Decisional Tree with MMSE to Carry Out a Neuropsychological Assessment with the Elderly for Better Non Pharmacological Strategies

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Abstract
Lots of consultations exist at the moment to evaluate cognitive capacities of the Elderly. When these patients begin to have memory problems, they often want to know if something is possible to help them and to have the opinion of specialists. We show in this article how and why we do cognitive evaluation for the Elderly.

Introduction
Population's ageing is a public health issue and dementia for the elderly a reality. Examination of cognitive disorders for the Elderly are done to help them to have the better ageing possible in spite of Alzheimer disease and related disorders, psychiatric and/or addictive disorders, and also to reassure people with no cognitive troubles to prevent pathological ageing. But the way to do it is what is the most important, taking care of each subject in his own history [1,2].

Method of Neuropsychological Assessment
After an anamnesis of the patient by a MD practitioner, we propose to use a decisional tree with MMSE to assess as better as possible the cognitive functions of elderly people [3].

The method used was explicated with the work done with the E3N cohort with women living in or next Paris [4] after the view of geriatric practitioners in this domain. We expose it now:

If MMSE is greater than 17, then we perform a complete battery of tests: In France, for memory: 16 words of the free an cued selective reminding test (FCSRT), for executive function: Trail making tests A and B, for visual-constructive capacities: Clock drawing test, for language: a French picture-naming test (DO 80) and lexical evocations, for reasoning similarities subtest of the WAIS III, for autonomy: Four instrumental activities of daily living, for depression: Geriatric depression scale 15 items (GDS).

If MMSE is between 10 and 17, we use more simple standardized tests like BEC 96 items of Signoret.

If MMSE is smaller than 10, it's a severe dementia and no further tests are necessary.

For Some patients with high socio-cultural level, we use WAIS III which is very complete and standardized with socio-cultural level.

Then, with this evaluation, we try to set and to manage goals [2] for patients with cognitive complaint. They are firstly, maintaining function and independence, secondly preventing further cognitive decline and also ensuring quality of life. The strong « partnership » between patient and care manager was showed in project Leonardo for example [1].

For patients with subjective cognitive impairment, the goals are essentially reassurance, optimizing management of comorbidities and promoting a healthy lifestyle. However, they should be monitored carefully for any signs of progression predictive of future mild cognitive impairment (MCI).

For MCI patients, it's necessary to minimize medications affecting cognitive functions, promoting physical and mental health and also building a partnership with patient and caregiver to establish a safety net and advance care planning.

And then, for patient with dementia, caregiver support becomes increasingly important as disease progresses and dependence increases. Vigilance and early intervention for neuropsychiatric symptoms, sleep disturbance and incontinence are necessary and of course, meeting patient's goals for end-of-life care.

Non-Pharmacological Helps
Once the diagnosis is established, I would to insist in the importance of non-pharmacological strategies to help each patient with his disease.

To date, no nonpharmacologic interventions have been shown to prevent further decline in patients with either subjective cognitive impairment or MCI. On the other hand, numerous nonpharmacologic interventions targeting patients with dementia, their caregiver or the patient-caregiver dyad have been investigated.

Firstly, possible mechanisms by which exercises may improve or maintain cognitive function include improving central adiposity and insulin resistance, decreasing oxidative stress, improving vascular function and increasing cerebral blood flow.

Secondly, cognitive stimulation uses enjoyable activities to engage memory and concentration in a social setting. Two of the larger studies using this approach reported improvements in cognitive functions and quality of life, but not in functional status, mood, or behavioral symptoms. But To date « brain training » programs have not provided strong evidence of benefit on cognition, function or mood in patients with mild to moderate dementia. Patients and caregivers should be cautioned against expensive programs that promise to prevent or reverse dementia.
Finally, nutrition is a new way which is studied to prevent cognitive decline, but we are only at the beginning of the possible discovery in nutrition programs.

**Conclusion**

Neuropsychological evaluation is very useful to help doing diagnosis as precisely as possible in Alzheimer disease and related disorders. But to date, there are too few studies to show how to treat patients with MCI diagnosis and subjective cognitive impairment. So, investigations must be more and more developed in this way in the future.

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**References:**