

Presence or absence of bacteria in otitis media with effusion?

Luc L. M. Weckx*

Otitis media with effusion (OME) is an inflammation of the middle ear containing serous or mucoid secretion, an intact tympanic membrane, and no clinical signs of acute infection, which results in mild to moderate hearing loss. Consequently, a child with OME may have a poor school performance, being regarded as inattentive, in addition to asking others to repeat what they have just said and listening to television at a loud volume.

There is some controversy over whether the release of inflammatory mediators, which maintain middle ear infection, is caused by bacterial or viral antigens.¹

In the Brazilian literature, positive culture findings for middle ear effusion vary between 0 and 33%, and the most commonly detected bacteria are *Staphylococcus aureus*, *Streptococcus pneumoniae*, *Haemophilus influenzae* and *Moraxella catarrhalis*.²⁻⁵ When collecting material from the middle ear, it is important that contamination of the external auditory canal be ruled out.

The clinical treatment of OME is one of the most controversial and most widely discussed issues related to middle ear infections. Even though 67% of Brazilian otolaryngologists choose antibiotic therapy as first-line treatment for OME, according to a survey described by Bogar in 1998, the 1999 Brazilian Consensus on Otitis Media does not recommend the routine use of antimicrobials, reserving them for some special situations, such as recent OME cases, never-treated patients, or signs of acute infectious and/or inflammatory process.⁶

Moreover, some doubts have been raised as to the use of pneumococcal conjugate vaccine and AOM.⁷

In the study "Prevalence of bacteria in children with otitis media with effusion", written by Pereira et al.,⁸ the rate of positive culture findings was 25.1%, whereas PCR was positive in 57% of the analyzed samples. Although the use of PCR for the investigation of OME is a pioneering technique in Brazil and the results are consistent with the international literature,⁹⁻¹¹ the authors show that there is some discrepancy as to the positive PCR findings obtained:

were viable bacteria detected or are they just fossilized remnants of bacteria (DNA fragments)?

This occurs due to the fact that in PCR the primer amplifies small bacterial DNA fragments; therefore, it is possible to have an intact fragment, but dead bacteria.

Finally, the data obtained in the referred article, showing penicillin-resistant pneumococci and *Moraxella*, as observed in other countries, serve as a warning to us. Also, we should recognize the restrictions imposed by the small number of isolates, as pointed out by the authors, despite the methodologically correct approach used and the careful analysis of the results.

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* Professor. Chief of the Department of Otorhinolaryngology and Head and Neck Surgery - Universidade Federal de São Paulo, São Paulo, SP, Brazil.

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Corresponding author:
Luc Louis Maurice Weckx
Universidade Federal de São Paulo
Rua dos Otonis, 674
CEP 04025-001 – São Paulo, SP, Brazil
E-mail: orlep@epm.br