



Can Psychomotor Vigilance Task Improve the Diagnosis of Excessive Daytime Sleepiness in Stroke Patients?

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Usually, patients with sleep disorders have excessive daytime sleepiness (EDS).¹ EDS is a remarkable finding used in clinical practice to identify possible sleep diseases. The Epworth Sleepiness Scale (ESS) has been frequently used to identify EDS and sleep disorders. The advantages of the ESS are low cost and easy use. ESS scores higher or equal to ten have been interpreted to show EDS in general population.¹

Numerous studies have presented that sleep disturbances have negative effects on attention, vigilance, learning, and memory. Usually, OSA drives cognitive impairment through intermittent hypoxia, hormonal imbalance, and/or systemic inflammation with consequent sleep fragmentation. However, in special populations such as patients after stroke, the ESS scores are lower than expected, despite the higher prevalence of OSA and other sleep disturbances.^{2,3}

Thomann et al. published an interesting paper entitled “Psychomotor Vigilance Task Demonstrates Impaired Vigilance in Disorders with Excessive Daytime Sleepiness.”⁴ The authors demonstrated that the psychomotor vigilance test (PVT) can be useful to the diagnostic work-up of sleep-wake disorders. PVT identified different patterns between healthy subjects and patients suffering from sleep-wake disorders, depending on different groups of disease.⁴

The authors showed the reliability and the highly sensitivity of PVT to identify consequences of sleep deprivation. The PVT is useful in analyzing fast reactions, and neurocognitive impairment in a few populations, independent of learning status.⁵ In theory, PVT could be an interesting tool to be used in different kind of patients, such as patients after stroke.

However, few authors have correlated the ESS and PVT.⁴ Patients after stroke can have dysfunction of sleep-wake modulatory circuits. It is possible that excessive daytime sleepiness, sleep perception, and impaired vigilance can be different entities. Although the PVT has limitations in patients after

neurological injuries, it can be a useful tool. PVT is an interesting instrument that must be contemplated to improve knowledge about EDS, sleep perception, and impaired vigilance in patients after stroke.

CITATION

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DISCLOSURE STATEMENT

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