Mental health

Depression common in patients with mild cognitive impairment

A third of patients with mild cognitive impairment also suffer from depression, a meta-analysis has found.

A total of 57 studies representing 20,892 patients were included in the analysis. The majority of these studies were carried out in North America (23) and Europe (22), with eight from Asia, two from Australia and one each from South America and Africa. There was a high level of heterogeneity (I^2 = 90.7%) as a result of study populations drawn from a mixture of community and clinic settings (in different countries), the lack of an agreed definition of mild cognitive impairment, and a wide range of methods used to identify depression.

The combined prevalence of depression in patients with mild cognitive impairment was 32% (95% CI: 27-37%).

There was a significant difference between the prevalence of depression in community-based samples 25% (95% CI: 19-30%) and clinic-based samples 40% (95% CI: 32-48%).

The estimated prevalence was not significantly affected by either the criteria used to define mild cognitive impairment or the chosen tool for depression diagnosis (clinician-rated, self-reported or informant-reported).

The authors suggest that the higher prevalence of depression in clinic-based samples is because patients with mild cognitive impairment are more likely to consult if they are depressed. Only a small minority of included studies used semi-structured clinical interviews to diagnose depression. The problem with using screening instruments such as the CES-D is that they lack specificity and therefore overdiagnose depression.[1]

A recent meta-analysis concluded that the CES-D 'should not be used as an isolated diagnostic measure of depression.'[2]

Mild cognitive impairment is impairment in one or more cognitive domains which is intermediate between 'normal ageing' and dementia. Amnestic (episodic memory) and non-amnestic (e.g. executive function, language, spatial awareness) subtypes have been proposed. Mild cognitive impairment is distinguished from dementia by the preservation of social and occupational functioning.[3]

However, there is no agreement as to how precisely memory impairment should be defined, subjective memory impairment may be caused by depression, and there is no precise boundary between 'some difficulty' and 'impairment' of functional abilities.[4] A further problem is that brief screening tools for dementia lack sensitivity for detecting mild cognitive impairment.[5]

The present study suggests that if we can make a diagnosis of mild cognitive impairment this will alert us to a group of patients who are at high risk for depression. Moreover, comorbid depression increases the risk that mild cognitive impairment will progress to dementia, but unfortunately there is no evidence that antidepressant treatment reduces this risk.[6]

NICE recommends that patients who are showing signs of mild cognitive impairment should be referred to memory clinics to facilitate early diagnosis in those who subsequently progress to dementia[7] (approximately 10% progress each year).[8] However, my own recent referral data suggest that I only refer patients with a high clinical suspicion of dementia: out of 14 patients, ten were immediately diagnosed with dementia, a further two were diagnosed at six months' review and only two were diagnosed with mild cognitive impairment.

In my defence, there are a number of reasons why referral of patients with possible mild cognitive impairment may not be such a good idea:

- No clinical interventions have been shown to reduce the risk of progression from mild cognitive impairment to dementia[9]
- Diagnosis of mild cognitive impairment may cause unnecessary anxiety in those patients (nearly half) who will not progress to dementia within five years
- Mild cognitive impairment may be missed by memory clinics especially in female patients[10] leading to false reassurance and possible delayed diagnosis of subsequent dementia
- Referral of patients with mild cognitive impairment may overwhelm memory clinics and delay treatment for those patients with dementia.

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REFERENCES

1 Richard E, Reitz C, Honig LH et al. Late-life depression, mild cognitive impairment, and dementia. *JAMA Neurol* 2013;70:374-82
2 Vilagut G, Forero CG, Barbaglia G, Alonso J. Screening for depression in the general population with the Centre for Epidemiologic Studies Depression (CES-D): A systematic review with meta-analysis. *PLoS One* 2016;11:e0155431
3 Petersen RC, Caracciolo B, Brayne C et al. Mild cognitive impairment: a concept in evolution. *J Intern Med* 2014;275:214-28
4 Tarawneh R, Holzman DM. The clinical problem of symptomatic Alzheimer's disease and mild cognitive impairment. *Cold Spring Harb Perspect Med* 2012;2:a006148
5 Tsoi KKF, Chan JYC, Hirai HW et al. Cognitive tests to detect dementia: a systematic review and meta-analysis. *JAMA Intern Med* 2015;175:1450-08
6 Saczynski JS, Rosen AB, McCammon RJ et al. Antidepressant use and cognitive decline: the health and retirement study. *Am J Med* 2015;128:739-46
7 National Institute for Health and Clinical Excellence. CG42. Dementia: supporting people and their carers in health and social care. NICE. London. 2006
8 Petersen RC. Early diagnosis of Alzheimer's disease: is MCI too late? *Curr Alzheimer Res* 2009;6:324-30
9 Cooper C, Li R, Lyketsos C, Livingston G. Treatment for mild cognitive impairment: systematic review. *Br J Psychiatry* 2013;203:255-64
10 Sundermann EE, Maki PM, Rubin LH et al. Female advantage in verbal memory: Evidence of sex-specific cognitive reserve. *Neurology* 2016;87:1916-24