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Case Report

An Unusual Case of Complete Absence of Malleus with Intact Incus and Stapes in Subtotal Perforation with History of Iatrogenic Trauma

Sanjaya Koirala* and Krishna Bogati

Department of ENT-HNS, Tribhuvan University/Gandaki Medical College, Nepal

***Corresponding Author:** Sanjaya Koirala, Department of ENT-HNS, Tribhuvan University/Gandaki Medical College, Nepal.

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Abstract

Introduction: Complete absence of malleus with intact and normal looking incus and stapes in a case of subtotal perforation of tympanic membrane is a rare phenomenon not seen before in my experience of 7 years of ear surgery and not even reported before in any literature till date.

Case: Twenty-eight years old female patient presented with history of recurrent ear discharge with decreased hearing for last 3 years. On examination she had subtotal perforation with absent normal landmarks. She underwent tympanoplasty with ossiculoplasty. During surgery she was found to have missing malleus with completely normal looking incus and stapes. Indudostapedial joint was intact and mobile. She gave history of iatrogenic trauma to the same ear in form of syringing and curretage for ear wax in a tertiary hospital 3 years ago, duration similar to her symptoms.

Discussion: Malleus is the last ossicle to undergo necrosis by chronic otitis media. TM perforations are seen sometimes but complete removal of malleus during routine otologic outpatient procedure is rare but not inevitable. In the case presented, iatrogenic trauma only best explains the complete absence of malleus. This demands meticulousness in every procedures we perform daily however trivial it may sound.

Keywords: Malleus; Tympanoplasty; Ossiculoplasty

Introduction

In otology practice, a number of procedures are performed routinely under outpatient basis. These ranges from simple syringing for ear wax to office myringoplasties [1]. Ear wax, which sounds very simple, can be asymptomatic to severely symptomatic in terms of pain it causes. Removal of wax can be very straightforward by syringing to sometimes very difficult needing anaesthetic support with microscope. In our case we believe that this simple procedure performed by a junior resident in a tertiary hospital led to subtotal perforation of tympanic membrane with complete avulsion of malleus.

Case Report

Twenty eight years old female patient from a nearby village presented with complaints of recurrent ear discharge and hearing loss for 3 years. She gave no history of discharge in childhood with completely normal hearing before. She however gave history of some otologic procedure probably syringing and curettage done for ear wax removal 3 years ago in a tertiary hospital. The patient recalls to have had a very hard time during the procedure with severe pain and vertigo. She insisted that her hearing had decreased immediately after the procedure. According to the patient, she had required admission to the hospital that day for pain, vertigo and vomiting. Since then she was having problems of recurrent discharge and progressive hearing loss.

On examination she had subtotal perforation of tympanic membrane with no identifiable landmarks. Neither handle of malleus nor even the short process of malleus was seen. Middle ear mucosa looked oedematous but with no active discharge. Her audiology reports showed 54dB conductive hearing loss with more loss in lower frequencies [2].

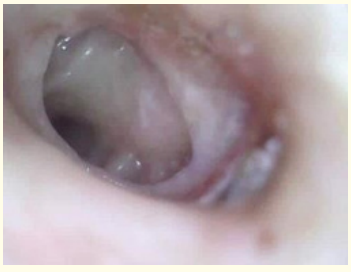

Figure 1: Otoscopic view of perforation.

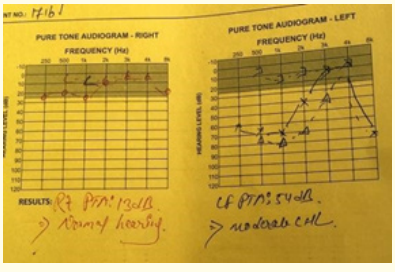

Figure 2: Audiology report of the patient.

She was counseled about the need for surgery to prevent recurrent discharge and possible hearing improvement with some form of ossiculoplasty [3]. During surgery, we found that her malleus was completely missing with normal incus, stapes and intact incudostapedial joint with normal mobility. This finding is usually rare with chronic otitis media. IS joint was disarticulated and incus removed and fashioned as a cap to fit over the head of stapes, further supported by cartilage below the fascia graft. Temporalis fascia with thinned out conchal cartilage was used as a graft. The procedure was uneventful. Patient was discharged the same day. Post operative results are awaited.

Discussion

Usually it's the long and lenticular process of incus which gets eroded at first during the course chronic otitis media and malleus handle is the last to undergo necrosis. In a study of 915 cases of chronic otitis media by Ackarcay., *et al.* most commonly seen OCE was incus erosion, followed by stapes and malleus erosions [4]. In my experience with ear surgery for last 7 years, I have seen cases with erosion of long and lenticular process of incus in majority of cases, stapes suprastructure eroded or absent in a number of cases and even partial erosion of malleus handle in few cases. But not a single case with complete loss of malleus was seen before which is also not noted in any existing literature. This finding is less likely with the disease per se. With subtotal perforation of the membrane and complete absence of malleus, not even some rudimentary piece of any part of malleus present, we suppose it must be traumatic in origin.

The history provided by the patient too corroborates with the findings on surgery.

Conclusion

Iatrogenic injury to tympanic membrane during routine outpatient procedures is rare in expert hands but seen sometimes with inexperienced clinicians and paramedics dealing with anxious patients. Iatrogenic perforation of TM is seen sometimes during otology practice but perforation with complete avulsion of malleus has never been reported. This case shows that malleus extrusion can occur during seemingly simple procedure of dewaxing by inexperienced hands. Thus extreme meticulousness should be observed during any clinical procedure.

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