International Journal of Pediatric Otorhinolaryngology Extra (2006) 1, 56—59

ELSEVIER

International Journal of Pediatric Otorhinolaryngology @Extra

www.elsevier.com/locate/ijporl

CASE REPORT

Codetection of serous otitis media and severe sensorineural hearing impairment in children—the management dilemma

Olusesi A.D.*

Department of Ear, Nose & Throat, National Hospital, Plot 132, Central Area, Garki, Abuja, Nigeria

Received 8 October 2005; received in revised form 21 December 2005; accepted 21 December 2005

KEYWORDS
Serous otitis media;
OME;
Paediatric;
Tympanostomy tube;
Myringotomy;
Sensorineural hearing loss

Summary Few cases of otitis media with effusion (OME) coexisting with severe to profound sensorineural hearing loss have been reported in medical literature, and beyond stressing need for awareness for early clinical detection, there is no stated guideline as to the management approach to such patients. The clinician is often in dilemma as to benefit or otherwise of myringotomy and ventilation tube placement in such patients. We present two cases of such children attending our hearing loss clinic that both had clinical, tympanometric, and operative finding of OME. Both had bilateral myringotomy and ventilation tube placement, but showed very little improvement in hearing or speech conditions.

1. Introduction

The child with hearing impairment is of special concern to parents. Depending on the onset of such hearing loss, manifestation can include poor or no response to verbal command, inability to talk, or both. These symptoms could occur in isolation or be associated with other symptoms or signs. A significant proportion of such children with speech disorder are believed to have treatable hearing loss [1]. With increasing availability of electronic medical information, there is increasing awareness and shortening of the ages of parental suspicion and identification of such hearing impairment [2]. Faced with a child with poor hearing and poor speech whose clinical and audiological assessments indicate otitis media with effusion (OME) and possible sensorineural hearing loss, clinicians are saddled with dilemma of prognosticating likely gains from surgical treatment of OME on one hand, and neglecting parental insistence that any treatment that has probability of improving patient's hearing condition should be attempted, on the other. Two of such management dilemmas were encountered at our hearing loss clinic within the past 6 months and form the object of this communication.

2. Case 1

A 3-year-old male with normal pregnancy, labour and delivery history presented to the hearing loss clinic of National hospital, Abuja, with inability to

* Tel.: +234 803 247 2069.
E-mail address: biodun@nanootology.org.

1871-4048/$ — see front matter © 2006 Elsevier Ireland Ltd. All rights reserved.
doi:10.1016/j.pedex.2005.12.007

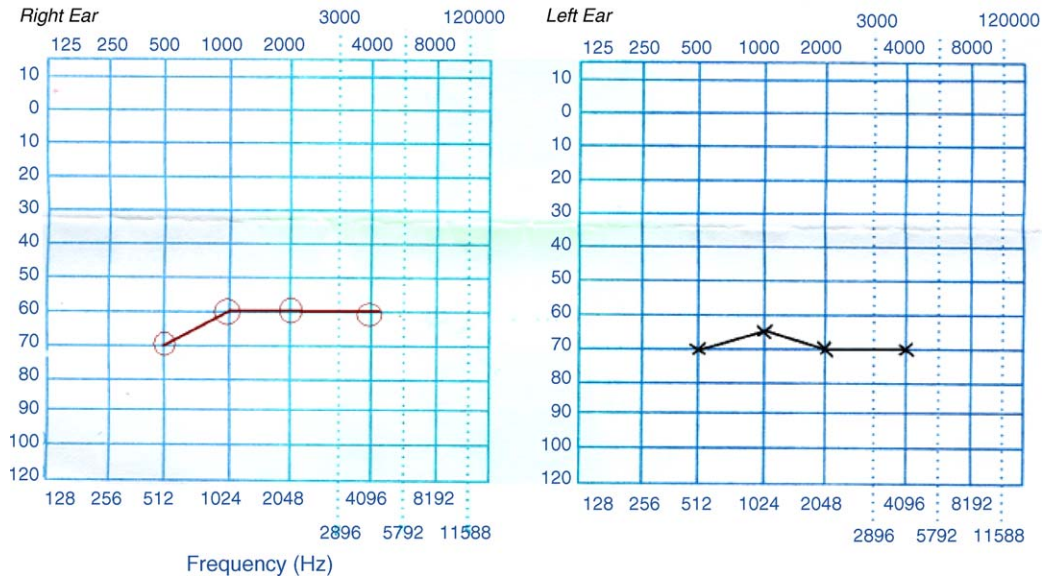

Fig. 1 Pre-insertion free field audiogram of child with serous otitis media co-existing with sensorineural hearing loss.

talk since age 9 months. Hearing loss was believed to have followed a parenteral treatment for pneumonia with an unidentified antibiotic in a private hospital. Prior to the illness, developmental milestones were said to be normal. He subsequently lost the verbal milestones attained up to the illness. At presentation, his linguistic assessment revealed he calls ''Ab'' for Abah'' — the name of the elder sib, he does not respond to verbal commands. He socializes well with other kids and demonstrates no hyperactivity or repetition of behaviour. He was the third child of parents with two other normal hearing sibs. Hearing loss was associated with uttering of incomprehensible speech. He had no snoring or mouth-breathing associated. There is a history of long-standing unilateral left-sided hearing loss in the father. Clinical examination revealed a quiet and amiable boy, with normal facies. Otoscopy revealed dull and bulging Tympanic membranes bilaterally. Tympanometry revealed type B tympanogram with −280 daPa middle ear pressure (MEP) right ear, and −286 daPa MEP left ear; compliance of 0.25 cc right ear and 0.21 cc left ear; and canal volume of 1.70 cc both ears. Free field hearing assessment using visual reinforcement audiometry revealed severe to profound hearing loss with response elicited to audiometric signals at 70–80 dB for mid frequency. The pre-op audiogram is as shown in Fig. 1. Myringotomy with insertion of Paparella ventilation tube was carried out. Thick middle ear effusion was detected bilaterally and suctioned. Patient had been followed up for 6 months with little change in hearing or speech status. Both ventilation tubes are still functional and are yet to extrude. Table 1 is a comparison of pre-op and post-op free field audiometric thresholds.

3. Case 2

A 22-month-old male with normal pregnancy, labour and delivery history was brought to the hearing loss clinic by the mother who complained of inability to talk and inability to hear well. He was the only child of parents. He had history of delayed locomotor and cognitive milestones. He obeys the parental command to 'come', 'sit down', etc., but had difficulty hearing when out of sight or during darkness of frequent power outage common in the neighbor-

Table 1 Comparison of free field pre- and post-insertion audiogram thresholds for both ears in a child with serous otitis media co-existing with sensorineural hearing loss

Frequency (Hz)	Pre-insertion threshold right ear (dB)	Post-insertion threshold right ear (dB)	Pre-insertion threshold left ear (dB)	Post-insertion threshold left ear (dB)
500	70	65	70	70
1000	60	60	65	60
2000	60	55	70	65
4000	60	60	70	70