

Case Report

Concealed Affair of Allergic Rhinitis and Somnambulism through a Middle Man

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Abstract

Obstructive Sleep Apnoea is common in children as well. It is strongly associated with parasomnias, including sleep terror, sleep walking etc. In this case report, we are discussing about a boy who was referred to us for the evaluation and management of sleep walking. Enlarged adenoid and tonsil, secondary to allergic disease was found to be causing Obstructive Sleep Apnoea in him, causing a trigger for the sleep walking. Here we are highlighting the importance of controlling the allergic disease in such children, which can even result in the avoidance of invasive surgical interventions like adenotonsillectomy.

Case Report

A 12 year old boy was brought to us with history of waking up with a shriek cry, after 2-3 hours of sleep and then walking to and fro in the room with laboured breathing and coughing. He has been having similar episodes, about twice or thrice in a week, for the last 3 months. The boy did not have any memory of the event and he sleeps peacefully, once forcefully taken to the bed by his parents. There was no history of seizure like movements or micturition during the episodes. The boy was otherwise normal, active and good in studies and socially interactive. He was asymptomatic in between the episodes. On detailed history taking, it was noticed that the boy was suffering from intermittent episodes of running nose and sneezing for many years and his symptoms had increased for the last 3 months. He did not snore, but used to mouth breath while sleeping. There was no history of easy fatigability, observed apnoea or increased day time somnolence. He was of moderate built. There were no cranio-facial abnormalities. Naso-Pharyngeal Laryngeal (NPL) scopy showed grade 2 adenoids and tonsils.

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He underwent polysomnography for the evaluation of his sleep disorder. He had a total sleep time of 370 minutes with sleep efficiency of 88.4%. But the time he spent on REM sleep was only 2.8% of the total sleep period. His Apnoea Hypopnea Index (AHI) was 9.0, which was abnormal for his age. AHI during the REM sleep period was 30. His heart rate fluctuated from 57 beats/min to 134 beats/min. His average SpO₂ during the sleep was 97% and the minimum SpO₂ associated with a respiratory event was 83%. There was no snoring. He did not have the somnambulism episode during the study.

As enlarged adenoids and tonsils, especially in the back ground of allergic rhinitis constitutes a major cause for sleep apnoea in children, he was advised to undergo adeno-tonsillectomy. At the same time he was initiated on Mometazone nasal spray 50ug once daily and Montelukast, along with anti-histamines for a short duration. He was advised to follow the anti-allergy measures strictly.

The boy's allergic symptoms improved on the medication and he stopped mouth breathing while sleeping. There were no episodes of somnambulism thereafter. Re-assessment showed that the adenoids had significantly reduced in size.

Discussion

Obstructive sleep apnoea is not a rare disease in children. The estimated prevalence of snoring in children is about 3 to 12 percent and the prevalence of OSA is about 1 to 10% [1]. Most of these children will have mild symptoms and they out grow it in course of time. The symptoms can include failure to thrive, attention deficit disorder, behavior problems, enuresis, other sleep disorders like somnambulism, poor academic performance etc. Unlike adults, fewer children with OSA will have excessive daytime sleepiness, with the exception of obese children [2]. AHI of one or more is considered as abnormal in children, where as an AHI of >5 is considered as moderate to severe.

The association between OSA and parasomnias is well established. Review of studies shows that about one half of the children referred for evaluation for sleep terror or sleep walking have underlying OSA [3]. OSA in children is most commonly associated with adeno-tonsillar hypertrophy [4]. But not all children with enlarged adenoids and tonsils will have OSA. For the same reason, adeno-tonsillectomy is considered as the first line of management of OSA, even in obese children [5]. As the area of adenoids and the tonsils are more prone for airway collapse, adenotonsillectomy is offered for all children with OSA, even if there is no significant enlargement of these lymphoid tissues. Not all OSA will improve after the surgery. So a repeat sleep study is advisable after the surgery. But the persistence of OSA is usually seen in those with craniofacial abnormalities [6].

First line of management of enlarged tonsil and adenoid is to treat the underlying allergic disease if any, by using corticosteroid nasal spray and anti-histamine. Even though OSA is a serious complication of adeno-tonsil hypertrophy, where an adeno-tonsillectomy is indicated, this case clearly shows how the initiation of the medications for the allergic disease and its control, can just be enough to manage

the situation, thus avoiding an invasive procedure, at least in a few children.

Conflict of Interest

No conflicts of interest.

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