

Risk Factors of Nocturnal Enuresis in Children with Attention Deficit Hyperactivity Disorder.

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BACKGROUND:

Presence of attention deficit hyperactivity disorder (ADHD) has a negative effect on the resolution of incontinence; however, there are few studies which investigated the risk factors of nocturnal enuresis (NE) in patients with ADHD.

AIMS:

This study was conducted to investigate the prevalence of NE and its risk factors in children with ADHD.

METHODS:

331 children, aged 6 to 10 years, diagnosed as having ADHD were enrolled in this study. The diagnosis of ADHD was confirmed by an experienced child and adolescent psychiatrist according to DSM-IV-TR. NE was defined as nighttime wetting with or without daytime incontinence, at least twice a week over a period of 3 months or longer in children 5 years old and older without anatomical abnormalities. Details on demographic data, perinatal history, medical history and developmental history were collected from parents or medical records.

RESULTS:

Most of the ADHD patients with inattentive subtype (77.5%) had NE, compared to 31.7% in the hyperactive/Impulsive subtype and 22.5% in the combined subtype ($p < 0.001$, $t = 42.71$). Among children with enuresis, there were significantly higher rates of history of familial enuresis (26% vs. 18%, $p < 0.001$, $t = 16.9$), cesarean delivery (47% vs. 33%, $p = 0.019$, $t = 5.84$) and history of neonatal sepsis (16% vs. 7%, $p = 0.018$, $t = 5.62$) than non-NE children. Moreover, patients with NE had lower birth weight than non-NE patients (2.93(0.65) vs. 3.09 (0.46), $p = 0.026$, $t = 2.51$). Also, low parental education was associated with increase in the rate of NE.

CONCLUSION:

Children with ADHD have a high prevalence of NE. Male sex, low education level of parents, history of neonatal sepsis, positive family history of NE, low birth weight and caesarian delivery may be risk factors for NE in ADHD children. Most ADHD patients with inattentive subtype had NE.