

Simple procedure using a nasal balloon can help treat hearing loss in children

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For children with a common middle-ear problem, a simple procedure with a nasal balloon can reduce the impact of hearing loss and avoid unnecessary and ineffective use of antibiotics, according to a randomized controlled trial published in *CMAJ (Canadian Medical Association Journal)*.

It is very common for young children to develop otitis media with effusion, also known as "glue ear," in which the middle ear fills with thick fluid that can affect hearing development. There are frequently no symptoms, and parents often seek medical help only when hearing difficulties occur.

"Unfortunately, all available medical treatments for otitis media with effusion such as antibiotics, antihistamines, decongestants and intranasal steroids are ineffective and have unwanted effects, and therefore cannot be recommended," writes Dr. Ian Williamson, Primary Care and Population Sciences, University of Southampton, Southampton, United Kingdom, with coauthors.

In 2004 in the United States, there were 2.2 million diagnosed episodes of otitis media with effusion, costing an estimated \$4 billion.

Researchers from the United Kingdom undertook an open [randomized controlled trial](#) to determine if autoinflation with a nasal balloon could be used on a large scale to benefit children in primary care settings. The child blows through each nostril into a nozzle to inflate the balloon. The

effectiveness of this procedure has been shown only in small trials in hospitals.

This latest trial involved 320 children aged 4 to 11 years from 43 family practices in the UK who had recent histories of otitis media and effusion with confirmed fluid in one or both ears. The children were randomly assigned to either a [control group](#) that received standard care or a group that received standard care with autoinflation three times a day for 1 to 3 months. The children receiving autoinflation were more likely than those in the control group to have normal middle-ear pressure at both 1 month (47.3% and 35.6%, respectively) and 3 months (49.6% and 38.3%, respectively) and have fewer days with symptoms.

"Autoinflation is a simple, low-cost procedure that can be taught to [young children](#) in a [primary care](#) setting with a reasonable expectation of compliance," write the authors. "We have found use of autoinflation in young, school-aged children with otitis media with effusion to be feasible, safe and effective in clearing effusions, and in improving important ear symptoms, concerns and related quality of life over a 3-month watch-and-wait period."

They suggest that this treatment should be used more widely in children over age 4 to manage otitis media with effusion and help treat the associated [hearing loss](#).

In a related commentary, Drs. Chris Del Mar and Tammy Hoffman, Centre for Research in Evidence-Based Practice, Bond University, Gold Coast, Queensland, Australia, write "At last, there is something effective to offer children with [glue ear](#) other than surgery." Surgery to insert drainage tubes can help a select minority of [children](#).

"Autoinflation is one of a number of effective nondrug interventions typically underrepresented in research and clinical practice," state the

authors.

The authors note that there are barriers to using nondrug therapies widely in clinical practice. In the case of autoinflation, doctors need to know about the technique's effectiveness, and how it is done, and must be able to instruct patients and families in how to use it.

More information: *CMAJ* study:

www.cmaj.ca/lookup/doi/10.1503/cmaj.141608

CMAJ commentary: www.cmaj.ca/lookup/doi/10.1503/cmaj.150527

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