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LETTER TO THE EDITOR

Further studies are still necessary on the relationship between indoor environment and otitis media

Dear Editor,

In the July/August 2023 edition of Jornal de Pediatria, Yao et al.[1] published a cross-sectional study that analyzed the association between the indoor environment of preschool children's homes and the prevalence of otitis. Strengths of the study were the original research question (May formaldehyde from the home furniture and wall surface material lead to otitis?), choice of sample allocation method and data presentation. My concern, however, stems from 3 main factors: choice of outcome; lack of control for multiple comparisons in the statistical analysis, and some unusual statements in the introduction and in the discussion sections. There is clearly a diagnostic limitation of the outcome - medical diagnosis of otitis at least once in life - as it is retrospective and based on non-validated clinicians (even the authors wrote that in China "... some pediatricians have a vague understanding of it, which leads to a missed diagnosis by physicians", referring to otitis). What is more serious, however, is that the outcome is combined and includes otitis externa and otitis media. From the physiopathogenic point of view, they are completely different entities, from which it is assumed that their risk factors also differ. Also worrying is the failure to use tests to control for the effect of multiple comparisons on the main association, since dozens of them were performed. Finally, some statements are unconventional. In the introduction, the authors wrote: "Otitis ...is usually divided into two types (otitis externa and otitis media) and is ... secondary to the common cold...". Otitis externa, however, has no pathophysiological relationship with the common cold. In the same section, they say "... children's hearing organs and brains were irreversibly injured due to ... acute otitis attacks". There is no evidence to confirm it. In the discussion, other disconcerting statements appear. They said that "... Otitis in children is mainly caused by bacteria, of which 69.7 % are gram-positive bacteria, 16.7 % are gram-negative bacteria, and 13.6 % are fungi." What otitis are the authors referring to? Finally, there are conceptual errors in the discussion, as when the authors referring to aminoglycosides wrote: "...its prolonged use causes its accumulation in the inner ear lymph nodes, causing the death of hair cells in the inner ear and irreversible ototoxic effects." Aminoglycosides are not used systemically for otitis media; they are only used locally for otitis externa and chronic suppurative otitis media. Also, there is not an organ as "inner ear lymph nodes". More prospective cohort studies are necessary to show if reducing furniture renovations and renovations in homes before birth (a common habit in Brazil) or during the growth of children may prevent otitis media in preschool children.

Author contributions

I certify that I have seen and approved the final version of the manuscript being submitted. The article is the author's original work, hasn't received prior publication, and isn't under consideration for publication elsewhere.

Conflicts of interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Reference

1. Yao J, Shi H, Lu J, Wang X, Xie D, Wang X, et al. Prevalence and indoor environment risk factors of otitis among preschool children in Urumqi, China. J Pediatr (Rio J). 2023;99:362–70.

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