Am I Losing My Marbles Doc?

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My opinion

“Am I losing my marbles Doc?”

Over the next few years this will be a question many doctors will hear from patients. And some of us will perhaps ask this of ourselves! As the leading edge of the ‘baby boomer’ generation moves through their 60’s and 70’s many of them will start to wonder if memory complaints are the start of more serious cognitive problems or dementia. It is crucial to distinguish sinister memory problems from benign complaints that just become more common with age. Forgetting one’s keys, reading glasses, or difficulty finding a word or two in a conversation are more common as we age but are not concerning as long as they are not occurring all the time. On the other hand, frequently needing to be reminded of what one has already been told or getting lost in previously familiar situations are more worrying symptoms that can indicate serious memory problems.

It is clinically important to determine whether memory complaints reflect ‘normal’ aging or are evidence of developing pathology. Memory and cognitive testing can assist this process. Office (or ‘bedside’) testing is commonly done with the Mini Mental State Exam (MMSE). While quick and easy to administer it is not detailed enough to provide a dependable evaluation of cognition and memory, especially in mildly affected patients. I find the Addenbrooke’s Cognitive Assessment – Revised (ACE-R) a more useful test. The ACE-R includes the MMSE but covers more cognitive domains in depth (attention/orientation, memory, verbal fluency, language, visuo-spatial) (1). The test is easy to administer and takes no more than 20 to 25 minutes in most cases. A practice nurse can administer the test. The ACE-R is scored out of 100. Scores in the mid 80’s suggest serious cognitive impairment or dementia. Most healthy elderly individuals will score in the 90’s. The ACE-R can identify patterns of cognitive and memory impairment that are useful in differentiating Alzheimer’s disease from fronto-temporal dementia variants, vascular cognitive impairment, and Lewy body dementia. Some experience with interpretation of the test is needed. Occasionally more extensive cognitive testing is required and referral to a neuropsychologist should be considered. Computer-based cognitive testing programs can be helpful in some cases.

Having decided that the patient has cognitive impairment, what are the clinical conditions to consider? Where mild memory difficulties are the primary presentation, then mild cognitive impairment (MCI)—amnestic type, may be the problem. These patients do not show problems in other cognitive domains (such as attention, concentration, language, visuo-spatial skills, and executive functions). Many MCI patients remain stable over time but a proportion (perhaps up to a third) do deteriorate and covert into dementia over a two to four year period. These cases may be individuals with very early manifestations of Alzheimer’s disease. Unfortunately, it is not yet possible to predict with any certainty which patients will get worse as we are not clear about the causes of MCI. If cognitive impairment extends beyond memory to other domains then a diagnosis of dementia is more likely. In the ‘baby boomer’ age group and older the main dementia conditions to consider are Alzheimer’s disease, vascular cognitive impairment, a combination of Alzheimer’s disease and vascular cognitive impairment, Lewy body dementia, dementia associated with Parkinson’s disease and other sub-cortical degenerations, and fronto-temporal dementia variants (semantic dementia, progressive non-fluent aphasia, and behavioral variant). Reversible causes of dementia need to be excluded (such as vitamin deficiencies or hormonal disturbances). Depressive illness and delirium can also masquerade as dementia.

Thorough investigation of cognitive impairment involves a screening physical and neurological exam as well as routine blood tests and neuro-imaging studies. A list of possibly relevant laboratory tests follows. However, the choice of tests will depend on the clinical circumstances. Consider ordering FBC, ESR, CRP, E/LFT’s, Mg, thyroid function, cholesterol and lipid profile, vitamin’s B12, B1, B6, and D, folic acid, homocysteine, APO-e genotype, HIV and syphilis serology, and urine analysis. An MRI brain scan is the most useful brain imaging study (a CT is an alternative for patients unsuitable for MRI). In addition to the usual report ask the radiologist to comment on regional and general atrophy, hippocampal volume, ventricle size, and presence of deep white matter ischemia. Single photon emission tomography (SPECT) and PET if available) provides information on cerebral perfusion activity patterns that can help differentiate between Alzheimer’s disease, vascular cognitive impairment, Lewy body dementia, and
fronto-temporal dementia. An EEG is sometimes indicated when delirium or unusual dementia conditions or seizure disorders are being considered. In the near future CSF studies of amyloid and tau protein fragments will also help with diagnosis. Treatment of mild cognitive impairment is directed towards preventing further deterioration and maximizing cognitive function. Interventions that focus on reducing risk factors for dementia and enhancing protective factors against dementia are the most appropriate. Memory clinics that offer these types of cognitive enhancement programs are available in some areas. Treatment of dementia depends on the type of dementia involved. Comprehensive management involves symptom treatment (usually with cognitive enhancing medication and psychotropic drugs), education and support for patient and carer/family, and cognitive enhancement programs. Symptomatic treatment for Alzheimer’s disease is available in the form of cholinesterase inhibitors (donepezil tablets, galantamine capsules, and rivastigmine patches) and the glutamate NMDA receptor antagonist memantine. These medications can improve cognitive function (particularly attention and memory) and dampen behavioral disturbances (such as psychosis, agitation, depression and anxiety), and maintain function over the longer term. If a patient shows benefit the medication should be continued. Dose increases may be needed. Although only approved for subsidy under the PBS for Alzheimer’s disease, these medications can help in other dementia conditions that have overlapping neuropathology with Alzheimer’s disease (Lewy body dementia, vascular cognitive impairment). Specialist consultation (physician, geriatrician, or psychiatrist) is required to gain access to PBS authority support for these medications.

Conclusion

Unfortunately, no disease modifying agents are available for the common dementia conditions at the moment. Much research is underway in this area. In the future it is possible that with early detection of individuals at risk of dementia the application of disease modifying (or ‘curative’) interventions will prevent dementia onset. Then no longer will patients have to ask if they are “losing their marbles”!

Reference(s)

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