

belong to the Asteraceae (Compositae, daisy) plant family, members of which are known to cause allergic reactions. Individuals with allergic tendencies, particularly those with known allergy to other members of the Asteraceae family (eg chamomile), should be advised to avoid echinacea preparations containing aerial parts. There is conflicting opinion regarding whether or not individuals with progressive systemic diseases such as leukaemia and multiple sclerosis and other autoimmune diseases should avoid echinacea. Although there is a lack of supporting evidence either way, in view of the seriousness of these conditions, it is appropriate to avoid use until further information is available. There is a lack of data on the safety of echinacea preparations taken during pregnancy and lactation and, given that the benefits of specific echinacea preparations have not been established definitively, excessive use during these periods should be avoided as a general precaution.

**DRUG INTERACTIONS:** There are no reported drug interactions for echinacea, although on the basis of its documented immunomodulatory activity, as a general precaution, echinacea should only be used with caution in patients taking immunosuppressant drugs. Studies assessing the effects of preparations of *E. purpurea* root on cytochrome P450 drug-metabolising enzymes in healthy volunteers have shown conflicting results. Caution is advised in using echinacea in patients taking drugs with a narrow therapeutic range and which are substrates for CYP1A2 and CYP3A4.

#### Key references

- Barnes J, Anderson LA, Phillipson JD. Herbal medicines. 3rd ed. London: Pharmaceutical Press; 217–236.
- Linde K, Barrett B, Wölkart K, Bauer R, Melchart D. Echinacea for preventing and treating the common cold (Review). Cochrane Database of Systematic Reviews 2006, Issue 1. Art. No: CD000530. DOI: 10.1002/14651858.CD000530.pub2.

## Grommets effective for recurrent acute otitis media

**Bruce Arroll** MBChB, PhD, FRNZCGP, Professor of General Practice and Primary Health Care, University of Auckland, Private Bag 92019, Auckland; b.arroll@auckland.ac.nz

**THE PROBLEM:** Acute suppurative otitis media is one of the most common infectious diseases in childhood. Recurrent acute otitis media is defined for the purposes of this review as either three or more acute infections of the middle ear cleft in a six-month period, or at least four episodes in a year. Strategies for managing the condition include the assessment and modification of risk factors where possible, repeated courses of antibiotics for each new infection, antibiotic prophylaxis and the insertion of ventilation tubes (grommets).

**CLINICAL BOTTOM LINE:** Grommets have a significant role in maintaining a 'disease-free' state in the first six months after insertion, in children aged three years or younger. In one study, grommets reduced the number of episodes of acute otitis media by an average of 1.5 episodes per child (a reduction of approximately 70%), and significantly increased the proportion of children with no episodes of AOM. The other study reviewed also found a higher proportion of patients in the grommet group had no episodes of AOM in the six months after intervention, but the difference was not statistically significant. The effect size was small in terms of total number of episodes of recurrent AOM but in both studies more than 50% of children were AOM free, while only a handful were rendered AOM free in the antibiotic arm. This review involved only two small studies. Further research is required to investigate the effect of grommets beyond six months. Clinicians should take into account an individual patient's circumstances, the possible adverse effects of grommet insertion and the potential complications of AOM before surgery is undertaken.

Table 1. Grommets effective for recurrent acute otitis media

	Success	Evidence	Harms
<b>Grommets to prevent recurrent otitis media</b>	Reduction on Acute otitis media up to six months	Cochrane review <sup>1</sup>	Complications of surgery

#### References

- McDonald S, Langton Hower CD, Nunez DA. Grommets (ventilation tubes) for recurrent acute otitis media in children. Cochrane Database of Systematic Reviews 2008, Issue 4. Art. No.: CD004741. DOI: 10.1002/14651858.CD004741.pub2.

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