHOPULMONARY DYSPLASIA (BPD) IN A LOW BPD SETTING: A 6-YEAR POPULATION-BASED COHORT OF THE MARCHE REGION

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**Background and objective:** BPD remains a severe complication of premature birth. We studied the risk factors and early predictors of BPD.

**Methods:** All infants from 24,0 to 31,6 weeks born in the Marche Region from 2004 to 2009 were studied.

**Results:** 629 infants were eligible, with 69 deaths (11%), 97 BPDs (15.4%), 161 deaths and/or BPD (25.6%). Histological chorioamnionitis (HCA) were 12,3% and culture proven sepsis 13.7%. Gestational age (GA), birth weight (BW), BW standard deviation score (BW-SDS), duration of mechanical ventilation and continuous positive airway pressure, oxygen supplementation, intubation within 6 hours from birth, ventilation associated pneumonia, patent ductus arteriosus (PDA), sepsis, respiratory distress syndrome (RDS), surfactant treatment (number of doses, age at 1<sup>st</sup> dose, oxygenation-index (OI) and FiO<sub>2</sub> before the 1<sup>st</sup> dose), pulmonary hypertension, inhaled nitric oxide (iNO), were all significant at the univariate analysis. We found no significant association between BPD and HCA or early-onset sepsis. Multivariate logistic regression analysis is reported in table below.

Risk Factors	p	OR	CI
GA	0,000	0,954	0,937-0,971
BW-SDS	0,006	0,708	0,553-0,906
PDA	0,003	0,432	0,250-0,745
age at 1 <sup>st</sup> surfactant	0,004	0,956	0,916-0,997
OI pre-1 <sup>st</sup> surfactant	0,000	1,103	1,045-1,166

[Table]

**Conclusion:** In our cohort of preterm infants receiving "optimal" prenatal care with a low rate of complications, BPD percentage was low and significantly associated with RDS severity and PDA but not with sepsis and/or HCA.