

COMMUNITY EAR AND HEARING HEALTH: ISSUE NO. 6 CHRONIC SUPPURATIVE OTITIS MEDIA

Thank you for your useful articles about Chronic Suppurative Otitis Media (CSOM) in Issue No. 6 of the Journal. They clearly emphasise that CSOM management is still not very effective.

We cover a target population of 15000 mainly poor and indigenous people in the Western Ghats mountains of South India. Twenty years ago, CSOM was very common in children but we have seen an obvious reduction in incidence in the last 20 years. This reduction could be due to improved primary health care access, with aggressive health promotion in villages and schools and the early management of acute suppurative otitis media. Improvements in socio-economic standards would also have contributed to this decline but this area of South India has not received much of the benefits of India's economic boom and, in many ways, economically, remains only marginally better off than 20 years ago.

I have concerns about recommending the use of ciprofloxacin ear drops. In our area, typhoid is not uncommon and is often multi-drug resistant, needing quinolones as the first line of therapy. We have, therefore, restricted quinolone use to only well defined situations - to prevent increase in resistance among *Salmonella typhi* to these drugs. Widespread use of quinolones in CSOM may lead to increase in drug resistance because some of this drug will reach the alimentary canal through the Eustachian tube. The evidence that quinolones improve short term outcomes in CSOM is not adequate to conclude that they make a long term difference to CSOM outcome, because we often succeed in drying up wet ears, only to see them discharging again later. The need to continue ear 'toilet' and possible topical medications long term is one reason why CSOM is very difficult to treat - because parents often stop the treatment too early. In this situation, the modified once in 2-4 weekly instillation of antibiotic- steroid ointments by health workers after ear 'toilet' may be more successful. This method was described by Teaching Aids at Low Cost (TALC) in their tape-slide program on ear disease many years ago and, more recently, in the Australian Northern Territory Disease

Control Bulletin Vol. 9, No. 4, December 2002, pp 9-13. Here, 0.5 to 1.5ml of an antibiotic - steroid ointment (e.g., Sofradex, Celestone VG, Kenacomb Otic) is instilled into the outer ear canal using a 2ml syringe and a 16 G plastic IV cannula inserted just inside the external auditory meatus, directing the stream of ointment up along the roof of the canal to fill the canal. The tragus is then 'pumped' with a finger to gently force the ointment into the middle ear. Ointments rather than drops must be used because ointments release antibiotics over a longer period of time. This instillation is repeated every 3-4 weeks by a health worker. Concerns over ototoxicity of aminoglycoside topical ear medications long term are acknowledged, but not supported by good evidence despite their widespread use in indigenous communities in Australia.

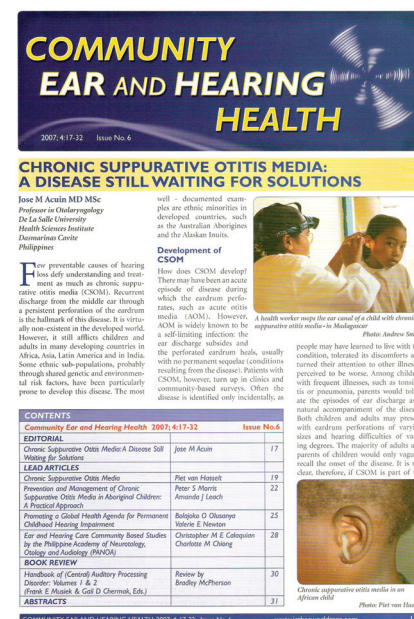
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Dr Piet van Hasselt responds:

As Dr Ramasamy has observed in his own region, the incidence of CSOM has declined over the years by public health measures, like health education, sanitation and clean water and, not least, good Primary Health Care. In the meantime, we still have to deal with many cases of CSOM. Dr Ramasamy has raised an important issue about patients' adherence to treatment and the need for a formula that prolongs the contact time of the active ingredients of the ototopical medicine with the middle ear mucosa and the ear canal skin. Ointments, however, contain ingredients that leave remnants one wouldn't necessarily want in the middle ear. An alternative, I have tried myself, is making a gel of ear or eye drops by adding hydroxypropylmethylcellulose powder (HPMC) for single treatment of external otitis, as well as CSOM.^{1,2} With 3% HPMC one gets a



gel that can be instilled with a syringe. With 0.3% HPMC (used in artificial eye tears) one gets viscous drops that can be instilled in the usual way. HPMC doesn't leave any residue in the middle and outer ear.

There is indeed a growing concern about increasing bacterial resistance against fluoroquinolones. Aggravating this situation is the use of the same kinds of antibiotics, both topically as well as systemically. The reason that topical fluoroquinolones, like ciprofloxacin and ofloxacin, have generally replaced aminoglycosides is their lack of ototoxicity and the fact that they are more effective than aminoglycosides³ and usual ototopical antiseptics like boric acid, spirit and povidone iodine. Ideally, one needs to find an antiseptic that has an effective concentration, is not (oto)toxic, irritant or painful. The above mentioned antiseptics don't fall into this category. The need for corticosteroids is questionable. Instead of experience-based or peer-based medicine, we need to practice evidence-based medicine. In this respect, many more randomised studies are needed comparing different ototopicals, formulas and ways of administration.

Piet van Hasselt MD
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References

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a community-based, multicentre, double-blind randomised controlled trial. Couzos S, Lea T, Mueller R, Murray R, Culbong M. *Med J Aust.* 2003; **179**: 185-190. (Full text on http://www.mja.com.au/public/issues/179_04_180803/cou10214_fm.html).

Letter from Costa Rica

COMMUNITY EAR AND HEARING HEALTH

An extract from a letter sent to Professor Valerie Newton (Editorial Board Member) in May 2008

I would like to comment that I find the *Community Ear and Hearing Health (CEHH)* very nicely done. It covers issues of global interest and remains user friendly and appropriate for developing nations and their universal interest.

I find it more balanced than other publications aimed at the 'developing world'. The topic oriented Issues touch on very current and important fields and I find the 'Abstract' section very useful - to be aware of particular publications, where Journals may not be readily available.

The management of Occupational Audiology in the last issue was especially good and I have made the link available for our colleagues in the field here in Costa Rica.

I would like to recommend that you consider ways to advertise CEHH more effectively and to promote its existence among the audiological community in the developing world.

I have not been able to hear about CEHH from any other source than the direct channel of our contact. I think there is a wealth of resources there and it should be promoted more aggressively.

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We ask our readers to consider ways in which we can promote the Community Ear and Hearing Health Journal. Please introduce the Journal to your colleagues and contacts around the world.
Editor



Abstract

Migraine associated with auditory-vestibular dysfunction

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The association between hearing and balance disorders with migraine is known since the times of the ancient Greeks, when Aretaeus from Cappadocia in 131 BC, made an accurate and detailed description of this occurrence during a migraine episode. We present a broad review of migraine neurotological manifestations, using the most recent publications associated with epidemiology, clinical presentation, pathophysiology, diagnostic methods and treatment for this syndrome.

Aim: To describe the clinical entity: 'Migraine associated with auditory-vestibular dysfunction', in order to help otorhinolaryngologists and neurologists in the diagnosis and management of such disorder.

Final Remarks: There is a strong association between neurotological symptoms and migraine, and the auditory-vestibular dysfunction-associated migraine is the most common cause of spontaneous episodic vertigo (non-positional). Symptoms may vary broadly among patients, making it a diagnostic challenge to the otorhinolaryngologist. This entity usually presents with positional or spontaneous vertigo spells, lasting for seconds

or days, associated with migraine symptoms. A better understanding of the relationship between central vestibular mechanisms and migraine mechanisms, besides the discovery of ionic channel disorders in some cases of migraine, ataxia and vertigo, may lead to a better understanding of migraine pathophysiology associated with audio-vestibular disorder.

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