About the pathophysiology of acute unilateral vestibular deficit - vestibular neuritis (VN) or peripheral vestibulopathy (PVP)?

Denis Uffer & Stefan C A Hegemann

OBJECTIVE
To determine whether patients with acute unilateral peripheral vestibulopathy (PVP), often called "vestibular neuritis/neuronitis or neuropathy" (VN) have a vestibular lesion pattern consistent with the distribution of the neurological afferents.

BACKGROUND
Much is known about the clinical nature of PVP, however less so about its etiology and pathogenesis. Due to the frequency with which VN is used to describe the syndrome, an inflammation of the vestibular nerve or of one of its branches is often assumed to be the cause of PVP, though there is insufficient data so far to support this assumption.

METHODS
We conducted a retrospective study of 25 patients who had presented to our clinic with PVP and had all vestibular receptor organs tested shortly after start of symptoms. We analysed their vestibular lesion patterns in order to determine whether they were consistent with the neuritis hypothesis (NH).

RESULTS
The lesion patterns varied conspicuously. 76% did not follow an innervation pattern, thereby contradicting the NH and only 24% had a lesion pattern that either definitely (16%) or probably (8%) supported the NH.

CONCLUSION
These results should remind us to be careful before jumping to quick conclusions about the pathogenetic nature of PVP. With any reason to question VN as the only cause of PVP, we should reconsider the treatment approach to PVP. If the cause probably or even possibly lies inside the vestibular labyrinth, an intratympanic steroid injection might prove to be a more effective measure, even in first-line treatment. If the etiology is unsure, a combination of systemic and intratympanic steroid treatment may be adequate.
type: journal paper/review (English)
date of publishing: 2-7-2016
journal title: J Vestib Res (26/3)
ISSN electronic: 1878-6464
pages: 311-7