Association between asthma with primary nocturnal enuresis in children

INTRODUCTION AND OBJECTIVES: Enuresis, sleeping respiratory problems and asthma are diseases that compromises the quality of sleep in children and may occur isolate or in association with each other. Enuresis is considered one of the most common sleeping disorders in pediatrics. Sleeping respiratory disorders (SRD) such as obstructive sleep apnea are common problems may be associated with enuresis. According to the United Airway Concept, abnormalities of both superior and inferior airways may coexist. A sibilant toddler has a greater chance of having snoring and nocturnal apnea. Since asthma and SRD may be associated, we questioned the possibility of the association between asthma and enuresis.

METHODS: Between January and October 2013, parents of children between 6 to 14 years of age from 16 different schools in our region were randomly chosen for interview. Children with non-monosymptomatic enuresis, neurological diseases were not included. A specific questionnaire for SRD (Tucson) and the ISAAC questionnaire (Internacional Study of Asthma and Allergies in Childhood) were used for the evaluation of SRD and Asthma and a structured questionnaire was applied to evaluate enuresis and its characteristics.

RESULTS: We evaluated 304 children, 147 males end 157 females, with mean age in years of 9.81±2.06. The overall prevalence of enuresis was 19.08% [15.04-23.89%]95%CI, and was more prevalent in children with history of asthma at any time of life, when compared to no asthmatics, respectively 28.28%(28/99) and 14.68%(30/205) OR=2.30[1.28-4.12]95%CI (p=0.008).

Likewise 35.29% (18/33) of those still having asthma (sibilants in the last 12 months) had enuresis, significantly higher than no sibilants that had a past history of enuresis in 15.8%(40/253) OR=2.91[1.49-5.65]95%CI (p=0.003). Forty percent of children with apnea had enuresis (8/20) while only 17.6% (50/284) of those without apnea had enuresis [1.212-8.031]95%CI (p=0.033).

CONCLUSIONS: These findings demonstrate that asthma, as well with sleeping respiratory disorders, is associated with primary nocturnal enuresis.

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