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ORIGINAL ARTICLE

Effectiveness of acupuncture therapy as treatment for tinnitus: a randomized controlled trial☆

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KEYWORDS
Acupuncture therapy;
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Abstract
Introduction: Tinnitus is a subjective sensation of hearing a sound in the absence of an external stimulus, which significantly worsens the quality of life in 15–25% of affected individuals.
Objective: To assess the effectiveness of acupuncture therapy for tinnitus.
Methods: Randomized clinical trial (REBEC: 2T9T7Q) with 50 participants with tinnitus, divided into two groups: 25 participants in the acupuncture group and 25 participants in the control group. The acupuncture group received acupuncture treatment and the control group received no treatment. After a period of 5 weeks, they were called to perform the final evaluation and the control group received acupuncture treatment for ethical reasons.
Results: A statistically significant result was found for the primary outcome, reducing the intensity of tinnitus, with $p = 0.0001$ and the secondary endpoint, showing improvement in quality of life, with $p = 0.0001$.
Conclusion: Chinese scalp acupuncture associated with bilateral electroacupuncture demonstrated, in the short term, a statistically significant improvement by reducing the level of tinnitus intensity, as well as improving the quality of life of individuals with tinnitus.

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PALAVRAS-CHAVE
Terapia por acupuntura;
Zumbido;
Qualidade de vida;
Ensaio clínico controlado aleatório;
Reabilitação

Efetividade da terapia por acupuntura como tratamento para o zumbido: ensaio clínico aleatorizado

Resumo
Introdução: O zumbido é a sensação subjetiva de ouvir um som na ausência de um estímulo externo e piora significativamente a qualidade de vida de 15%–25% das pessoas afetadas.
Objetivo: Verificar a efetividade da terapia por acupuntura em indivíduos com zumbido.
Método: Ensaio clínico aleatorizado com 50 participantes com zumbido, divididos em dois grupos: 25 participantes no Grupo da Acupuntura (GA) e 25 participantes do Grupo de Controle (GC). O GA recebeu tratamento com a craniopuntura chinês e o GC não recebeu nenhum tratamento. Após o período de 5 semanas, eles foram chamados para realizar a avaliação final e o GC recebeu tratamento de acupuntura por questões éticas de pesquisa.
Resultados: Foi encontrado resultado estatisticamente significativo para o desfecho primário, reduzindo a intensidade do zumbido, com $p = 0{,}0001$ e o desfecho secundário, apresentando melhora na qualidade de vida, com $p = 0{,}0001$.
Conclusão: A craniopuntura chinesa associada à eletroacupuntura bilateral nos mostrou no curto prazo, uma melhora estatisticamente significativa, reduzindo o nível de intensidade do zumbido, bem como melhorando a qualidade de vida dos indivíduos com zumbido.

Introduction

Tinnitus is a symptom defined as the perception of sound without the presence of an external sound source.[1]

It is estimated that approximately 5–15% of the population has of some type of tinnitus and, although it can occur at any age, it is more prevalent among the elderly (mainly in those aged between 60 and 69 years) than in young adults.[2] In a study on the incidence of tinnitus, Nondahl et al.[3] followed a group of 2922 adult and elderly individuals, aged 48–92 years, for 10 years. During the first 5 years of follow-up in this same group, they observed that the incidence of tinnitus in the assessed population was 5.7%.[4] After 10 years, the authors found that the incidence had more than doubled, reaching 12.7%.[3]

In Brazil, it is estimated that 17% of the population is affected by tinnitus, i.e., more than 28 million Brazilians.[5] Santos et al.[6] evaluated 406 patients in a 6 month period and found that 58% had a tinnitus complaint; of these, 68% were females and 32% males. In a study carried out by Gibrin et al.[7] in 2012, the authors evaluated 519 individuals of both genders with a median age of 69 years and found a prevalence of 42.77% for tinnitus complaints.

It is currently believed that tinnitus occurs as a result of the dynamic interaction of several centers of the nervous and the limbic system, and that cochlear alterations and/or lesions are the precursors of this process, causing imbalance in the lower auditory pathways, resulting in abnormal neuronal activity, further enhanced by the central nervous system, and finally perceived as tinnitus.[8]

Several etiologies have been proposed, including otologic, dental, neurological, psychiatric diseases, cervical spine and metabolic disorders, as well as others related to the intake of drugs, caffeine, alcohol, and tobacco.[9]

However, the physiopathological mechanisms of tinnitus are not well-defined, and therefore the treatment remains a major challenge to date. Symptom subjectivity and the wide etiological variety, often seen in the same patient, make it difficult to obtain good results.[9] Moreover, currently, no one specific treatment, including drug therapy, is considered effective in treating the symptoms of tinnitus.[10]

Complementary and alternative medicine has often been used to treat tinnitus, and acupuncture is one of the most often-used options.[10] Acupuncture is a therapeutic method that involves the insertion and manipulation of needles into the body. The treatment of tinnitus by acupuncture has been widely described in books[11,12]; however, the scientific literature still lacks studies supporting its therapeutic effectiveness. Studies have shown that stimulation performed with needles promotes introduction of an electrical charge that triggers action potentials in order to rebalance the system.[13,14]

Chinese scalp acupuncture is a contemporary acupuncture technique that has only 40 years of history. It integrates traditional Chinese insertion methods with Western medical knowledge of the cerebral cortex, and has been proven to be a very effective technique for the treatment of several diseases of the central nervous system,[15] as well as for alleviating the symptoms of tinnitus.[9]

In 2000, Park et al.[16] performed a systematic review and identified 36 publications on the subject, but only 6 were randomized controlled trials. The authors mentioned that the prescription of points was heterogeneous and that results were controversial. Therefore, they suggested that future studies on this subject are necessary and should be performed according to the highest methodological standards.