

## **Abstract**

### **Background**

This study aimed to examine hearing function in a group of children aged between the ages of six months and twelve years admitted with bacterial meningitis so as to determine the prevalence and degree of sensorineural hearing loss in them. This prospective study was conducted in the audiology unit and paediatric wards of Kenyatta National Hospital, KNH.

### **Methods**

The study involved 83 children (49 males and 34 females) between the ages of six months and twelve years admitted with bacterial meningitis. The median age for the children examined was 14 months (range from 5 to 120 months). They were sequentially recruited and at discharge following treatment, underwent age-appropriate hearing testing to evaluate presence and degree of hearing loss which was analyzed. The study was limited by the absence of otoacoustic emission and auditory brainstem responses testing by excluding the significant numbers of children below six months of age admitted with bacterial meningitis.

### **Results**

Thirty six of the 83 children (44.4%) were found to have at least a unilateral mild sensorineural hearing loss during initial audiologic testing. Of the children with hearing loss, 22 (26.5%) had mild or moderate sensorineural hearing loss and 14 (16.9%) had severe or profound sensorineural hearing loss.

### **Conclusions**

Sensorineural hearing loss was shown to be highly prevalent in children treated for bacterial meningitis. There is therefore a need for objective hearing assessment in infants and young children following bacterial meningitis and further studies involving larger population sizes.