Role of Allergic Rhinitis in Sleep Disordered Breathing and Behavioral Disorders in Children
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Case:
- A 6 year old boy is referred to you by his pediatrician with the recent diagnosis of Attention Deficit Hyperactivity Disorder (ADHD). He has been placed on methylphenidate with some improvement in his school attentiveness and hyperactivity. The mother believes his problem is due to a food allergy, since he is more hyperactive after eating candy and sugary foods. She is not sure if dairy products make him worse, and has come specifically for food allergy testing. There was never a cutaneous reaction to any food, but mild eczema was noted as an infant.
- Your history reveals that the patient snores and breathes with his mouth wide open every night. At times he stops breathing for a few seconds. He sometimes wets the bed. Interspersed with hyperactivity, he often falls asleep during school hours.
- Frequent ear infections and persistent middle ear fluid from 6 months to 2 years old has been replaced by recurrent tonsillitis, but not enough to see the ENT, according to the pediatrician. His nose is always blocked, at times with yellow or green discharge, which improves with antibiotics.
- Physical Exam reveals “long face” with open mouth and allergic shiners. Nose is completely obstructed by swollen turbinates and thick mucoid discharge. Dental arch is somewhat narrow and high. Tonsils are markedly enlarged and almost “kissing”. Tympanic membranes are normal.
- Skin prick testing reveals 4+ reaction to dust mites, 2+ to molds and tree pollen, 1+ or negative to other allergens and foods. Humeral immune evaluation is normal.
- You recommend immediate ENT evaluation and sleep study. You also prescribe Mometasone Nasal Spray to be used for at least 2 months. After his exam, which reveals 50% obstruction by hypertrophic adenoids and a positive sleep study, the ENT physician schedules Tonsillecotomy and Adenoidectomy.
- However, prior to the surgery date one month later, the patient has marked improvement. He can breathe through his nose. Tonsils and adenoids are significantly smaller. He is no longer snoring or experiencing sleep apnea. The teacher reports that he is paying attention, and not hyperactive or falling asleep. A repeat sleep study is normal. Surgery is postponed and Mometasone nasal spray is continued.

Is there any correlation between allergy and adenotonsillar tissue hypertrophy?

Allergic Rhinitis and Sleep Disturbance:


Intranasal corticosteroids for nasal airway obstruction in children with moderate to severe adenoidal hypertrophy.

Intranasal budesonide treatment for children with mild obstructive sleep apnea syndrome.


A Clinical Overview of Sleep and Attention-Deficit/Hyperactivity Disorder in Children and Adolescents

Allergic rhinitis in children with attention-deficit/hyperactivity disorder Ashley Brawley, MD*; Bernard Silverman, MD, MPH* Shannon Kearney, DO*; Denise Guanzon, MD*; Mark Owens, DO*; Harvey Bennett, MD*; and Arlene Schneider, MD*Ann Allergy Asthma Immunol. 2004;92:663– 667.

Allergic Rhinitis and Inner-City Children—Is There a Relationship to Sleep-Disordered Breathing?