

CERVIKOGENI VERTIGO



Darija Granec

Specijalna bolnica za medicinsku rehabilitaciju Krapinske toplice, Hrvatska
e-mail: dgranec@gmail.com

Cervikogeni vertigo (CV) predstavlja nespecifičan osjećaj promijenjene orijentacije u prostoru i neravnoteže koji potječe od abnormalne aferentne aktivnosti iz vrata. CV nastaje zbog senzornog nesklada (engl. *sensory mismatch*) između vestibularnog, vizualnog i cervikalnog proprioceptivnog inputa. Ključnu ulogu igraju gornji cervikalni segmenti (C1-C3), gdje se nalazi visoka gustoća mehanoreceptora. Aferentni signali iz ovih struktura konvergiraju u vestibularnim jezgrama (nucleus vestibularis), utječući na kontrolu pokreta očiju i posturalnu stabilnost. Disfunkcija u ovom području, bilo uslijed traume, degenerativnih promjena ili mišićnog spazma, generira lažne informacije o položaju glave, rezultirajući vrtoglavicom ili nestabilnošću. Dijagnoza CV-a postavlja se isključivanjem drugih uzroka. Pozitivan „Neck Torsion Test“ (nistagmus ili vrtoglavica pri rotaciji tijela dok je glava fiksirana) sugerira cervikalnu etiologiju jer isključuje vestibularnu stimulaciju, ali nije dovoljno specifičan. Liječenje je kompleksno i uključuje farmakološke i nefarmakološke mjere, odnosno rehabilitaciju. Prije upućivanja na rehabilitaciju potrebno je isključiti: vestibularnu patologiju kao npr. benignu paroksizmalnu pozicijsku vrtoglavicu (BPPV), Menierovu bolest ili neuritis vestibularnog živca, potom neurološke bolesti središnjeg živčanog sustava i eventualne vaskularne uzroke kao što je npr. insuficijencija vertebralnog bazilarnog sliva. Sve veći broj istraživanja ukazuje na to da su rehabilitacijske intervencije, posebno manualna terapija i fizikalna terapija, učinkovite u smanjenju intenziteta i učestalosti vrtoglavice te poboljšanju funkcionalnosti kod ovih pacijenata. Najčešće korištene intervencije su manualna terapija. Kombinacija manualne terapije i vestibularnih vježbi pokazuje dodatne koristi u nekim slučajevima. Randomizirane studije pokazuju da Mulligan SNAGs i Maitland mobilizacije značajno smanjuju intenzitet i učestalost vrtoglavice, smanjuju bol te poboljšavaju funkcionalnost vrata u odnosu na placebo. Reid i suradnici demonstrirali su dugoročnu učinkovitost Mulliganovih SNAG tehnika (C1/C2 rotacijski SNAGs) u smanjenju simptoma vrtoglavice i povećanju opsega pokreta. Korisnim se pokazao i proprioceptivni trening i kontrola pokreta vrata, odnosno trening dubokih fleksora vrata. Pasivni modaliteti fizikalne terapije kao monoterapija nisu se pokazali učinkovitima. Vestibularna rehabilitacija također pokazuje pozitivne učinke na smanjenje simptoma kod kroničnih vestibularnih sindroma, uključujući cervikogeni vertigo. Iako je primarni uzrok cervikalni, vestibularni sustav zahtijeva habituaciju te u kombinaciji s manualnim tehnikama daje bolje rezultate. Zaključak: Cervikogeni vertigo ostaje kontroverzan, ali klinički neosporan entitet. Ne postoje dijagnostički kriteriji za cervikogeni vertigo, već se dijagnoza postavlja isključivanjem drugih vestibularnih, neuroloških i vaskularnih uzroka. Rehabilitacija uključuje manualnu terapiju s ciljem

mobilizacije gornjeg cervikalnog segmenta, vježbe reedukacije cervikalne propriocepcije i posturalnu korekciju te vestibularnu rehabilitaciju u užem smislu.

Ključne riječi

vrtočlavlava, rehabilitacija, fizikalna, terapija, manualna terapija

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Special Hospital for Medical Rehabilitation Krapinske Toplice

Cervicogenic vertigo (CV) is a non-specific feeling of disorientation and imbalance arising from abnormal afferent activity from the neck. CV is caused by a sensory mismatch between vestibular, visual and cervical proprioceptive input. A key role is played by the upper cervical segments (C1-C3), where there is a high density of mechanoreceptors. Afferent signals from these structures converge in the vestibular nuclei (vestibular nucleus), influencing eye movement control and postural stability. Dysfunction in this area, whether due to trauma, degenerative changes, or muscle spasm, generates false information about head position, resulting in dizziness or instability. The diagnosis of CV is established by excluding other causes. A positive "Neck Torsion Test" (nystagmus or vertigo when rotating the body while the head is fixed) suggests a cervical etiology because it excludes vestibular stimulation, but is not specific enough. Treatment is complex and includes pharmacological and non-pharmacological measures, i.e., rehabilitation. Before referral to rehabilitation, it is necessary to exclude: vestibular pathology such as benign paroxysmal positional vertigo (BPPV), Meniere's disease or neuritis of the vestibular nerve, then neurological diseases of the central nervous system, and possible vascular causes such as insufficiency of the vertebrobasilar basin. An increasing number of studies indicate that rehabilitation interventions, especially manual therapy and physical therapy, are effective in reducing the intensity and frequency of vertigo and improving functionality in these patients. The most frequently used interventions are all manual therapy. A combination of manual therapy and vestibular exercises shows additional benefits in some cases. Randomized studies show that Mulligan SNAGs and Maitland mobilizations significantly reduce the intensity and frequency of vertigo, reduce pain, and improve neck function compared to placebo. Reid et al. demonstrated the long-term effectiveness of Mulligan's SNAG techniques (C1/C2 rotational SNAGs) in reducing vertigo symptoms and increasing range of motion. Proprioceptive training and control of neck movements, i.e., training of the deep flexors of the neck, also proved to be useful. Passive modalities of physical therapy as monotherapy have not been shown to be effective. Vestibular rehabilitation also shows positive effects in reducing symptoms in chronic vestibular syndromes, including cervicogenic vertigo. Although the primary cause is cervical, the vestibular system requires habituation and, in combination with manual techniques, gives better results. Conclusion: Cervicogenic vertigo remains a controversial but clinically indisputable entity. There are no diagnostic criteria for cervicogenic vertigo, but

the diagnosis is made by excluding other vestibular, neurological and vascular causes. Rehabilitation includes manual therapy aimed at mobilizing the upper cervical segment, cervical proprioception reeducation exercises and postural correction, and vestibular rehabilitation in the narrow sense.

Keywords

vertigo, rehabilitation, physical therapy, manual therapy

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