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Short Communication

Hearing Loss in Children with HIV

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DESCRIPTION

Children with HIV and hearing loss were more likely to have other problems, be absent from school, and have poorer emotional and academic performance. Nearly, 20–30% of HIV-positive children had hearing loss [1].

The most common types of hearing loss in HIV-infected children have varied between research, with some reporting conductive hearing loss as the most common [2], as in this study, while others reported a higher prevalence of sensorineural hearing loss or central auditory abnormalities. Because we detected high rates of middle ear abnormalities, such as perforated tympanic membranes, the high incidence of conductive hearing loss in this and previous investigations was likely linked to high rates of ear infections.

This study reveals that there is a significant unmet need for ear examinations and hearing services among HIV-positive children. This is alarming, especially since the vast majority of children were already receiving ART and were thus in constant touch with health care providers. Caregivers were inconsistent when it came to detecting hearing loss. Only 40% of caregivers of children with hearing loss correctly identified the hearing loss, whereas 11% of children with no hearing loss were reported to have difficulty hearing by their caregiver. One probable explanation is that the study's definition of hearing loss (>20 dB HL in either ear) led to a failure to recognize hearing loss in one ear. The fluctuating nature of conductive hearing loss, where earlier conductive hearing loss has resolved, could explain the over-reporting of hearing loss in children with normal audiologic examinations. Furthermore, these children are likely to have a high prevalence of cognitive and developmental delay [3] as well as central auditory processing disorders [4], making it difficult for caregivers to distinguish between these disorders and hearing loss, resulting in a higher caregiver report of hearing loss in children with normal audiologic testing. These findings suggest that parents are insufficiently trustworthy judges to identify and recommend children with hearing loss for services. Routine Otoacoustic Emissions (OAE) screening for all HIV-infected children would discover a significant number of ears with hearing loss, and it is now possible for non-specialists to do so at a minimal cost using widely available mobile phone technology. Alternatively, hearing loss screening questions could be developed to identify those at high risk for hearing loss and refer them for an ear exam and hearing evaluation (e.g., those with perceived hearing impairment, frequent ear infections, ear drainage, TB, more severe HIV, or a low BMI), though this study found that screening questions alone missed many children with hearing loss, and a better hearing loss screening tool is needed. Both clinicians and patients and their caregivers need to be educated about ear health and hearing loss in HIV-infected children.

The high prevalence of conductive hearing loss, as well as the high frequency of discharging ears and abnormal tympanic membranes in our patients, point to recurrent or chronic otitis as a possible cause of hearing loss. This study suggests that preventative interventions for these children should focus on early detection and treatment of ear infections, and various strategies for implementing this intervention should be investigated. In addition, many of the children with hearing loss could benefit from hearing aids, indicating yet another area where intervention is needed. Studies are needed to improve hearing loss screening tools, as well as preventative and treatment services, for children with HIV.

CONCLUSION

Hearing loss was frequent in HIV-infected children, affecting school functioning and quality of life. Improved screening measures, detection, and treatment of hearing issues in HIV-infected children are urgently needed. Since most hearing loss was conductive in origin, likely owing to frequent ear infections, and many children with hearing loss qualified for hearing aids, clear preventative and treatment strategies were discovered. Because caregivers were unreliable at detecting hearing loss, and frequently misidentified children with normal hearing as having hearing loss, screening procedures must be created and tested. Children with frequent ear infections, ear drainage, tuberculosis, severe HIV disease, or a low BMI should have their ears and hearing tested more frequently.

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