Feeling of sound produced by ear and its surrounding structures is called as objective tinnitus which is audible to both the patient and clinician. Objective tinnitus forms 5% of all patients with tinnitus. Associated pathology is usually caused by surrounding structures such as muscles, eustachian tube, vascular structures or temporomandibular joint (TMJ). While the treatment choice is usually symptomatic in most of time in subjective tinnitus patients, objective tinnitus may be curable with the treatment of underlying cause. Presenting of a curable objective tinnitus patient was aimed in this paper to boost its awareness in daily practice.

A 51-year-old woman was admitted to the otolaryngology clinic with a disturbing voice in her left ear. She had suffered from this condition for 4 months. She had seropositive rheumatoid arthritis (RA) for 5 years and receiving 5 mg/day metilprednisolone and 15 mg/week metotrexate. She denied ototoxic drug use, ear trauma, hearing loss, previous ear surgery, discharge and noise exposure. She did not complain at nights. The voice was in a low pitch. She emphasized that the voice was felt in speaking and mastication merely. In her physical examination there was a soft tissue in her anterior wall of the left external ear.

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The right ear was normal. When the patient was asked to open her mouth, the mass disappeared (Figure 2). The other head and neck examination was normal. There was no crepitation on TMJ and limitation of mouth opening. Her audiogram was normal. In her computed tomography (CT) imaging, there was a dehiscent area between the left TMJ and the left external auditory canal (EAC) (Figure 3). Soft tissues of the TMJ was bulging through the EAC during resting and disappearing when opening of the mouth. The patient was informed about her disease. Surgical repairing and non-surgical follow-up options were presented. The patient chose non-surgical follow-up. There was no alteration in her condition in a 6-month follow-up. (An informed consent was taken from the patient).

DISCUSSION

Objective tinnitus consists of quite small proportion of all tinnitus patients, clinicians should be careful in differential diagnosis. Because it can be curable when the underlying cause is eliminated. Because of close proximity, TMJ and ear diseases can effect each other reciprocally. Omidvar and Jaferi recently reported that TMJ diseases and tinnitus had a strong relationship and TMJ disorders should not be underestimated in tinnitus patients.

There is a bony wall between EAC and TMJ. Foramen Huschke (FH) or foramen tympanicum can be found in different rates in this wall. Herniation of TMJ does not develop in every patient with FH. Er-tugrul and Keskin reported prevalence of FH between 1.5% and 22.7% in tomography studies and between 7.2% and 38.2% in osteological studies. Unlike, prevalence of TMJ herniation was reported as 0.4% by Park et al. It is a rare disease.

The most common rheumatologic disease affecting the TMJ is rheumatoid arthritis. More than half of RA patients suffer from TMJ involvement. However, TMJ dehiscence develops rarely. Ali and Rubinstein mentioned this possible relationship in 2000 firstly. They also reported that the dehiscence can be caused by FH. There is no article mentioned a relationship between RA and TMJ dehiscence after that.

Xie et al. reviewed 42 patients with spontaneous TMJ herniation. Twelve of them had objective tinnitus. Twenty-seven of them were performed a surgical procedure, especially grafting with tragus cartilage. Additionally; fascia, polipropylene plate, au-

FIGURE 1: The left external auditory canal when the mouth closes.

FIGURE 2: The left external auditory canal when the mouth opens.

FIGURE 3: Axial section of computed tomography indicated temporomandibular joint dehiscence on left side (asterix).
ologous bone and titanium mesh were also used for repairing in the literature. Xie et al. mentioned a new endoscopic-assisted approach, while the others performed preauricular or end-aural open approach. The presented case did not accept any surgical procedure.

As always anamnesis and phycial examination are the most important parts of the management of patients with tinnitus. The patient had no symptom at nights. She complained the disturbing sound during speaking and mastication merely. We diagnosed TMJ dehiscence by physical examination. The diagnosis was sharpened by advanced examinations. Because of curability of objective tinnitus, patients with tinnitus must be seperated as objective and subjective firstly. Disorders of TMJ should be kept in the mind especially in patients who feel discomfort during mastication and speaking.

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**Conflict of Interest**
No conflicts of interest between the authors and / or family members of the scientific and medical committee members or members of the potential conflicts of interest, counseling, expertise, working conditions, share holding and similar situations in any firm.

**Authorship Contributions**
This study is entirely author’s own work and no other author contribution.

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