Prospective comparison of the Montreal Cognitive Assessment (MoCA) and the Mini Mental State Examination (MMSE) in geriatric oncology

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ABSTRACT

Introduction: Among the various instruments recommended by the International Society of Geriatric Oncology, the Mini Mental State Examination (MMSE) is the most commonly used cognitive screening test before oncological treatment. Although the Montreal Cognitive Assessment (MoCA) has been shown to be more sensitive than the MMSE in several pathologies, no specific data exist for older patients with cancer. We aimed to compare the proportions of older patients with cancer who had screened positive for cognitive impairment according to the MMSE and MoCA scores obtained during a pretherapeutic geriatric assessment (GA) in oncology.

Patients and Methods: This prospective study was conducted among 66 patients older than 70 years who were candidates for a first-line treatment for either a solid tumor or hematological malignancy. Patients with brain tumor or previously known dementia were ineligible. During GA, cognitive function was assessed using both the MoCA and the MMSE tests administered in a random order.

Results: Median age was 78 years. Most patients (n=43, 65.2%) had a solid tumor. The median scores were 26 [11-30] for MMSE and 24 [8-30] for MoCA. Thirteen (19.7%) and 44 (66.7%) patients were screened positive for cognitive impairment according to MMSE and MoCA scores, respectively. Overall, 55 (66.7%) patients were screened positive: 12 (21.8%) on both scores, 32 (70.5%) with the MoCA only and one patient with MMSE only (p<0.0001).

Conclusion: The MoCA test seems to be most relevant to screen for cognitive impairment in older patients with cancer.

KEYWORDS: Geriatric assessment, Cognition, Montreal Cognitive Assessment, Mini Mental State Examination, Cancer, Older patients
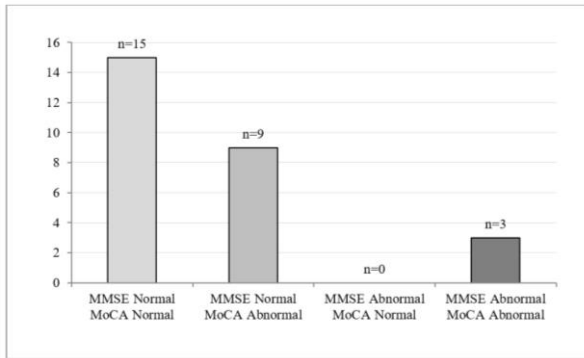
Figure 2. Results of cognitive screening tests at follow-up (n=27)
Data are presented as number of patients in each subgroup (n)
Among 66 patients_whose had baseline assessment, , 50 underwent chemotherapy and 27 of them had a
cognitive evaluation 6 to 9 months later (9 died during follow-up, 10 refused a second cognitive evaluation, 3
were lost to follow-up and one patient was not assessable).
MMSE: Mini Mental State Examination, MoCA: Montreal Cognitive Assessment