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Title: Lung function and respiratory morbidity in children with bronchopulmonary dysplasia

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Body: Introduction: There are limited data regarding respiratory sequelae in school-age children with bronchopulmonary dysplasia (BPD) born in the surfactant era at. Aim: To determine lung function and respiratory morbidity in school-age children with BPD and to compare the results with preterm non BPD and at-term born children. Methods: Two cohorts of preterm children with a gestational age < 30 weeks (BPD, n=23 and preterm without BPD, n=33) and 33 at-term born subjects were recruited at a median age of 7.7 years. Their lung function and patterns respiratory morbidity were assessed. Results: The children in the BPD group had significantly lower mean FVC % predicted, (89.1 vs. 98.5 vs. 100.1), FEV1 % predicted (75.3 vs. 89.8 vs. 91.1) and FEF25-75 % predicted (58.9 vs. 82.6 vs. 90.1), compared to preterm non BPD and at-term born group. Children in the preterm non BPD group had mean spirometric values in normal ranges and there was no significant difference in FVC, FEV1 and FEF25-75 compared to the at-term born group. There were significantly more children with BPD wheezing in the first 3 years of life and in the last year before study compared to preterm non BPD and at-term born group ($P < 0.01$). There were no statistically significant differences in wheezing episodes between preterm non BPD and at-term born group of children. Conclusions: Impaired lung function and higher prevalence of wheezing persist in school-age children with BPD.