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Vestibular dysfunctions: comparison between patients with head and neck tumors and a control group

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Background. The use of ototoxic drugs is common in patients with head and neck tumors. Consequently, there may be vestibular dysfunctions that are not always detected, affecting the quality of life. Thus, it is important to evaluate the factors that may lead to vestibular system dysfunction. The objective of this study is to determine if vestibular dysfunction in individuals with head and neck tumors who underwent chemotherapy and/or radiotherapy also occurred in a control group.

Material and Methods. The sample consists of 54 individuals of both genders, aged between 20 and 91 years old and is divided into two groups: a group of 30 individuals without any kind of tumor and no medical history of chemotherapy and/or radiotherapy (control group) and a group of 24 individuals with head and neck tumors. The instruments used to collect the data were an Anamnesis, the modified Clinical Test of Sensory Interaction and Balance (mCTSIB), Limits of Stability test (LOS) and the Dizziness Handicap Inventory (DHI) scale.

Results. There are statistically significant differences between the two groups on the Physical, Functional and Emotional sub-scales of the DHI scale, on the DHI Total ($p_{\text{DHI Physical}} < 0,0001$; $p_{\text{DHI Functional}} < 0,0001$; $p_{\text{DHI Emotional}} < 0,0001$; $p_{\text{DHI Total}} < 0,0001$) and on the Reaction Time (RT) in LOS test in every position ($p_{\text{RT Front}} = 0,020$, $p_{\text{RT Back}} = 0,011$, $p_{\text{RT Right}} = 0,036$, $p_{\text{RT Left}} = 0,036$). There are marginally significant differences between the two groups in the postural oscillation velocity in Condition 4 of the mCTSIB ($p_{\text{Condition 4}} = 0,065$).

Conclusion. The group of individuals with head and neck tumors had worse results on the DHI scale, in the RT in LOS test and in the Condition 4 of the mCTSIB, suggesting the existence of greater vestibular alterations in this group compared to the control group.