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Title: Parental history of adenotonsillectomy is a risk factor for tonsillar hypertrophy and snoring in children

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Body: Recognition of subgroups of children predisposed to overgrowth of the pharyngeal lymphoid tissue, such as those with history of wheezing requiring treatment, may allow implementation of treatment interventions in early life for the prevention of obstructive sleep-disordered breathing (SDB). We hypothesized that parental history of adenoidectomy and/or tonsillectomy (AT) is a risk factor for tonsillar hypertrophy and snoring in childhood in addition to history of wheezing requiring treatment. Methods: Children were recruited from outpatient clinics. Parental history of AT (explanatory variable) and snoring ≥ 1 night/week (outcome) were recorded and presence of tonsillar hypertrophy (outcome) was assessed. Results: 435 children were recruited (2-16 yo) and 79 (18.2%) of them had parental history of AT. Parental history of AT was significantly associated with the presence of tonsillar hypertrophy and snoring even after adjustment for history of wheezing requiring treatment, age, gender, obesity and passive smoking [odds ratio (95% CI): 2.2 (1.2-3.9); $p<0.01$ and 1.8 (1.1-3.1); $p<0.05$, respectively]. When both tonsillar hypertrophy and parental history of AT were entered in the same multiple logistic regression model, the former was stronger predictor of snoring than the latter: 3.3 (2-5.3); $p<0.01$ vs. 1.6 (0.9-2.9); $p=0.09$), respectively. Conclusions: Children with parental history of AT have more frequently tonsillar hypertrophy than those without such history. Familial predisposition to tonsillar hypertrophy may mediate at least in part the association between parental history of AT and SDB in children.