

Strictly Embargoed until 00:01hours (GMT), 25th January 2006

Antibiotic ear drops better than pills at treating middle ear infections

Topical quinolone antibiotics can clear aural discharge better than systemic antibiotics. This was the finding of a systematic review of literature published in the latest update of *The Cochrane Library*.

Chronically discharging ears associated with underlying persistent eardrum perforations (chronic suppurative otitis media (CSOM)) are a common cause of preventable hearing impairment, particularly in low and middle income countries.

The disease usually occurs in the first five years of life, but may persist to adulthood. Untreated CSOM may cause permanent hearing loss as the small sound-transmitting bones in the middle ear become damaged. When it occurs in children, the reduction in hearing can also impair language development and the acquisition of speech.

A systematic review of literature found that short courses of topically administered quinolone antibiotic drops such as ciprofloxacin were more effective at drying the ear than oral or injected antibiotics. The Review Authors were unable to find enough high quality data to assess the value of topical non-quinolone antibiotics that do not contain steroids, or of antiseptic treatments, when compared to systemic treatments.

“Less is known about the longer-term outcomes, or about treating complicated CSOM,” says lead author Carolyn Macfadyen a Research Associate at the International Health Research Group in the Liverpool School of Tropical Medicine, UK.

The Review Authors also noted that the evidence regarding safety of topical antibiotics is weak, and believe that clinicians should watch for any signs of ototoxicity when using topical treatment, particularly for non-quinolones such as aminoglycoside.

“The cost effectiveness of alternative treatments, preferably through economic evaluations alongside clinical trials, would be valuable in guiding both clinical practice and health policy,” says Macfadyen.

Notes for editors

1. Review Paper: Macfadyen CA, Acuin JM, Gamble C. Systemic antibiotics versus topical treatments for chronically discharging ears with underlying eardrum perforations. *The Cochrane Database of Systematic Reviews* 2006, Issue 1. Art. No.: CD005608. DOI: 10.1002/14651858.CD005608.

Macfadyen CA, Acuin JM, Gamble C. Topical antibiotics without steroids for chronically discharging ears with underlying eardrum perforations. *The Cochrane Database of Systematic Reviews* 2005, Issue 4. Art. No.: CD004618. DOI: 10.1002/14651858.CD004618.pub2.
2. The Cochrane Library contains high quality health care information, including Systematic Reviews from The Cochrane Collaboration. These Reviews bring together research on the effects of health care and are considered the gold standard for determining the relative

effectiveness of different interventions. The Cochrane Collaboration (<http://www.cochrane.org>) is a UK registered international charity and the world's leading producer of systematic Reviews. It has been demonstrated that Cochrane Systematic Reviews are of comparable or better quality and are updated more often than the Reviews published in print journals^a.

3. The Cochrane Library can be accessed at <http://www.thecochranelibrary.com>. Guest users may access abstracts for all Reviews in the database, and members of the media may request full access to the contents of the Library. For further information, see contact details below.
4. A number of countries have national provisions by which some or all of their residents are able to access The Cochrane Library for free. These include:

Australia	www.nicsl.com.au/Cochrane
New Zealand	http://www.moh.govt.nz/cochranelibrary or http://www.nzgg.org.nz/ or http://www.cochrane.org.nz/
Denmark	www.vifab.dk or www.sundhedsportalen.dk or www.deff.dk or www.cochrane.dk
England	www.nelh.nhs.uk/cochrane.asp
Finland	www.terveysportti.fi
Ireland	All residents within the Island of Ireland can access The Cochrane Library for free, thanks to funding for a national provision by The Health Research Board in Dublin and The Research and Development Office in Belfast.
Norway	www.cochrane.no
Scotland	http://www.nes.scot.nhs.uk/
Spain	http://www.update-software.com/Clibplus/ClibPlus.asp
South Africa	http://www.sahealthinfo.org/evidence/databases.htm
Sweden	www.sbu.se
Wales	All residents of Wales with access to the Internet can access The Cochrane Library for free, thanks to funding provided by The Welsh Assembly Government.
The Canadian Province of Saskatchewan	www.thecochranelibrary.com
The US State of Wyoming	www.thecochranelibrary.com

5. There are also several programmes, such as the Health InterNetwork Access to Research Initiative (HINARI) that provide access in developing countries. To find out whether your country is included in any of these programmes/provisions, or to learn how to get access if you don't already have it, please visit: <http://www.thecochranelibrary.com>.

If you would like to see a full list of Reviews published in the new issue of The Cochrane Library, or would like to request full access to the contents of The Library, please contact.

Contact: Polly Young
Tel: +44 (0)1243 770633
Email: pyoung@wiley.co.uk

^a Jadad AR, Cook DJ, Jones A, Klassen TP, Tugwell P, Moher M, et al. Methodology and reports of systematic Reviews and meta-analyses: a comparison of Cochrane Reviews with articles published in paper-based journal.