Mild Cognitive Impairment: Implications of Diagnosis

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Mild cognitive impairment (MCI) reflects the interim stage between normal cognitive functioning and more severe and irreversible cognitive decline that can be associated with dementia. Prevalence estimates suggest 12% to 18% of older adults (>60 years) develop MCI [1]. Risk factors for MCI include being male, older age, lower education level (i.e., lower cognitive reserve), diabetes and hypertension, apolipoprotein E (APOE) e4 genotype, and sleep disorders [2]. MCI presents as four phenotypes: amnestic single, amnestic multiple, non-amnestic single and non-amnestic multiple, and classification depends upon the affected cognitive domain. MCI is a common precursor to Alzheimer’s disease and other neurodegenerative disorders including dementia with Lewy bodies, frontotemporal dementia, and vascular cognitive impairment [1].

Since the focus on MCI in the scientific literature over the past two decades, there has been significant variability in evaluating and diagnosing MCI within and between research and clinical practice [3]. There is some scientific consensus, however, that a positive diagnosis of MCI involves [4]: (1) patient reported subjective cognitive decline supported by an informant-validated history of changes in cognition, (2) neuropsychological deficits in cognitive function not normal for age or level of education, (3) cognitive deficits that do not impair daily activities, and if available, (4) structural brain imaging (e.g. positron emission tomography or magnetic resonance imaging) [5,6] to support classification of an MCI syndrome. MCI is, however, heterogeneous and health practitioners must be conservative in their use of diagnostic labels, particularly in the absence of certainty.

There are positive and negative implications associated with diagnosing a patient with MCI within their family. Positive implications can include a sense of relief, and often associated with confirming a patient’s on-going perception of their health and cognitive function, as well as providing a starting point for planning for the long-term implications of living with cognitive decline that may increase in severity and lead to dementia [7]. Conversely, an MCI diagnosis has many negative implications including overwhelming feelings of anxiety and fear for one’s health, the potential impact of ‘courtesy stigma’ associated with an MCI diagnosis [8] and an individual’s perceived autonomy in personal and professional relationships post-diagnosis [9]. Patients who receive a diagnosis also report feelings of frustration surrounding the current paucity of treatment options for MCI [10]. Serious negative consequences may also result from potential false-positive diagnoses when clinicians are limited by available resources (i.e., only using screening measures in absence of neuropsychological assessment and structural brain imaging) and knowledge of the temporal nature of MCI (i.e., some patients with MCI revert back to normal cognition) [11].

Early detection of MCI as a prodromal feature of dementia is of paramount importance with the ever increasing ageing population and the rise of dementia as the second leading cause of death in Australia [12]. However, there is currently no treatment option available for MCI and health practitioners need to ensure they are aware of the implications associated with an MCI diagnosis. All suspected cases of MCI must be accompanied by a thorough neuropsychological assessment of cognitive function and, when possible, structural brain imaging to detect cortical atrophy associated with MCI. For patients at risk of developing MCI, promising evidence suggests a multimodal approach including diet, physical activity, cognitive training and monitoring vascular risk may maintain and improve cognitive function during older age [13].

References

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Received January 19, 2018; Accepted January 24, 2018; Published January 31, 2018


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