The Developmental Impact of Otitis Media with Effusion (OME) in children: A systematic review

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10 studies involving the effect of bilateral OME on the developmental outcomes of children were analysed. Of these, a significant effect was found in 5 studies.

Embase and MEDLINE search, including studies involving otherwise-healthy and typically-developing children. The screening process was carried out as per PRISMA protocol. Screening was carried out by two independent assessors. Information such as study design, whether unilateral/bilateral OME was assessed, presence of intervention, age of participants, domain assessed and effect was extracted.

Introduction

Whether OME affects a child’s educational achievement, behaviour or speech and language development is unclear. Various studies aimed to assess the impact of OME in various aspects of development with conflicting results.

The aim

Aim was to undertake a systematic review to analyse the findings of published studies.

Flow diagram illustrating screening process of articles as per PRISMA protocol (Figure 1)

Large methodological variation between studies makes interpretation of their findings difficult.

5 studies showed a significant effect on developmental outcomes for children with bilateral OME.

Only 1 study was composed entirely of children with bilateral hearing loss lasting 3 months or longer with hearing of 25 dB or worse in the better hearing ear and this study showed a significant impact.

The other 9 studies either included children with better hearing or it was not specified.

The table above illustrates the studies that were included following assessment for eligibility.

Ongoing work will extract relevant data to try and achieve meaningful comparisons.

AUTHORS JOURNAL NICE CRITERIA DOMAIN EFFECT
McCormick DP et al Ambulatory pediatrics 1:2 (pp 87-90), 2001 UNKNOWN Language Significant effect
Grievevink E.H. et al Journal of Speech and Hearing Research. 36 (5) (pp 1004-1012), 1993. MIXED Language No significant effect
Gravel JS Journal of Speech and Hearing Research. 35 (3) (pp 588-595), 1992. UNKNOWN Language Significant effect
Wallace IF et al Laryngoscope. 98 (1) (pp 64-70), 1988. UNKNOWN Language, cognition Significant effect
Johnson DL et al Journal of Communication Disorders. 41(1):20-32, 2008 Jan-Feb UNKNOWN Language No significant effect
Paradise JL et al Pediatric Infectious Disease Journal. 22(4):309-14, 2003 MIXED Language, cognition No significant effect
Asbjornsen A et al Developmental Medicine & Child Neurology. 42(7):481-6, 2000 UNKNOWN Attention Significant effect
Augustsson I et al International Journal of Pediatric Otorhinolaryngology. 57 (1) (pp 31-40), 2001. UNKNOWN Academic No significant effect
Asbjornsen A et al Child Neuropsychology. 11 (2) (pp 121-133), 2005. UNKNOWN Attention No significant effect

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