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Letter to the Editor

Deconstructing or reestablishing frontal gait in normal pressure hydrocephalus?

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Dear Editor,

We greatly appreciate the insightful comments of Dr. Onder about our article "Is frontal gait a myth in normal pressure hydrocephalus?" [1] and thank him for highlighting the need for a better understanding of the clinical features of idiopathic normal pressure hydrocephalus (iNPH).

First, the presence of stroke did not interfere with the findings of this study. After excluding iNPH patients with a previous stroke (7 patients), the increased prevalence of parkinsonian gait in the mimics in comparison to iNPH remained significant (31.7% vs. 13.7%; p value: 0.022), while the prevalence of other gait phenotypes was still similar between both groups.

Secondly, even if the validity of the actual clinical criteria of iNPH [2] may be questioned by some authors [3], it is important to highlight that iNPH is often associated with comorbid neurodegenerative and/or vascular conditions especially in older patients [4], as discussed by a task force of the International Society for Hydrocephalus and Cerebrospinal Fluid Disorders [5]. Furthermore, even if the benefits of ventriculoperitoneal shunt (VPS) may be time-limited; that time needs to be put into perspective with the life expectancy of these older patients. Excluding older iNPH patients with comorbid vascular or neurodegenerative conditions from VPS based on the arguments that the beneficial outcomes might last less than 3 years would prevent them from a potential improvement of quality of life at the end of their life.

Thirdly, we deliberately decided to include patients at a very early stage of their condition in order to improve the early management of iNPH. Consecutively, we reported a relatively high prevalence of normal clinical gait in patients with iNPH (29%); that does not preclude the diagnosis of iNPH. A patient at an early stage may complain about walking difficulties, but still present a normal clinical gait evaluation especially on a non-ecological setting, such as a gait laboratory that does not reflect walking difficulties encountered in everyday life (i.e., walking while talking or walking on uneven terrain), when gait deterioration, postural instability and falls often happen.

Fourthly, as noticed by Dr. Onder, iNPH patients and mimics share similar clinical features in term of cognitive and urinary symptoms, but also similar spatio-temporal gait parameters, as previously reported [6]. iNPH symptoms are not specific, occurring in many neurological conditions that mimic iNPH, such as vascular dementia or progressive supranuclear palsy. Although we demonstrated that parkinsonian gait may be a cue pointing to the mimics [1], the clinical heterogeneity of iNPH and the frequent association of iNPH with comorbid vascular of neurodegenerative conditions contribute to the clinical challenge to identify iNPH patients from their mimics.

Finally, we fully agree with Dr. Onder that studying the predictive value of gait phenotypes after VPS needs to be assessed in future investigations in order to reestablish or definitively deconstruct frontal gait in iNPH.

Declaration of Competing Interests

None.

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