

ABSTRAK

Latar belakang: Tinnitus merupakan persepsi suara tanpa rangsangan eksternal yang dapat menurunkan kualitas hidup penderita. Salah satu penyebab tinnitus subjektif dikaitkan dengan gangguan fungsi koklea dan saraf auditorius. Vitamin D3 diketahui memiliki peran terhadap regulasi kalsium yang berperan dalam proses transduksi pendengaran. Defisiensi vitamin D3 dilaporkan berhubungan dengan peningkatan keparahan tinnitus. **Tujuan:** Mengetahui pengaruh pemberian vitamin D3 terhadap perubahan skor *Tinnitus Handicap Inventory* (THI) pada penderita tinnitus subjektif. **Metode:** Penelitian ini merupakan studi eksperimental dengan desain *double blind control trial pre-post test two group*. Subjek penelitian berjumlah 40 pasien tinnitus subjektif yang dibagi menjadi dua kelompok, yaitu kelompok perlakuan yang mendapat suplementasi vitamin D3 1000 IU/hari dan kelompok kontrol yang mendapat plasebo. Penilaian skor THI dan kadar serum vitamin D3 dilakukan sebelum dan sesudah intervensi. Analisis menggunakan uji *paired t-test* dan Wilcoxon untuk analisis berpasangan serta *independent t-test* dan Mann–Whitney untuk analisis antar kelompok. **Hasil:** Terdapat penurunan skor THI yang bermakna pada kelompok perlakuan maupun kelompok kontrol ($p = 0,001$). Penurunan skor THI lebih besar pada kelompok vitamin D3 dibandingkan kelompok kontrol, perbedaan selisih skor THI antar dua kelompok tidak berbedanya bermakna ($p = 0,067$). Kadar serum vitamin D3 meningkat secara bermakna pada kedua kelompok ($p = 0,001$), dengan peningkatan yang lebih besar pada kelompok perlakuan, perbedaan antar kelompok tidak bermakna ($p = 0,354$). **Kesimpulan:** Pemberian vitamin D3 berpengaruh terhadap perubahan skor THI dan kadar serum vitamin D3.

Kata kunci: *tinnitus subjektif, vitamin D3, skor Tinnitus Handicap Inventory, serum vitamin D3*

ABSTRACT

Background: Tinnitus is the perception of sound without an external stimulus and may significantly reduce patients' quality of life. One of the underlying causes of subjective tinnitus is associated with cochlear dysfunction and impairment of the auditory nerve. Vitamin D3 plays an important role in calcium regulation, which is essential in the auditory transduction process. Vitamin D3 deficiency has been reported to be associated with increased tinnitus severity. **Objective:** To determine the effect of vitamin D3 supplementation on changes in Tinnitus Handicap Inventory (THI) scores in patients with subjective tinnitus. **Methods:** This study was an experimental study using a double-blind, two-group pre–post controlled trial design. A total of 40 patients with subjective tinnitus were enrolled and divided into two groups: a treatment group receiving vitamin D3 supplementation at a dose of 1000 IU/day and a control group receiving placebo. THI scores and serum vitamin D3 levels were assessed before and after the intervention. Statistical analysis was performed using paired t-test or Wilcoxon test for within-group comparisons, and independent t-test or Mann–Whitney test for between-group comparisons. **Result:** A significant reduction in THI scores was observed in both the treatment and control groups ($p = 0.001$). The reduction in THI scores was greater in the vitamin D3 group compared to the control group; however, the difference in mean change between groups was not statistically significant ($p = 0.067$). Serum vitamin D3 levels increased significantly in both groups ($p = 0.001$), with a greater increase in the treatment group, although the between-group difference was not statistically significant ($p = 0.354$). **Conclusion:** itamin D3 supplementation has an effect on changes in THI scores and serum vitamin D3 levels in patients with subjective tinnitus.

Keywords: *subjective tinnitus, vitamin D3, Tinnitus Handicap Inventory score, serum vitamin D3 level*