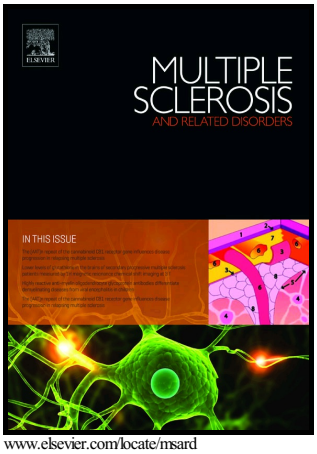

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Correlation between the corpus callosum index and brain atrophy, lesion load, and cognitive dysfunction in multiple sclerosis

Lucas Immich GONÇALVES[a1], Giordani Rodrigues DOS PASSOS[b,1], Lucas Piccoli CONZATTI[b], Jorge Luiz Palmeiro BURGER[c], Gustavo Henrique TOMASI[b], Manuella Édler ZANDONÁ[b], Luciana Schermann AZAMBUJA[c], Irênio GOMES[c], Alexandre FRANCO[c], Douglas Kazutoshi SATO[a,b,c], Jefferson BECKER[a,b,c*]

[a]School of Medicine;

[b]São Lucas Hospital, Neurology Service;

[c]Brain Institute (BRAINS) of Rio Grande do Sul; Pontifical Catholic University of Rio Grande do Sul, Porto Alegre, Brazil.

[*]**Corresponding author: Jefferson Becker, MD Ph,** Hospital São Lucas da PUCRS – Serviço de Neurologia - Avenida Ipiranga, 6690, sala 220 – Porto Alegre – Rio Grande do Sul – Brazil – CEP 90610-000, Tel./fax +55 51 3320-3218, jefferson.becker@pucrs.br

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.

[1] Equally-contributing first authors.