Medical Xpress

Nasal steroid spray may not help resolve dysfunction of the ear's eustachian tubes

May 16 2011

For patients with eustachian tube dysfunction (ETD), steroids administered by a nasal spray may be ineffective, according to a report in the May issue of *Archives of Otolaryngology–Head and Neck Surgery*.

The eustachian tubes connect the middle ear, the upper part of the throat and the ends of the nasal passages. Eustachian tube dysfunction may contribute to fluid collection in the middle ear (otitis media with effusion, or OME) or negative middle ear pressure (NMEP). Presently there is no gold-standard single treatment for this condition, although one hypothesis proposes that intra-nasal steroid treatment could be beneficial. "Because of the lack of a single accepted medical intervention to deal with ETD and the ostensibly benign nature of this condition, it is common practice for some clinicians to take a 'wait and see' initial approach when this clinical entity is encountered in lieu of prescribing unproven or unapproved medications," note the authors, who also point to the fact that some cases resolve on their own.

Michael B. Gluth, M.D., formerly of the Mayo Clinic in Rochester , Minn. (now with University of Arkansas for Medical Sciences, Little Rock), and coauthors conducted a randomized, placebo-controlled, double-blind prospective clinical trial of intranasal aqueous triamcinolone acetonide for ETD. They enrolled patients, children and adults, ages 6 and older, presenting with either OME or NMEP between September 2005 and December 2008 and randomly assigned 45 patients to the treatment group and 46 to the placebo group. The outcome measures were clinical resolution of ETD, as evidenced by

tympanometry (a test of the eardrum's mobility and middle ear conditions), and improvement in symptom scores on a questionnaire administered before and after treatment.

Among adults who had follow-up tympanograms, 18.9 percent of those receiving the study drug and 32.4 percent of those receiving placebo experienced complete normalization. Of pediatric patients with follow-up tympanograms, 7 percent receiving triamcinolone acetonide and 27 percent receiving the placebo had complete normalization. Neither of these differences was statistically significant, nor were overall poststudy symptom scores between the two groups (after prestudy overall symptom score was adjusted for).

The researchers note that the results obtained challenge their original premise. "These findings were contradictory to our hypothesis that nasal steroids would increase the rate of tympanogram normalization," they conclude. "These findings do not support the use of intranasal steroid sprays to treat the manifestations of eustachian tube dysfunction."

More information: Arch Otolaryngol Head Neck Surg. 2011;137[5]:449-455.

Provided by JAMA and Archives Journals