

Environmental tobacco smoke exposure (ETS) and respiratory morbidity in school age children

Carolina Constant¹, Isabel Sampaio¹, Filipa Negreiro³, Pedro Aguiar³, Ana Margarida Silva², Marisa Salgueiro², Cristina Bastardo², Teresa Bandeira²

¹Departamento da Criança e da Família; Clínica Universitária de Pediatria. Hospital de Santa Maria; ²Núcleo de Estudos da Função Respiratória, Sono e Ventilação do Departamento da Criança e da Família; Clínica Universitária de Pediatria. Hospital de Santa Maria; ³Departamento de Bioestatística; Eurotrials – Consultores Científicos, S.A.

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Tobacco smoke is a risk factor for COPD and a major public health problem. Prenatal maternal smoking and post-natal ETS lead to dose-dependent decrease in lung function and respiratory morbidity. Influence of different socioeconomic indicators and ETS in the home has also been suggested. Methods: Data on 313 children (52% male) from 4 public schools in Lisbon was analyzed [1st (54%) and 4th graders]. ETS assessment and respiratory symptoms were based on a self-answered questionnaire. All children performed standard spirometry in the school setting (MicroLab Spiro V1.34) and 54% were acceptable according to ATS/ERS criteria. Descriptive and bivariate analysis of the most relevant variables was done, followed by multiple logistic regression analysis adjusted to the variables with clinical/statistical relevance. Results: ETS in the home was found in 41% (maternal smoking during pregnancy 18%, smoking mother 32%, smoking father 38%). Smoking fathers had lower education and less qualified occupation. Cough was more frequent in children with a smoking mother (adjusted OR=2.1 95%CI 1.1-4.0) and wheezing in children with maternal smoking during pregnancy and smoking parents. All differences were significant ($p<0.05$). No association was found between parental education and cough/wheeze or ETS and respiratory infections/asthma diagnosis/decreased spirometric values. Conclusions: Children in Lisbon are frequently exposed to ETS which results in significant respiratory morbidity. Targeted interventions must have social conditions in consideration. In this study field spirometry was not helpful in early detection of lung function disability in children associated with ETS.