

## **EVALUATION OF BOTULINUM TOXIN IN THE TREATMENT OF SOMATIC TINNITUS**

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Somatic tinnitus includes those tinnitus generated after a somatosensorial injure (whiplash syndrome, temporomandibular joint disorders, dental injure) or those tinnitus that can change the pitch or the loudness with orofacial movements. A disfunction of the multimodal crossing sites between the auditory and the somatosensorial pathways could be the possible mechanism of somatic tinnitus. The botulinum toxin is actually used in some cases of migraine and neuropathic pain. It has demonstrated a positive affect on the autonomic nervous system. It is suspected to block not only acetylcholine, but inhibit release of other neurotransmitters and neuropeptides important in the autonomic pathway. The effect is supposed to act from the distal dendrites of the nerves to the ANS, all along the somatosensorial pathway. A possible action on the multimodal crossing sites could have an indirect effect on the auditory pathways. Auditory modulation could reduce somatic tinnitus perception.

The goal of the study is the evaluation of the effect of botulinum toxin in the somatic tinnitus. A double-blinded clinical assay is designed for the evaluation of the effectiveness of botulinum toxin A on tinnitus patients. Treated group will be compared with a placebo group. The demonstration of the effectiveness of botulinum toxin A on somatic tinnitus would be interesting to design more specific treatments for this tinnitus type.