

COVID-19 and Spectrum of Vestibular Dysfunctions: A Case Report

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COVID-19 infection had shown to affect multiple systems. A positive COVID-19 case with multiple vestibular problems, its management and a review of the literature were reported.

A 63-year-old lady who was a Category 5 COVID-19 infection patient, complicated by mild frontal stroke, left isolated mononeuropathy causing foot drop, had persistent dizziness lasting hours to days in the first month after being extubated. She underwent vestibular rehabilitation which did not resolve her vertigo. Upon presentation to the vestibular clinic at 3-months post-extubation, she complained of vertigo on changing positions lasting a few seconds with dizziness in between. Her Dizziness Handicap Inventory (DHI) was severe, with severe abnormal Depression Anxiety Stress Scale 21 (DASS 21). Vestibular assessments showed oculomotor abnormalities with positive left posterior Benign Paroxysmal Positional Vertigo (BPPV) on Dixhallpike test. During Epley maneuver, there was canal conversion to the anterior canal which was resolved with a deep head hanging maneuver. The canal repositioning maneuver was done in serial, and her vertigo reduced tremendously. Her Video Head Impulse Test showed abnormalities in all semicircular canals bilaterally, rotatory chair showed lateral vestibular weakness and videonystagmography showed abnormal smooth pursuit, saccade and optokinetic suggesting central lesion. Her cervical and ocular vestibular evoked myogenic potential were normal reflecting normal saccular and utricular function. Tympanometry showed type A bilaterally with right mild and left mild to moderate sensorineural hearing loss. Magnetic resonance imaging of the Internal Acoustic Meatus showed bilateral vascular loop with no cerebellopontine angle tumour. Upon review three months later, the patient was asymptomatic of vestibular complaint with normal DHI and DASS21 score. Her foot drop had also resolved.

Evidence in the literature showed up to 16.8% of COVID-19 patients reported vestibular symptoms. The mechanism of this vestibular neuritis is unclear but may be similar to the pathogenesis causing anosmia or vasculopathy.

Keywords: COVID-19, Vestibular dysfunction, Multicanal BPPV, Vestibular neuritis, Vertigo

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