

Abstrakt (AJ)

Tinnitus is not seen as a separate disease, but in terms of symptoms accompanying various diseases. The emergence of tinnitus is involved in a variety of risk factors. Relationship between tinnitus and blood flow of the ear is described in a relation to impaired microcirculation, which plays a key role in the proper function of the inner ear and therefore we evaluated the relationship prothrombogenic factors for tinnitus.

From the original group of 853 patients we excluded patients with organic cause problems. We excluded patients with hearing impairment, cardiovascular and other comorbidities and also patients taking ototoxic drugs or patients with laboratory abnormalities. Then we have a homogenous group of 40 patients without the evidence of an organic cause of tinnitus and without associated diseases and the effect of ototoxic medications. On this basis there has been created a control group matched by the age and sex.

In our group as the main marker of prothrombogenic state was used a level of 11-dehydrothromboxan B₂. Patients with tinnitus have significantly higher values of 11-dehydrothromboxane-B₂. The average concentration in tinnitus patients was 2.02 ± 1.81 ng/ml compared to 1.32 ± 1.33 ng/ml in the control group.

At the same time we evaluated other coagulation parameters. We checked prothrombin time, INR and levels of fibrinogen. The average values of prothrombin time in patients with tinnitus are 12.95 ± 0.72 sec. versus 12.62 ± 0.94 sec. in the control group. The average INR are 0.997 ± 0.07 versus 1.021 ± 0.12 in the control group. Fibrinogen values are 3.337 ± 1.06 g/l compared to 3.012 ± 1.16 g/l in the control group. After statistical processing of these values we can say that there are no statistically significant differences.

We also monitored the levels of neurosteroids. The clear relationship to tinnitus was at statistically significance level of $p < 0.05$ and sometimes $p < 0.01$ was found, mainly in levels of pregnenolone, progesterone, allopregnanolone conjugated, isopregnanolone and 5-alpha-pregnan-3-beta-20-alpha-diol. Using multivariate regression showed the important relationship with conjugated isopregnanolone and conjugated pregnenolone. We followed the relationship of the frequency characteristics of tinnitus which is statistically significant with relationship to androstenedione, cortisol and conjugated isopregnanolone.

Key words : tinnitus – hearing impairment - thromboxans – neurosteroids