

Prevalence of sleep disorders in idiopathic normal pressure hydrocephalus

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Introduction: Idiopathic normal-pressure hydrocephalus (iNPH) is a common condition in the elderly population and is clinically and radiologically defined by distinctive hallmarks: ventriculomegaly, cognitive decline, urinary dysfunction, gait impairment with or without parkinsonism [1-2]. The glymphatic system, that is turned on mainly during sleep allowing the clearance of neurotoxic products, could play a crucial role in the pathogenesis of iNPH and neurodegeneration [3].

Objective: The association between sleep disorders and iNPH has been only slightly investigated. The few data available focuses mainly on the frequent link between Obstructive Sleep Apnea (OSA) and iNPH [4]. The aim of our study is to evaluate in patients with iNPH the prevalence and the role of OSA and other sleep disturbances, in particularly Rem Behavior Disorder (RBD), universally known as sleep markers of synucleinopathies.

Methods: We administered specific sleep questionnaires such as Hong-Kong Scale (HKS) for RBD, Berlin Questionnaire (BQ) for OSA and Epworth Sleepiness Scale (ESS) in a retrospective cohort of 60 unselected patients (mean age 72,3, 22 female and 38 male) all diagnosed according to the iNPH International Guidelines, at the Parkinson's Disease and Movement Disorders Unit of the Mondino Foundation in Pavia.

Results: We found that one third of our patients (20/60) has HKS total score suggestive for the presence of RBD (≥ 18 ; mean: 12,8, sd: 15,6); 24/60 (40%) are at high risk for OSA (BQ-total score = 2), meanwhile 14/60 (23,3%) have low risk (BQ-total score = 1). The majority of our cohort (61,7%) has a significative day time sleepiness evaluated with EES (mean 9,13, ds 5.8).

Conclusions: Clinical interviews found that sleep disorders are quite prevalent in iNPH patients. These findings with that ongoing video polysomnography study could clarify the meaning of sleep disorders in iNPH's phenotypes.

References:

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