

## Vestibular Disorder Management in Outpatient Setting in Latvia

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**Introduction.** Vestibular dysfunction is a common medical problem – vestibular disorders occur frequently and affect people of any age. The patient's description is relevant for classifying the possible etiology of dizziness.

**Aim, Materials and Methods.** The purpose of this research is to understand the prevalence of vestibular disorders and treatment recommendations at general practitioners' (GPs) and neurologists' practices, to improve awareness of vestibular disorders and to provide support for GPs and neurologists in recognizing vertigo patient needs. 35 neurologists and family doctors from different regions of Latvia participated in the study. The target group was adult patients with vestibular dysfunction, who during the survey were visiting neurologist or general practitioner. The survey took place from December 1, 2016 until February 20, 2017. The study is prospective and includes data obtained from patients' answers during the visit. In total, 793 patient data was summarized. Patient identity has not been disclosed. The survey was conducted in compliance with the legislation of Latvia. The data was statistically analysed using the IBM SPSS Statistics.

**Results.** From 793 patients complaining of vertigo 73.1% (n = 580) were women, 26.9% (n = 213) were men. From all patients, 57.6% (n = 457) admitted that dizziness has a concrete direction, 50.8% (n = 403) had hearing impairment, 58.1% (n = 461) disequilibrium and/or ataxia, 55.1% (n = 437) confounding vegetative reactions and 23.8% (n = 189) had nystagmus. 52.0% (n = 412) of all patients repeatedly complained about dizziness. The most commonly used medication for treatment was *betahistinum* received by 98.0% (n = 777) of all patients, with dose ranging from 24 mg to 144 mg/daily, mean 48 mg/daily in 61.6% of all patients receiving it (n = 479). For 52 patients, *betahistinum* was assigned to long term use. Different drug formulations has been used in treatment; in 25.4% (n = 197) of cases *betahistinum* dispersible formulation was used. In several cases, second and third medication also has been used, of which the most common ones were *piracetam* (n = 24), *vinpocetin* (n = 15) and *nicergolin* (n = 6). Other medications used off label in vertigo treatment included *pramipexidam*, *tolperison*, *phenibut*, *naftidrofuryl*, *meldonium*, *mebicar*, *ginko biloba*, *actovegin*, *cerebrolysin*. Benzodiazepines like *diazepam*, *alprazolam*, *bromazepam* has been used as adjunctive therapy in 10 patients, antidepressants/antipsychotics and anticonvulsants in 5 and 2 patients, respectively. Women patients tend to complain about vertigo repeatedly more often than men (54.5% (n = 316) vs. 46% (n = 98)).

**Conclusions.** Female patients tend to complain about vertigo more often and repeatedly than men. More than half of all patients had dizziness, disequilibrium, ataxia, hearing impairment and nystagmus. The most commonly used medication for treatment is *betahistinum*. There are many different created therapy regiments by doctors including dosage and timing which are not supported by the guidelines. This justifies the need for educational work about vestibular dysfunction and appropriate therapy.