GERD Tx Aids Lung Function in Asthmatic Kids

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SEATTLE — Treating gastroesophageal reflux disease in children with persistent asthma improves lung function in the long term, new data show. Moreover, medical and surgical treatments appear to work equally well.

About two-thirds of nonatopic children with persistent asthma also have gastroesophageal reflux disease (GERD), and that disease appears to exacerbate the asthma, Dr. Aaron K. Kobernick said at the annual meeting of the American College of Allergy, Asthma, and Immunology. Studies of GERD treatment in this context have focused on asthma medication use and have been relatively short.

"With asthma, short-term studies are not as reliable," said Dr. Kobernick. "Because [it] is a disease of exacerbation and remission, the longer we look at asthma and [its] outcomes, the better."

Large airways are exposed to the reflux acid, and they tend to respond more quickly with anti-GERD treatment.

DR. KOBERNICK

In a prospective 2-year study, Dr. Kobernick and his colleagues enrolled 62 children aged between 6 and 11 years and who had moderate persistent asthma but did not have atopy or risk factors for wheezing. At baseline, all of the children underwent spirometry and extended esophageal pH monitoring. The latter testing revealed that most also had GERD.

Of those with asthma and GERD, 32 were treated with medical therapy for GERD consisting of proton pump inhibitors and prokinetic agents and 12 underwent surgical fundoplication; they also received asthma therapy. The 18 children who did not have comorbid GERD received asthma therapy only.

The three groups were similar with respect to age, sex, socioeconomic status, duration of illness, and initial spirometry findings, noted Dr. Kobernick, a medicine and pediatrics resident at Tulane University in New Orleans.

After 2 years of treatment, the average annual number of asthma exacerbations per child was significantly lower, by about 75%, in those with medically treated GERD (0.68) and those with surgically treated GERD (0.79), compared with their GERD-free counterparts treated for asthma alone (2.9). The difference between the medically and surgically treated GERD groups was not significant.

The percentage of children who had an improvement in forced expiratory volume in 1 second (FEV_1) by more than 20% from baseline was significantly greater in the groups given medical GERD treatment (47%) and surgical GERD treatment (58%), compared with the group given asthma therapy alone (28%).

The percentage of children with an improvement in forced expiratory flow in mid-expiration ($FEF_{25\%-75\%}$) of more than 20% from baseline was significantly greater with added medical GERD therapy (22%) and surgical GERD therapy (25%), versus asthma therapy alone (11%).

Dr. Kobernick said anatomy may explain why more children had an improvement in FEV_1 (indicating large-airway function) than they did in $FEF_{25\%-75\%}$ (indicating small-airway function) with anti-GERD treatment. "Maybe the large airways… are most likely exposed to the onslaught of acid from the reflux, and those just tend to improve more quickly with anti-GERD treatment," he said.

Spirometry testing done after only 1 year of treatment did not show any significant improvement in FEV_1, he noted. That, combined with the apparent slower improvement of $FEF_{25\%-75\%}$, reinforces the importance of long-term studies.

The results may underestimate the benefit of anti-GERD treatment because many children had been previously treated for asthma. "The average time a patient was treated for asthma before enrollment was about 1½-2 years, so we think their lungs probably started looking a lot better before they enrolled," said Dr. Kobernick, who reported no conflicts of interest related to the study. ■