

Tinnitus Etiology and Management at a Glance

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Tinnitus is different from auditory hallucinations; in which, perceived sounds in tinnitus are meaningless [1]. About 20% of general population has some form of tinnitus. In most cases, tinnitus is accompanied by hearing loss; however, some cases may reveal normal hearing [2].

The origin of tinnitus may be from any part of the anatomical structure of the ear to the central auditory system. Due to the extent of the symptoms associated with tinnitus, it may not be logic to assume a specific cause or pathophysiology for tinnitus [3]. In other words, studies have been shown show that the tinnitus etiology may be unknown in about 30% of cases [4]. In the tinnitus network model, there is an extensive interaction among the auditory cortex, the frontal cortex and limbic system [5].

Medical interventions are usually considered as the first step in the treatment of tinnitus, which merely is a symptomatic treatment [6]. Other treatment methods including the prescription of hearing aids to mask the tinnitus, acoustic therapy to promote the habituation, cognitive behavioral therapy (CBT) and neuro-feedback [1]. More recent methods, which apply the cortical neuromodulation to improve the cortical neuroplasticity, include the transcranial magnetic stimulation (TMS) and transcranial direct current stimulation (tDCS) [1].

It should be noted that most of the mentioned interventions had its own advantages and limitations and is not considered a definitive option for the treatment of tinnitus. In other ways, for better management of the tinnitus patients, we should apply a comprehensive evaluation in multidisciplinary approach, which includes audiologist, otolaryngologist, neurologist, and psychologist; as well as follow the tinnitus guidelines and protocols completely.

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