

Rare clinical manifestations associated with CCSVI-MS: extrapyramidal syndrome and normotensive hydrocephalus

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In 2008 Barun et al reported the rare association between parkinsonism and MS in two patients and reviewed the literature regarding this topic. The conclusions of this paper were that parkinsonism and MS can coexist as two separate diseases in the same patient and that parkinsonism may be aggravated by MS; this will explain the good response to corticosteroids in some of the reported patients.

It is well known for neurologist involved in MS patients care that in the advances stage of MS some patients may present parkinsonian signs such as mask face, bradykinesia,... We observed seven patients with this association and studied them with ECD.

All patients had CCSVI according to Zamboni's criteria. Our hypothesis is that iron deposition in the substantia nigra and basal ganglia, secondary to CCSVI, may be responsible for parkinsonian sign and symptoms.

Normal pressure hydrocephalus (NPH) is one of the few cause of dementia that is potentially reversible. In 1965 Hakim S. and Adams R.D. described this syndrome characterized by a clinical triad of gait disturbance, dementia, urinary incontinence.

The most important pathophysiological feature of NPH is a dysfunction of cerebrospinal fluid (CSF) dynamics with reduced absorption through Pacchionian granulations and compensatory CSF diffusion into the periventricular white matter.

Brain MRI shows ventricular enlargement that is disproportionate to cerebral atrophy; enlargement of the frontal and temporal horns is relatively uniform and symmetric. In NPH there is absence of macroscopic obstruction to CSF flow.

In 2009 Zamboni et al described the venous outflow disturbances in CCSVI that significantly impact on CSF pathophysiology in patients with MS.

The classical triad of gait disturbance, dementia, urinary incontinence was present in seven patients affected by MS; in all MRI showed the classical NPH findings in addition to MS lesions. All patients had McDonald criteria for MS diagnosis and a diagnosis of CCSVI by ECD.

We know very well that dementia, gait disturbance, and urinary incontinence may be part of MS symptomatology but we believe that CCSVI in MS modifies the CSF outflow and leads to a treatable cause of dementia.