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Occurrence of otitis media in children and assessment of treatment options

Dear Editors,

I came across a very interesting article published in your esteemed journal titled 'Occurrence of otitis media in children and assessment of treatment options' by Nwokoye *et al*.[1] The study had been well planned and was very thought provoking. However, I beg to differ from the author's conclusion and would like to highlight the same through your esteemed journal.

The efficacy of antibiotics in otitis media has been a subject of great debate amongst healthcare providers, and there are studies supporting[2] as well as advising against[3] their regular use. Most of the studies have recommended starting antibiotics in high-risk groups such as patients with bilateral acute otitis media and those aged less than two years;[4] this practice is followed in our institution as well. However, there are still lacunae in our knowledge regarding which patients exactly constitute this 'high-risk' group and further trials can be planned in this regard.

The antibiotic used in the study is amoxicillin or an amoxicillin-clavulanic acid combination, but what is not clear is when the patients were shifted from an amoxicillin regimen to an amoxicillin-clavulanic acid combination. There is still debate and controversy regarding the dosing[5] and duration of amoxicillin-clavulanic acid for otitis media, with various studies recommending different regimens. Another point which needs to be emphasised is the emergence of organisms resistant to amoxicillin,[6,7] which can lead to treatment failure.

A suggestion for improving the methodology would be to follow up the patients treated with antibiotics for the development of recurrence and/or complications. Such data would add weight to the authors' conclusion. This can be done in future studies.

With hardly any newer antibiotics being developed, and the emergence of resistant strains, our options for treating patients with infection are becoming limited; therefore, judicious use of antibiotics is vital. A prospective, randomised trial that evaluates the efficacy of antibiotics for otitis media in children, with a longer follow-up period, is required for a definite conclusion.

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Authors' reply

Dear Editors,

I have considered the comments, opinion and recommendation of Dr Satvinder Singh Bakshi, and, as part of scholarly discourse to enrich the literature, his perception on the subject should be published. It is, however, important to examine and reiterate some of the issues highlighted.

Dr Bakshi's concern is about identifying the 'high-risk' group of otitis media patients who will require antibiotic intervention. Children aged less than six months are considered high risk because recurring bouts of otitis media may predispose them to complications that include speech difficulties and hearing loss.[1,2] In our study, we reported the highest incidences of non-resolving acute otitis media following initial paracetamol usage in children aged 7–12 months (43.5 per cent) and 2–5 years (42.1 per cent).[3] In chronic suppurative otitis media (CSOM) where microbial aetiology is implicated, it is important that antibiotics be given. However, opinion is likely to vary, as there may be a number of underlying factors. These factors may inform the final decision on whether to give antibiotics, and on choice and treatment regimen.

Two groups of patients were evaluated: acute otitis media and CSOM. Acute otitis media patients in whom symptoms persisted after aural care and paracetamol administration were placed on amoxicillin therapy (80 mg/kg/day in 2 divided doses) for up to 10 days. Only those who did not respond to this initial therapy were further given amoxicillin-clavulanic acid, and only when susceptibility test results favoured the use of this antibiotic. The CSOM patients were randomly placed into three groups; two groups were treated empirically either with amoxicillin or amoxicillin-clavulanic acid, while the choice of treatment for the third group was based on antibiotic susceptibility test results. This latter part of the study aimed to evaluate the effectiveness of empirical therapy for CSOM with first-line antibiotics such

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as amoxicillin or amoxicillin-clavulanic acid. Therefore, a shift from amoxicillin to another antibiotic in the present study was informed by the outcome of culture and antibiotic sensitivity tests. As amoxicillin is effective against a large number of organisms that may complicate acute otitis media or be isolated from CSOM, it is recommended that one start with mainstay antibiotics and thereafter move on to reserved antibiotics in order to restrain a rapid emergence of multiple drug-resistant organisms.[4,5] In my view, this is what Dr Bakshi is referring to, but it is not possible on the ground of emerging resistance to discontinue totally the use of any class of antibiotic. The rule rather than exception is good antibiotic stewardship.

In line with Dr Bakshi's recommendation, as more information becomes available and our understanding of the factors influencing occurrence, persistence and pathology of otitis media grows, it will be easier to institute appropriate and timely intervention in otitis media patients.

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