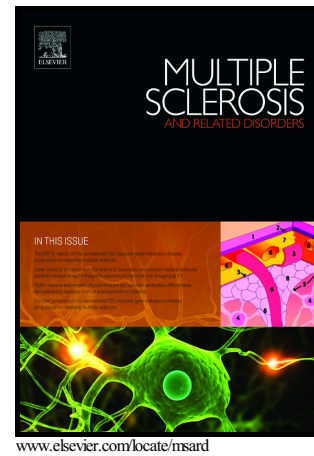


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Correlation between the corpus callosum index and brain atrophy, lesion load, and cognitive dysfunction in multiple sclerosis

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ABSTRACT:

Background: The corpus callosum index (CCI) can be easily and reliably obtained from conventional magnetic resonance imaging (MRI) and has been proposed as a possible marker of brain atrophy in MS. However, further validation of its correlation with volumetric measurements is still warranted.

Objective: To assess the correlation of the CCI with the corpus callosum volume (CCV), brain and lesion volumes, and level of disability in MS.

Methods: Cross-sectional, exploratory study including patients with relapsing-remitting MS. Clinical assessment comprised of physical and cognitive disability scales. MRI parameters included conventional volumetric measurements, the CCI (manual), and the CCV (automated).

Results: Twenty-four patients were included. There was a strong correlation between the CCI and CCV. The CCI correlated strongly with the white matter and lesion volumes, and moderately with the whole brain volume and scores on the Paced Auditory Serial Addition Test and MS Functional Composite.

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