

Introduction: Nowadays, the treatment of tinnitus is still a great challenge for the otolaryngologists. Many facts remain unknown in its pathophysiology, leading to many different therapies, with irregular results. Memantine is a drug used in Alzheimer's disease, due to its action in blockage of the NMDA receptor. **Aim:** To evaluate efficacy and safety of memantine in the treatment of sensorineural tinnitus. **Materials and method:** 60 patients with sensorineural tinnitus were divided in 2 groups in a double-blind prospective cross-over study against placebo, with evaluation of the therapeutic and side effects, using the THI (Tinnitus Handicap Inventory). **Results:** This study didn't show any statistically significant improvement in the THI than placebo. Meanwhile, some data suggest a possible late effect of memantine. The incidence of side effects was low (9,4 %), but led to interruption in all the cases. **Conclusion:** This study didn't provide data to recommend memantine to treat sensorineural tinnitus, but a possible late effect of the drug should be evaluated in further studies.

KEY WORDS: tinnitus, memantine.