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Feasibility study of the Montreal Cognitive Assessment (MoCA) in patients with brain metastases

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Abstract

Goal of work Detection of cognitive impairment in patients with brain metastases is important for both patient management and clinical trials. The most commonly used cognitive screen, the Mini Mental State Examination (MMSE), though convenient, is not sensitive in these patients. More sensitive tools are less convenient and, therefore, uncommonly used. Therefore, a practical and sensitive tool is needed. The Montreal Cognitive Assessment (MoCA) is a good candidate, shown to be sensitive in detecting mild cognitive impairment in the pre-dementia setting. This study is the first to explore the MoCA in cancer patients and is aimed at determining the feasibility of administering the MoCA in brain tumor patients. The secondary objective is to explore the relationship between MoCA and MMSE scores.

Patients and methods Forty patients with brain metastases being treated with whole brain radiotherapy were prospectively accrued from January to May 2007. All patients were administered both the MoCA and MMSE.

Main results The MoCA was completed in 10 min in 88% of patients. 92% of all the patients found the MoCA to be only mildly or not at all inconvenient. Eighty percent of the patients were deemed cognitively impaired by the MoCA compared with 30% by the MMSE ($p < 0.0001$). Of the 28 patients with a normal MMSE, 71% had cognitive impairment according to the MoCA. Overall, 50% of the patients had an abnormal MoCA, yet normal MMSE.

Conclusion The MoCA was well tolerated and provided additional information over the MMSE, justifying further validation studies of the MoCA in brain tumor patients.

Keywords Brain metastases - Cognition - Oncology - Radiotherapy - Cognitive screen

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References secured to subscribers.

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