CASE REPORT PEER REVIEWED | OPEN ACCESS

A rare case of objective tinnitus in an octogenarian

Sunil Goyal, Yamuna Ranganathan, Sween Banger

ABSTRACT

Introduction: The word tinnitus originates from the Latin word "tinnire" meaning to ring. According to McFadden, the tinnitus is described as the conscious expression of a sound that originates in an involuntary manner in the head of its owner, or may appear to him to do so. Tinnitus can be classified into subjective and objective, in the former only the patient is aware of sound sensation, in the latter sound can be perceived by others either unaided, using stethoscope or a microphone and amplifier.

Case Report: A 76-year-old male patient presented with tinnitus in right ear which he noticed about six months back which on examination found to be an objective tinnitus secondary to dehiscent temporomandibular joint.

Conclusion: Dehiscent temporomandibular joint especially in an elderly can be a rare cause for objective tinnitus which can be overlooked. Here we report an interesting and rare case of objective tinnitus. Hence, ear examination in an elderly should include examination with the patient be asked to open and close the jaw especially when no other obvious cause for tinnitus is present. Such patients can be managed conservatively with adequate counselling.

Keywords: Dehiscent temporomandibular joint, Objective tinnitus, Octogenarian, Tinnitus

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INTRODUCTION

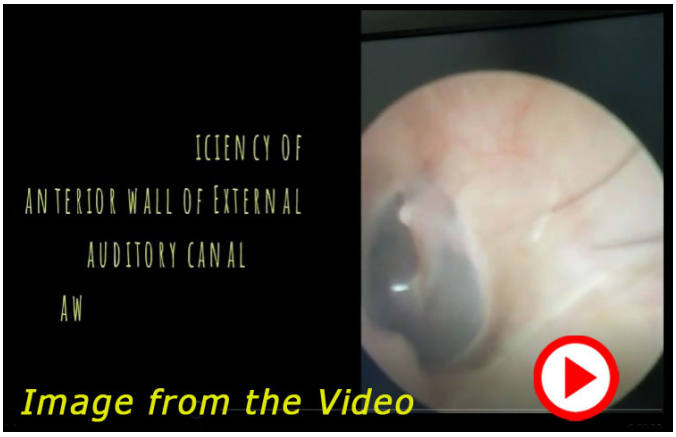
Tinnitus is the perception of sound in the absence of any external sound source and it is a very heterogeneous condition [1]. Objective tinnitus occurs when the sound is perceived by the patient as well as others (including examiner), either unaided or aided (using a stethoscope or a microphone, amplifier). Etiology can be either pulsatile (vascular) or non-pulsatile (e.g., palatal myoclonus, patulous eustachian tube, etc.) [2]. Here we present a rare case of objective tinnitus in an octogenarian.

CASE REPORT

An elderly gentleman presented with tinnitus in right ear which he noticed about six months back. It was clicking in character which was observed by the patient while eating food, speaking, yawning. No history of otorrhea, otalgia, vertigo, previous ear surgery, trauma, use of ototoxic medications, hearing loss was found. No history of pain around the ear or headache was found. No known comorbidities were found.

Clinical examination of pre- and post-auricular region including temporomandibular joint, pinna was normal. Tympanic membrane was intact and mobile. No obvious retro-tympanic mass was seen. However, during otoscopic examination when the patient was asked to open jaw there was bony deficiency of anterior wall of external auditory canal (right ear) in the medial aspect

close to annulus of tympanic membrane (Video 1) and an audible clicking sound could be heard. On enquiry, the sound associated with movement was like the character of tinnitus perceived by the patient. The other ear also had bony deficiency of anterior wall of external auditory canal, as it is lateral from annulus patient is asymptomatic. The patient was managed conservatively with adequate counseling.



Video 1: A rare case of objective tinnitus in an octogenarian secondary to dehiscent temporomandibular joint.

Video 1 URL: https://www.videojournalofclinicalresearch.com/archive/article-full-text/100005VAM08SG2023#video1

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DISCUSSION

The word tinnitus originates from the Latin word "tinnire" meaning to ring. The prevalence of tinnitus increases with age, as it is associated with hearing loss.

Tinnitus can be subjective, only when the patient hears the sound or objective when both patient and others hear the sound either aided or unaided.

Objective tinnitus can be either pulsatile or non-pulsatile type. Pulsatile tinnitus can be arterial or venous based on the vessel of origin.

Non-vascular pulsatile tinnitus is rare, originates from sources other than vascular. Some of the non-vascular causes include palatal, stapedial, tensor tympani myoclonus. Neurologic disorders, such as brainstem infarctions, multiple sclerosis, trauma, syphilis have been reported in association with this entity [3].

History and examination are very important in evaluating these patients. Rhythmic movements of tympanic membrane are seen in myoclonus of tensor tympani. Myoclonic contractions of soft palate are seen in palatal myoclonus.

Apart from these causes, persistent foramen of Huschke leading to herniation of temporomandibular joint soft tissue into external auditory canal resulting in otological symptoms (conductive hearing loss, tinnitus, otalgia). But it is an extremely rare condition affecting only 0.4% of population [4].

Our case had dehiscent temporomandibular joint, which was obvious when the patient was asked to open the jaw during otoscopic examination with no herniation was seen, causing tinnitus. The dehiscence in temporomandibular joint occurred secondary to senile changes.

The examination strategy recommended is dynamic otoscopy and conventional computed tomography (CT), magnetic resonance imaging (MRI) can be chosen when the herniation is complicated by infection or otitis externa [5].

In asymptomatic cases or those without complications, the first line of management is expectant. Those with associated infections, fistulas, herniation of adjacent structures surgical closure to be considered [6].

As our case had dehiscent temporomandibular joint secondary to senile changes and mild symptoms, the patient was managed conservatively with adequate counselling.

CONCLUSION

Tinnitus is the perception of sound in the absence of any external sound source which is usually subjective but rarely could be objective in nature. Dehiscent temporomandibular joint especially in an elderly can be a rare cause for objective tinnitus which can be overlooked. These patients would present with complaints of having tinnitus in the affected ear when they chew food or yawn. Hence, ear examination in an elderly should include examination with the patient be asked to open and close the jaw especially when no other obvious cause for tinnitus is present. Such patients can be managed conservatively with adequate counseling.

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Author Contributions

Sunil Goyal – Conception of the work, Design of the work, Interpretation of data, Revising the work critically for important intellectual content, Final approval of the version to be published, Agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved

Yamuna Ranganathan – Conception of the work, Design of the work, Revising the work critically for important intellectual content, Final approval of the version to be published, Agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved

Sween Banger – Acquisition of data, Analysis of data, Drafting the work, Final approval of the version to be published, Agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved

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Consent Statement

Written informed consent was obtained from the patient for publication of this article.

Conflict of Interest

Authors declare no conflict of interest.

Data Availability

All relevant data are within the paper and its Supporting Information files.

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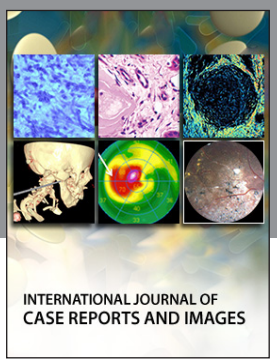

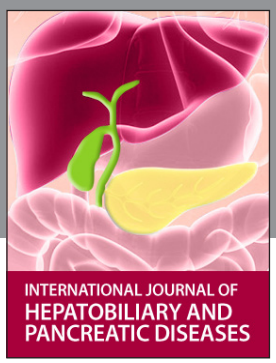

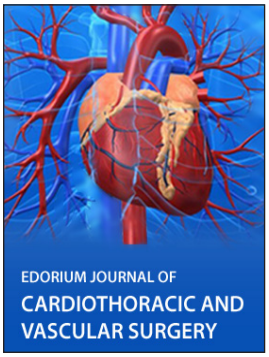

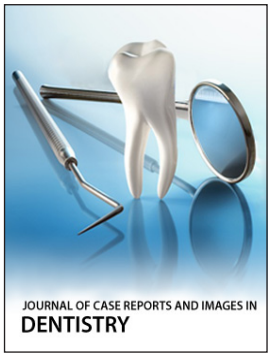

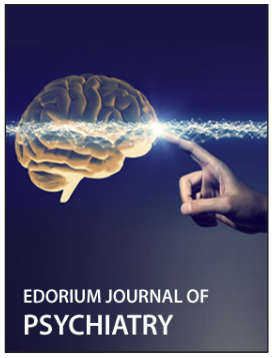

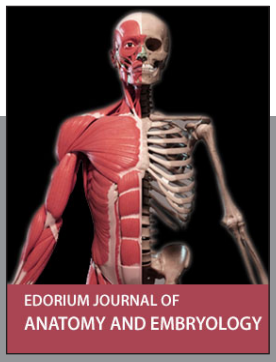

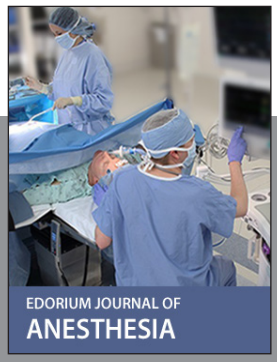

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