

# Adenotonsillectomy Reduced Asthma Symptoms

BY HEIDI SPLETE

ORLANDO — Children with asthma who underwent adenotonsillectomies showed significant improvement in their asthma symptoms, compared with presurgical levels, according to findings from a retrospective review of 93 children with asthma.

Children with asthma are at greater risk for sleep-disordered breathing than their peers without asthma, said Dr. Rowley S. Busino of the University of Medicine and Dentistry of New Jersey, Newark. Consequently, asthma is a common comorbidity in children undergoing adenotonsillectomy.

Parents of children with asthma often report that their children's asthmatic symptoms improve after an adenotonsillectomy, but that observation has not

been well studied, Dr. Busino observed.

Dr. Busino and her colleagues reviewed data from all children who underwent adenotonsillectomy at a single institution between 2002 and 2007. The study population included 93 children

disease, subglottic stenosis, prematurity, and neurological disorders were excluded.

Both groups were similar in terms of age and gender distribution, and the most common reason for surgery in

both groups was obstructive sleep apnea/adenotonsillar hypertrophy. Asthma symptoms were assessed 12 months before and 12 months after surgery, according to a poster presented at the Triological Society's Combined Sections Meeting.

After surgery, the children with asthma had significantly fewer hospital visits (1.6 vs. 0.1), and used significantly fewer daily medications (2.6 vs. 2.3) and systemic steroids (2.0 vs. 0.5), compared with presurgery levels.

Scores on the Asthma Control Test also improved significantly after surgery,

compared with presurgery scores, from 18.5 to 20.5.

Because of the small number of respiratory complications in each group, the researchers were not able to assess whether children with asthma had a higher postoperative respiratory complication rate, compared with children without asthma. The average length of postoperative hospital stay was not significantly different between the asthma and control groups.

"This study suggests that adenotonsillectomy, which provides improvement in the upper airways of children, may in turn lead to improvement of their lower airways," Dr. Busino said at the meeting, which was jointly sponsored by the Triological Society and the American College of Surgeons.

Prospective studies to clarify the relationship between asthma, adenotonsillectomy, and obstructive sleep apnea are needed to improve clinical care, she said. ■

## VITALS

**Major Finding:** Children with asthma who underwent adenotonsillectomies required significantly less asthma medication and had fewer hospitalizations, compared with presurgical utilization.

**Data Source:** A retrospective review of 465 consecutive children with and without asthma who underwent adenotonsillectomy at a single institution. Symptoms of asthma were compared 12 months pre- and post surgery.

**Disclosures:** Dr. Busino had no financial conflicts to disclose.

with asthma and 372 children without asthma. The children were aged 3-14 years, with an average age of 6 years. Children younger than 3 years and those with comorbid medical conditions including Down syndrome, heart

## Estrogen-Only Hormone Therapy Linked to Asthma

BY JENNIE SMITH

Estrogen-only hormone therapy has been shown to increase the risk of developing asthma after menopause by 54% among postmenopausal women compared with those never treated with HT, according to a new analysis.

Researchers at the National Institute of Public Health, Cuernavaca, Mexico, and INSERM and the Université Paris-Sud, France, used data from the E3N cohort, a health survey of nearly 100,000 French women born between 1925 and 1950. The women, mostly teachers, responded to biannual questionnaires between 1990 and 2002 (Thorax 2010 Feb. 8 [doi:10.1136/thx.2009.116079]).

Of the 57,664 women free of asthma at menopause, just under two-thirds used some sort of HT, and 569 were later diagnosed with asthma. The study, led by Dr. Isabelle Romieu of the Mexican institute, found that "the increased risk of asthma onset among women using [HT] was present only in users of estrogen alone [hazard ratio 1.54]. The effect was observed only in recent users including current users and women for whom time since last use was <1.5 years."

Moreover, the authors wrote, "Fifty-eight percent of women reporting the use of estrogen alone at the time of asthma onset or as last treatment before asthma onset had previously used another [HT]. This supports our finding that the increased risk of asthma onset is linked to estrogen use."

The authors found the risk of developing asthma increased to 80% and 86% (hazard ratios of 1.80 and 1.86), respectively, among postmenopausal women treated with estrogen-only HT who never

smoked or had a history of allergies before menopause, compared with untreated women. The authors cautioned, however, that the allergy histories were self-reported and that potential misclassifications of allergic disease could have occurred.

The apparently lower susceptibility of HT-treated women who smoke or have smoked to postmenopausal asthma, the authors said, had been noted in earlier studies. "This might be due to the antioestrogenic effect of smoking or to the difficulty of isolating the additional effect of [HT] among smokers," they wrote.

Female hormones have long been suspected to play a role in the development of asthma, and the connection between HT and postmenopausal asthma had been investigated in a large-scale U.S. study published in 2004 (Arch. Int. Med. 2004;164:379-86). That study determined that recent HT treatment was linked to an increased risk of postmenopausal patients developing asthma. But it found the risk to be similar whether patients were treated with estrogen only, or a combination therapy.

Dr. Romieu and colleagues offered as a possible explanation for the disparity the fact that French and American physicians generally use different ratios of estrogen and progestin, as well as different types of progestin, in HT treatment regimens.

Also in contrast to the earlier U.S. study, Dr. Romieu's team did not observe interactions between body mass index and risk of asthma among HT and non-HT patients following menopause, but stated that this may have been because the French cohort presented leaner body mass as a whole. ■

**Disclosures:** The study investigators reported no financial conflicts of interest.

## Adenotonsillectomy Done More For Sleep-Disordered Breathing

BY HEIDI SPLETE

ORLANDO — Both the indication and the incidence of adenotonsillar procedures in children have changed, according to Dr. Laura Orvidas.

"We seem to do more adenotonsillectomies for sleep-disordered breathing than we have in the past," she said at the combined sections meeting of the Triological Society.

To evaluate changes in the incidence and indications for tonsillectomy

**In 1970, treatment of infection accounted for 90% of procedures. In 2005, upper airway obstruction accounted for more than half of the indications.**

and adenotonsillectomy, Dr. Orvidas of the Mayo Clinic in Rochester, Minn., reviewed data from the Mayo Clinic's database for a 35-year period between 1970 and 2005. The study population included 8,106 tonsillectomy and/or adenotonsillectomy patients aged 6 months to 29 years (mean age, 10.5 years).

The most interesting finding was the change in surgical indications for all procedures, said Dr. Orvidas: "Early on we were treating mostly for infection, and now it seems to be mostly for upper airway obstruction." In 1970, treatment of infection accounted for approximately 90% of either adenotonsillectomies or tonsillectomies, while upper airway obstruction accounted for about 10%. In

2005, upper airway obstruction accounted for more than half of the indications for both procedures, while infection accounted for about 25% and a combination of both upper airway obstruction and infection accounted for approximately 20%.

The incidence of tonsillectomy or adenotonsillectomy was 369/100,000 person-years during the period from 1970 to 1974, compared with 642/100,000 person-years from 2001 to 2005, Dr. Orvidas said. Sixty-five percent of the tonsillectomy patients, 48% of the adenotonsillectomy patients, and 55% of the patients for both conditions were female.

"Neither the indication nor the incidence for adenotonsillar surgery has been static," Dr. Orvidas noted at the meeting, jointly sponsored by the Triological Society and the American College of Surgeons.

Adenotonsillectomy incidence increased more than tonsillectomy incidence overall, although there was a high density of tonsillectomies in adolescent females, she said. For tonsillectomy alone, the mean age across the entire study period was 16 years vs. a mean of 7 years for adenotonsillectomy.

Dr. Orvidas also noted an increase in both adenotonsillectomy and tonsillectomy procedures for younger males. The possible reasons for these two trends were not addressed in the Mayo Clinic study. ■

**Disclosures:** Dr. Orvidas said she had no financial conflicts to disclose.