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Early dementia

Optimal management in general practice

Background
The assessment and management of dementia is complex. General practitioners are often the first point of contact for people with dementia, and their families. General practitioners have a key role in providing quality primary care in terms of the identification, assessment, provision of information, referral and ongoing management.

Objective
This article discusses the role of the GP in the diagnosis and management of people with dementia.

Discussion
It is important GPs are aware of the importance of early detection of dementia. Dementia is a complex condition. It develops slowly and early signs of dementia are very subtle. Difficulty in detecting the transition between normal aging and the onset of dementia and the lack of a definitive diagnostic tool often precludes early diagnosis. Evidence based recommendations are available to assist GPs in the diagnosis and ongoing management of people with dementia.

Keywords: dementia; Alzheimer disease; dementia, vascular

CPD

The number of Australians with dementia is increasing. In 2009, 245 400 Australians were experiencing dementia, 60% were female and 88.5% were aged 70 years or more. The prevalence of dementia increases with age, doubling every 5 years between the ages of 60 and 85 years.[1] 'Mild' dementia is most prevalent (55%); while 30% can be classified as 'moderate' and 15% as 'severe'.[1] A person with mild dementia may only experience one or two symptoms that have a relatively minor impact on day-to-day living, such as getting lost on a familiar route, having a reduced attention span or becoming repetitive in conversation. A person with moderate or severe dementia may experience many symptoms and require 24 hour care.[1,2]

Detection, diagnosis and disclosure of dementia have been identified as potential evidence gaps in Australian general practice.[3,4] General practitioners are usually the first point of contact for people with dementia, and their families. General practitioners have a key role in terms of recognition of symptoms, assessment and referral[5–7] and are well situated to provide continuing care, health promotion, care co-ordination and support.

Delay in diagnosis has clinical and social implications for people with dementia and for their families. Overseas and Australian studies have estimated the average time from first symptoms to diagnosis, as reported by informants, to be between 1 and 3 years,[5,8–10] with symptoms recorded in GPs' medical records as early as 5 years before diagnosis.[11] Earlier recognition that a problem exists may facilitate earlier access to resources, information, treatment and support.[6,7]

To assist in the diagnosis and management of people with dementia, evidence based clinical practice guidelines have been published.[12,13] The evidence included in these guidelines is gathered from studies conducted in a range of settings, and the recommendations are relevant to Australian GPs.

What is dementia?

Dementia describes a progressive decline in an individual's cognition and functional ability. It is characterised by progressive loss or decline of intellectual ability including memory, thinking, orientation, comprehension, learning capacity, language, social interaction, reasoning, planning, decision making and emotional responses which impact on the individual's ability to carry out day-to-day activities.[14,15]

Subtypes of dementia

Alzheimer disease

Alzheimer disease accounts for approximately 60% of cases of dementia. Onset is usually insidious. Common features are slowly progressive onset of memory impairment, language impairment, reduced executive function (ability for complex thought and decision making), with possible dyspraxia and agnosia.

Vascular dementia

Vascular dementia is caused by cerebrovascular conditions including multi-infarct disease and stroke and accounts for 10–20% of dementia. Onset may be sudden, following a stroke, or may be gradual. It should be considered in people with vascular risk factors such as hypertension, hypercholesterolemia, diabetes, and other evidence of vascular disease such as coronary, renal or peripheral vascular disease.

Dementia with Lewy bodies

Dementia with Lewy bodies accounts for almost 10% of dementia cases. Lewy bodies develop inside nerve cells in the brain leading to the degeneration of brain tissue, with at least two of the three features of:

- fluctuating impaired cognition
- visual hallucinations, and
- parkinsonism.

Diagnosis

There is no simple test for the diagnosis of dementia. Diagnosis is made on clinical assessment and supported by investigation results. This includes a comprehensive assessment to ensure that other conditions that show similar symptoms are identified or eliminated, and differentiating which disease(s) is (are) causing the dementia.[16] *Figure 1* summarises the pathway for detection and diagnosis.

Investigations

Cognitive assessment

Well recognised tests of cognitive ability are the Mini-Mental State Examination (MMSE), General Practitioner Assessment of Cognition (GPCOG), Rowland Universal Dementia Assessment Scale (RUDAS) and Informant Questionnaire of Cognitive Decline in the Elderly

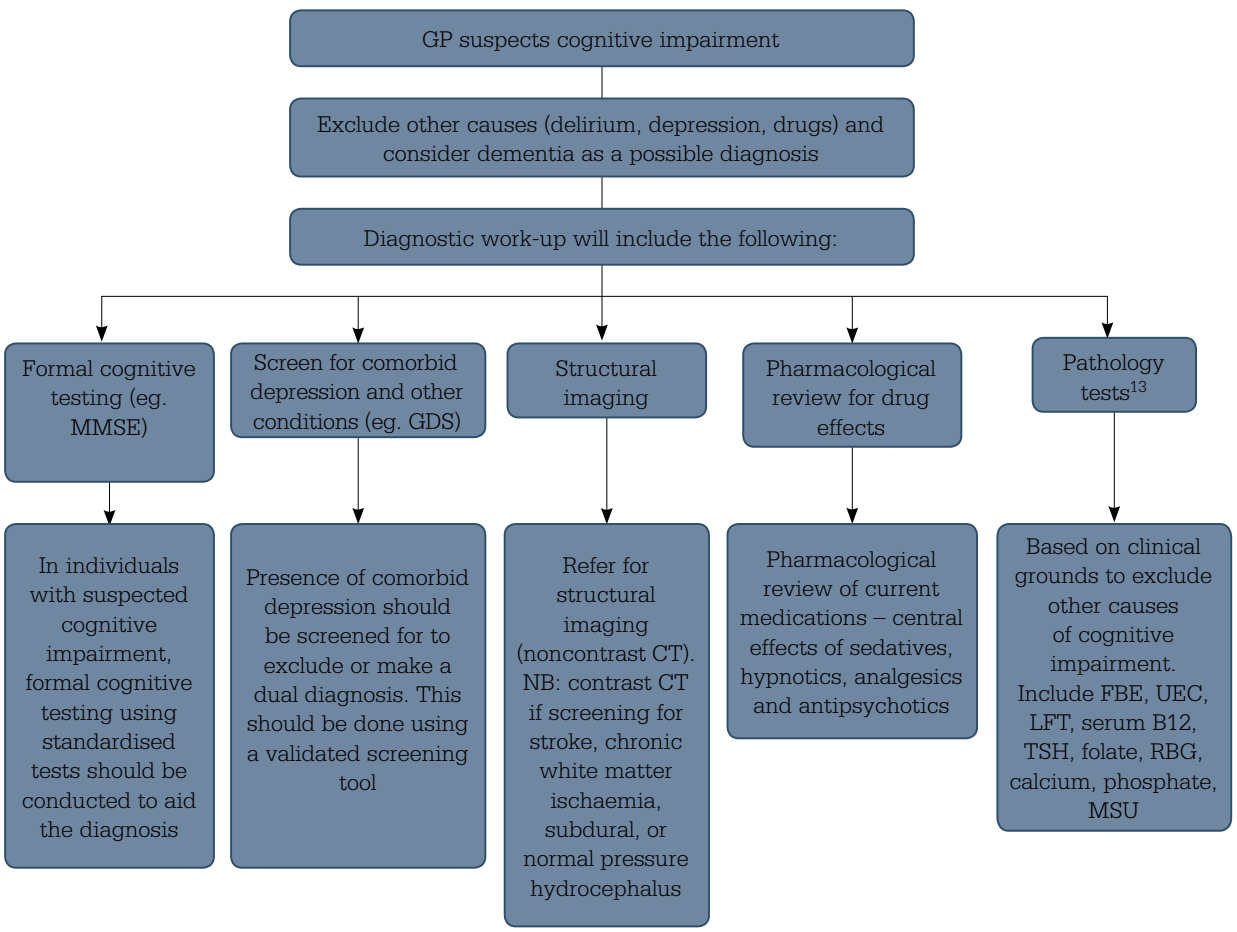

Figure 1. Evidence based recommendations and best practice points in the diagnosis of dementia
FBE = full blood examination; UEC = urea, electrolytes and creatinine; LFT = liver function tests; RBG = random blood glucose; MSU = mid stream urine; ESR = erythrocyte sedimentation rate

(IQCODE). The MMSE is the most widely used cognitive screening test and is used to monitor progression and response to dementia modifying medication. The maximum score for the test is 30, with a score below 24 suggestive of cognitive impairment and often dementia. It does however, have biases in relation to culture and education.[12,13,15]

Screening for comorbid conditions and drug effects

Several conditions may present with similar symptoms to dementia, including delirium, depression, and drug induced effects, which may aggravate or cause cognitive impairment. Depression can be difficult to differentiate in a person with dementia as the two often co-exist. To differentiate between dementia and depression, a validated tool such as the Geriatric Depression Scale (GDS) should be used.

Other comorbidities to screen for include vitamin B12 deficiency and hypothyroidism. Delirium develops over a short period (hours to days) and fluctuates; in such cases a search for an acute medical cause is required promptly. Many drugs can cause cognitive impairment and looking specifically for central effects of sedatives, hypnotics, analgesics and antipsychotics is recommended.[12,13,15]

Computerised tomography

There are two main reasons for computerised tomography (CT) imaging to be undertaken. The first is to exclude an intercerebral lesion as a cause of cognitive impairment (eg. brain neoplasm or subdural haematoma). The second is for diagnostic purposes as it can aid in the differentiation of type of dementia. Under most circumstances a noncontrast CT scan should be part of the routine initial evaluation.[12,13,15,17]

Pathology tests

There is no evidence to support or refute that routine pathology tests improve the accuracy of clinical diagnosis of dementia. The selection of tests should be based on clinical grounds according to history and clinical circumstances.[12,13] Recommended tests are included in *Figure 1*.

Management

The management of dementia includes both pharmacological and nonpharmacological interventions (*Figure 2*).

Early diagnosis of dementia allows:

- treatable conditions such as depression to be managed
- offers the opportunity for a number of interventions to slow progress to be implemented, and
- allows individuals and their families to plan for the future, eg. addressing financial and legal issues, preparing health directives and making lifestyle changes such as planning for losing the ability to drive.[15,18]

Counselling and support is available for people with dementia, their families and their carers. Alzheimer's Australia can provide information and support (see *Resources*).

Informing the person with dementia

There is an emerging consensus among health professionals that favours disclosure of a dementia diagnosis.[12,13] However, some people with dementia and/or their carers may not wish to know their diagnosis. Wherever possible the patient undergoing assessment should be allowed to decide if they want to be informed if a diagnosis of dementia is confirmed.

Patient targeted management strategies

Pharmacological

There are currently no drugs proven to modify the neuropathology of dementia once established. Clinical studies have shown cholinesterase inhibitors can improve cognitive function and/or delay or lessen the rate of cognitive and functional decline in patients with mild to moderate Alzheimer disease, however, the clinical benefit remains uncertain and all the studies are short term.[19] Donepezil, galantamine and rivastigmine are available on the Pharmaceutical Benefits Scheme (PBS) for patients who meet the criteria for subsidised treatment. Memantine is available on the PBS and may be an alternative for patients unable to tolerate cholinesterase inhibitors. In people with moderate to severe Alzheimer disease, a small, although nonclinically significant, benefit has been found.[12]

Referral to a memory clinic or specialist (geriatrician, psychiatrist or neurologist) for confirmation of diagnosis and review for appropriateness of pharmacological interventions may be required to access some of these treatments via the PBS. Referral should occur to facilitate access to other support services as well.[13]

Evidence of benefit is inconsistent and controversial for the use of vasodilators, vitamin E, ginkgo biloba, vitamin B12, anti-inflammatories, and selegiline. There is still no good evidence that aspirin is effective in treating people with vascular dementia, although it may be used in people who have a history of vascular disease.[20]

Nonpharmacological

Maintaining cognitive, physical and social activity appears to be helpful in improving quality of life, wellbeing and the physical health of the person with dementia. Cognitive stimulation can be provided either formally by support organisations or informally at home by the carer. Recreational activities should be encouraged, appropriate to the physical ability and interests of the patient.[12,13] Continuing longstanding hobbies is important, as new learning is compromised.

Carer targeted management strategies

Carers and family members should be able to access information on dementia and its progress.[12,13,16] This can be written information, provision of telemedicine helplines, eg. the National Dementia Hotline (see *Resources*) or guidance on accessing more information from local or national support organisations. Organisations such as Alzheimer's Australia offer education and training on practical solutions that are effective in caring for a person with dementia. As dementia is a progressive condition the need for information and

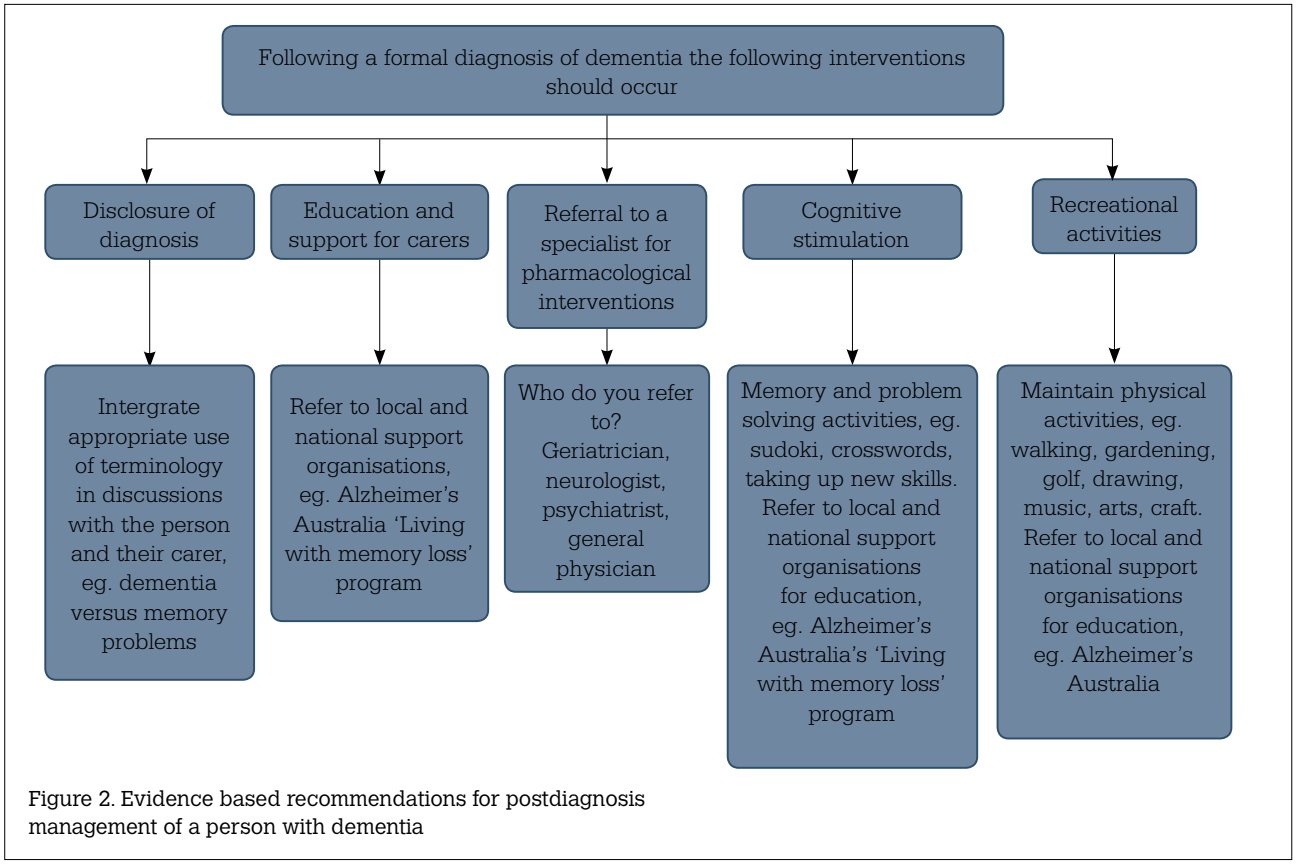

Figure 2. Evidence based recommendations for postdiagnosis management of a person with dementia

support services will change so a responsive primary care service is critical.[12,13] This social support is probably the area of management which will make the most impact on the quality of life for both the patient and their carer.

Carer wellbeing is important for the wellbeing of the person with dementia. Most people with dementia live in the community because of the efforts of their carers and the provision of an optimal social and physical environment. The increasing burden of care may lead to depression and anxiety and has been associated with more frequent physical illness in the carer. It is important that carers maintain a relationship with their own GP so that their needs are addressed.[21]

In addition to the evidence based recommendations listed above, a number of recommendations considered 'best practice' based on consensus exist, despite there being insufficient evidence to support or refute them.[12] These include:

- promote awareness of changes in driving capacity +/- assess fitness to drive as the dementia progresses
- discuss the importance of forward planning of legal and financial affairs, together with a discussion of treatment decisions and medical care soon after diagnosis so the person with dementia may still be able to express their views (see the article 'End of life care: The importance of advance care planning' by Bloomer, Tan and Lee in this issue)
- promote awareness of the importance of carers taking a break by arranging additional support services such as respite care.

Table 1. Recommendations for postdiagnosis management of a person with dementia

Refer to a specialist for consideration of appropriateness of dementia modifying medications and access to other support services
Carers and family members should receive education and training in practical and effective interventions for caring for people with dementia
Cognitive stimulation should be offered to people with dementia (this may be done formally or informally by carers)
Recreational activities should be encouraged, appropriate to a person's physical function and interests

Table 1 summarises the key issues to consider in management postdiagnosis.

Summary of important points

- The GPs role in dementia care includes recognising the signs of cognitive impairment, assessment to confirm a diagnosis of dementia, management, health promotion and support for the person with dementia, and their family.
- GPs have a role in both pharmacological and nonpharmacological interventions. Nonpharmacological approaches such as cognitive

stimulation, recreational and physical activities may be beneficial.
- High quality evidence based clinical practice guidelines for dementia are available and need to be implemented into clinical practice.
- Carer wellbeing is important for the wellbeing of the person with dementia and regular assessment of social support should be considered.

Resources

- Alzheimer's Australia: www.alzheimers.org.au
- National Dementia Hotline: 1800 100 500; Interpreter service 131 450
- The Australian and New Zealand Society of Geriatric Medicine provides online learning material for doctors: www.anzsgm.org/vgmtp/Dementia/.

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References

1. Access Economics 2009. Keeping dementia front of mind: incidence and prevalence 2009–2050. Final report by Access Economics Pty Limited for Alzheimer's Association Australia.
2. Australian Institute of Health and Welfare. Hales C, Ross L, Ryan C. National evaluation of the Aged Care Innovative Pool Dementia Pilot: final report. Aged Care Series no. 10. AIHW cat. no. AGE 48. Canberra: AIHW, 2006.
3. Australian Institute of Health and Welfare. General Practice Statistics and Classification Unit. SAND abstract no.28 from the BEACH program: Alzheimer's disease and dementia. University of Sydney, 2002.
4. Bridges-Webb C, Giles B, Speechly C, Zurynski Y, Hiramanek N. Patients with dementia and their carers in general practice. Aust Fam Physician 2006;35:923–4.
5. Speechly C, Bridges-Webb C, Passmore E. The pathway to dementia diagnosis. Med J Aust 2008;189:487–9.
6. Iliffe S, Manthorpe J, Eden A. Sooner or later? Issues in the early diagnosis of dementia in general practice: a qualitative study. Fam Pract 2003;20:376–81.
7. Downs M, Iliffe S, Turner S, et al. How can we improve GPs' response to dementia? Journal of Dementia Care 2002;3:18–9.
8. Teel CS, Carson P. Family experiences in the journey through dementia diagnosis and care. J Fam Nurs 2003;9:38–58.
9. Cattel C, Gambassi G, Sgadari A, et al. Correlates of delayed referral for the diagnosis of dementia in an outpatient population. J Gerontol A Biol Sci Med Sci 2000;55:M98–102.
10. Fiske A, Gatz M, Aadnøy B, Pedersen NL. Assessing age of dementia onset: validity of informant reports. Alzheimer Dis Assoc Disord 2005;19:128–34.
11. Ramakers IH, Visser PJ, Aalten P, et al. Symptoms of preclinical dementia in general practice up to five years before dementia diagnosis. Dement Geriatr Cogn Disord 2007;24:300–6.
12. Scottish Intercollegiate Guidelines Network (SIGN), 2006. Management of patients with dementia: A National Clinical Guideline SIGN 86. Available at www.sign.ac.uk/guidelines/fulltext/86/index.html [Accessed 1 September 2010].
13. Bridges-Webb C, Wolk J. Guidelines for the care of patients with dementia in general practice. NSW Department of Health 2003. Available at www.racgp.org.au/guidelines/dementia [Accessed 14 September 2010].
14. World Health Organization. International Classification of Diseases Version 10 2007. Available at http://apps.who.int/classifications/apps/icd/icd10online/ [Accessed 14 September 2010].
15. Alzheimer's Association Australia. Diagnosing dementia: a reference paper. 2001. Available at www.alzheimers.org.au/upload/DiagnosingDementia.pdf [Accessed 14 September 2010].
16. Department of Health and Ageing 2007. Dementia Research Mapping Project final report. Available at www.aro.gov.au/documents/Dementia%20RMP%20Report%20final.pdf [Accessed 12 August 2010].
17. Knopman DS, DeKosky ST, Cummings JL, et al. Practice parameter: diagnosis of dementia (an evidence-based review). Report of the Quality Standards Subcommittee of the American Academy of Neurology. Neurology 2001;56:1143–53.
18. Alzheimer's Association Australia 2007. Early diagnosis of dementia. Available at www.alzheimers.org.au/content.cfm?infopageid=3498 [Accessed 14 September 2010].
19. Qaseem A, Snow V, Cross JT Jnr, et al. Current pharmacologic treatment of dementia: a clinical practice guideline from the American College of Physicians and the American Academy of Family Physicians. Ann Intern Med 2008;148:370–8.
20. Rands G, Orrell M, Spector AE. Aspirin for vascular dementia. Cochrane Database Syst Rev 2000; Issue 4. Art. No.: CD001296. DOI: 10.1002/14651858.CD001296.
21. Couch A. Treating dementia. Australian Prescriber 2009;32:9–12.

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