

Correlation of cortical lesions of multiple sclerosis at double inversion recovery with cognition screening scores - Sally Mohamed Shaaban Elsheshtawy - Mansoura University

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Multiple sclerosis is a chronic inflammatory disease affecting both white and gray matters of the central nervous system. It has been approved that the degree of gray matter involvement is closely associated with the degree of physical disability and the extent of cognitive impairment. Thus, it is necessary to incorporate widely available simple methods for neurocognitive evaluation and gray matter detection in the periodic assessment of MS patients that will influence treatment decisions. This study was conducted to assess the correlation of cortical lesions of multiple sclerosis (MS) at double inversion recovery (DIR) with cognition screening scores on 30 patients with MS.

All of them underwent MRI and clinical assessment with the calculation of Expanded Disability Status Scale (EDSS), Montreal Cognitive Assessment (MoCA), and Symbol Digit Modality Test (SDMT) scores. Results revealed that both MoCA and SDMT scales had a significant inverse correlation with cortical lesions number and total lesion load. Besides, there was a significant inverse correlation between these cognitive screening tests and varied cortical lesion subtypes and shapes. Interestingly, there was an excellent inter-observer correlation of cortical lesion number, total lesion load, different

subtypes and shapes of cortical lesions. In conclusion, DIR can detect cortical lesions of MS which were well correlated with cognitive dysfunction as well as disability progression in these patients. Thus, DIR is found to be reliable and useful for clinical purposes to suspect cognitive dysfunction in MS patients.

Its course is unpredictable resulting in a changing pattern of clinical need. Diagnostic criteria for multiple sclerosis require objective evidence for dissemination in space and time. The diagnostic and management process should follow good practice guidelines with the person at the centre of the process. Appropriate support and information should be available from the time of diagnosis. Continuing education is key in enabling the person to actively participate in their management. In the event of an acute relapse the person should have direct access to the most appropriate local service. Provided medical causes have been excluded, corticosteroid treatment to hasten the recovery from the relapse should be considered. Management of an acute relapse should be comprehensive addressing any medical, functional, or psychosocial sequelae.