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SPECIAL REPORT

Diagnosing and managing dementia in primary care

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How should patients be assessed?

How should diagnosis be confirmed?

What are the management options?

IN THE UK 6.5% OF THE POPULATION OVER 65 HAVE DEMENTIA[1] AND MORE THAN 200,000 NEW cases develop annually.[2] Dementia is associated with a significant personal cost for individuals and their families.

Increasing recognition of the early symptoms and the benefits of early treatment have led to new targets in primary care and acute hospitals to identify individuals with suspected dementia. This has fuelled greater public awareness about the importance of early identification of cognitive changes, and more patients are seeking specialist memory assessments. The recent NICE guidelines summarise good practice in diagnosing and managing dementia.[3]

For many patients, accessing diagnosis and treatment at an early stage of their illness is viewed positively. It enables greater understanding among family and friends, access to community support, the opportunity for advance care planning and use of medication which can stabilise and ameliorate distressing symptoms. The current symptomatic treatments and future disease-modifying medications are likely to have most effect if prescribed early in the illness. An early diagnosis can delay entry to a care home which can reduce the costs to society of institutional care and can contribute to a better quality of life as most elderly people prefer to stay in their own home for as long as possible.[4] Some patients do not wish to know their diagnosis early on, and so it is important that patients consent to a referral to a memory clinic, and to participating in assessment, mindful of the possible outcomes (including a dementia diagnosis).

PRESENTATION

The common early symptoms of dementia such as forgetting recent conversations, becoming repetitive and misplacing items are usually due to poor short-term memory. In most cases, long-term memory is relatively well preserved. Other aspects of cognitive function may be affected with patients describing problems with orientation in time and place, language, sequencing and planning, recognising faces, and subtle changes in mood, personality or behaviour. There may be a decline in function and an impact on aspects of daily living. Symptoms may be recognised by the patient, family or carers.

ASSESSMENT

The initial assessment in patients suspected of possible dementia should involve a detailed and careful history from patients and their family or carers. The history should focus on disturbance of cognitive function and daily living activities; collateral history is crucial because others may have a better understanding of the duration of cognitive decline and the broader impact of the symptoms.

History and assessment of cognition should cover the major cognitive domains, particularly focusing on: attention, executive functioning, agnosia, language, memory, orientation, praxis and visuospatial skills. It is also important to enquire about behavioural and psychological symptoms of dementia, including: agitation, aggression, depression, apathy, psychosis and sleep disturbance[5]

A physical examination is necessary to look for any focal neurological signs and to exclude any visual or auditory problems.[6] It is important to identify and exclude reversible causes of cognitive decline, including: vitamin B_{12} and folic acid deficiency, thyroid disease, delirium, depression and anxiety, as well as the impact of alcohol, illicit drugs and polypharmacy on cognition. Baseline blood tests (full blood count, thyroid function tests, liver function tests, glucose, lipids, ESR, renal function tests including eGFR, vitamin B_{12} and folate levels) should be carried out. A brief cognitive screening test should be performed before referring the patient to a memory clinic for further assessment. A midstream urine specimen, chest X-ray and ECG may also be needed where clinically indicated. »

Depression can mimic dementia and the two conditions can coexist in patients. Therefore depression should be identified and, if suspected, treated and reassessment of cognitive function should be carried out 6-8 weeks later.[6] Diagnosis of depressive disorder can be made clinically, using standardised diagnostic criteria.[7] However, depression screening tools may be a helpful adjunct to diagnosis. The Geriatric Depression Scale (GDS-15) is appropriate for older adults as it avoids questions relating to somatic symptoms, which may yield false-positive results.[8] The Patient Health Questionnaire (PHQ-9) is an alternative tool, which GPs may be more familiar with. However, it is important to be aware that the apathy items (questions 2, 9 and 13) can indicate apathy syndrome or cognitive impairment as well as depression.

There are a number of tools available to make an initial assessment of a patient's cognitive function. The most commonly used tool is the Mini-Mental State Examination (MMSE); a score of less than 25 out of 30 is suggestive of dementia.[9] However, the MMSE may not be a practical tool to use within primary care and is now subject to copyright. NICE recommends the use of validated brief cognitive screening instruments such as the ten-point cognitive screen (10-CS), 6-item cognitive impairment test (6CIT) or Mini-Cog.[3] Other screening instruments such as the General Practitioner Assessment of Cognition (GPCOG), Montreal Cognitive Assessment (MoCA), and Short Test of Mental Status (STMS) are also good alternatives when considering factors such as application time, sensitivity and specificity.[10]

These screening tests should not be used to exclude dementia, as patients who score above normal thresholds, may still have cognitive problems. False-negative results can arise because of individual patient factors (e.g. high premorbid intelligence) and the screening instruments themselves, which focus on a limited number of cognitive domains and so are less sensitive to non-Alzheimer's dementias. Where there is clinical suspicion of dementia, a patient should still be referred for specialist assessment, regardless of their score on screening instruments.

In primary care, while collecting collateral information, using a structured instrument such as the Informant Questionnaire on Cognitive Decline in the Elderly (IQCODE) or the Functional Activities Questionnaire (FAQ) is recommended especially if the patient is not able to perform cognitive testing or to give a clear history.[3]

Table 1

Recommended pharmacological management in common dementia sub-types[3]

Dementia sub-type	First line	Second line	Third line
Alzheimer's dementia			
Mild	Donepezil/rivastigmine/galantamine*		
Moderate	Donepezil/rivastigmine/galantamine or memantine (if not tolerating AChEi)*	Combination of donepezil/rivastigmine/galantamine with memantine**	
Severe	Memantine*	Combination of donepezil/rivastigmine/galantamine with memantine*	
Lewy body dementia			
Mild	Donepezil/rivastigmine* ◊	Galantamine (if not tolerating donepezil/rivastigmine)** ◊	Memantine (if not tolerating AChEi)** ◊
Moderate	Donepezil/rivastigmine* ◊	Galantamine (if not tolerating donepezil/rivastigmine)** ◊	Memantine (if not tolerating AChEi)** ◊
Severe	Donepezil/rivastigmine** ◊	Memantine (if not tolerating AChEi)** ◊	
Frontotemporal dementia	No effective anti-dementia medication		
Vascular dementia	No effective anti-dementia medication		
Mixed dementia			
Vascular/Alzheimer's	Donepezil/rivastigmine/galantamine or memantine** ◊		
PDD/Alzheimer's	Donepezil/rivastigmine/galantamine or memantine** ◊		
LBD/Alzheimer's	Donepezil/rivastigmine/galantamine or memantine** ◊		

AChEi = acetylcholinesterase inhibitors PDD = Parkinson's disease dementia LBD = Lewy body dementia * offer ** consider ◊ unlicensed

After investigation and treatment for reversible causes of cognitive decline, if dementia is still suspected, patients should be referred to a specialist dementia diagnostic service, even if they score highly on cognitive tests.

EVALUATION

Accurate cognitive evaluation of older people with suspected cognitive impairment helps in the planning of care and treatment. Testing should be conducted in a quiet room without distractions, and clinicians should pay attention to the effects of the environment, physical function (e.g. pain) and sensory function (e.g. hearing impairment), which can adversely impact on test results. Education, premorbid intellect and primary language can significantly alter the interpretation of standard cognitive tests. Therefore, background information including medical, social and cultural history needs to be taken into account when interpreting results.

When performing cognitive testing, if a patient appears to be finding it difficult to understand an instruction, it is worth repeating it slowly and clearly, and then to check that the patient has understood. It is important to bear in mind that sometimes assessment of cognitive loss can be a highly stressful and potentially demeaning process for patients. Cognitive tests should be repeated as part of monitoring since they can give valuable information on the progression of the underlying condition.

DIAGNOSIS

At a specialist dementia diagnostic service, after assessing the history and neurological examination, detailed cognitive evaluation is conducted using instruments such as the Addenbrooke's Cognitive Examination Revised version (ACE-III-R) or other neuropsychological batteries. Structural brain imaging including a CT scan or MRI is recommended by NICE, and additional functional imaging (e.g. FDG PET or perfusion SPECT) may be performed to assist in diagnosis of dementia sub-type.[3] This will enable a dementia diagnosis and sub-type to be confirmed with reasonable certainty.

MANAGEMENT

Cognitive symptoms

There are currently four effective medications recommended for the treatment of cognitive symptoms of dementia: the acetylcholinesterase inhibitors; donepezil, galantamine, rivastigmine; and memantine[3,11] (see table 1, opposite).

These medications can initially be prescribed in primary care, on the advice of a psychiatrist, neurologist, geriatrician or other healthcare professional with appropriate training in dementia.[3] Dual prescribing is now recommended by NICE and GPs may prescribe memantine to patients already established on an acetylcholinesterase inhibitor without seeking further specialist advice. In severe dementia, the routine cessation of acetylcholinesterase inhibitors is no longer recommended.[3] »

Table 2

Commonly prescribed medication that should be reviewed in patients with dementia (non-exhaustive)

Condition	Drug class	Drugs to avoid in dementia	Recommended alternative
Pain	Analgesics	Codeine Tramadol Fentanyl patches	Paracetamol Topical NSAIDs Buprenorphine
Nausea/vomiting	Antiemetics	Metoclopramide Prochlorperazine Cyclizine	Domperidone Serotonin 5HT3 antagonists
Urinary frequency	Anticholinergics	Oxybutynin Tolterodine	Darifenacin Trospium Solifenacin
Irritable bowel syndrome	Antispasmodics	Atropine sulphate	Mebeverine
Allergies	Antihistamines	Chlorpheniramine	Cetirizine
Depression	Antidepressants	Paroxetine Amitriptyline Nortriptyline	Citalopram Mirtazapine Trazodone

Table 3

Recommendations for the treatment of non-cognitive symptoms of dementia[3]

Non-cognitive symptoms	First line	Second line	Drugs not recommended
Agitation/psychosis	Psychosocial and environmental interventions *	Low-dose antipsychotic (caution in LBD and PDD) *	Valproate
Depression/anxiety	Psychological therapy **		Routine use of antidepressants
Insomnia	Sleep hygiene, exercise and light exposure **		Melatonin

PDD = Parkinson's disease dementia LBD = Lewy body dementia *offer **consider

key points

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In the UK, 6.5% of the population over 65 have dementia and more than 200,000 new cases develop annually. The most common early symptoms of dementia, such as forgetting recent conversations, becoming repetitive and misplacing items, are due to poor short-term memory. In most cases, long-term memory is relatively well preserved. Other aspects of cognitive function may also be affected, such as orientation in time and place; language; sequencing and planning; and facial recognition. Subtle changes in mood, personality or behaviour may occur.

The history should cover cognitive, behavioural and psychological symptoms, and the impact symptoms have on daily life. A physical examination is necessary to look for any focal neurological signs and to exclude any visual or auditory problems. Baseline blood tests (full blood count, thyroid function, liver function, glucose, lipids, ESR, renal function, vitamin B_{12} and folate levels) should be carried out. A midstream urine specimen, chest X-ray and ECG may also be needed where clinically indicated. Depression can mimic, or coexist with, dementia. If it is suspected it should be treated and cognitive function should be reassessed 6-8 weeks later.

A brief cognitive screening test should be carried out before referring patients to memory clinics for further assessment. However, these instruments lack sufficient sensitivity to be used as a rule-out test and patients with suspected dementia should be referred to a specialist dementia diagnostic service even if they score highly on cognitive tests.

There are currently four effective medications recommended for the treatment of cognitive symptoms of dementia: the acetylcholinesterase inhibitors (donepezil, galantamine and rivastigmine) and memantine. These medications can be initiated in primary care on the advice of a psychiatrist, neurologist, geriatrician or other healthcare professional with appropriate training in dementia. Dual prescribing is now recommended by NICE and GPs may prescribe memantine to patients already established on an acetylcholinesterase inhibitor without seeking further specialist advice. In severe dementia, the routine cessation of acetylcholinesterase inhibitors is no longer recommended.

Patients with a diagnosis of dementia should be offered a medication review. Many commonly prescribed medications have anticholinergic effects which can exacerbate cognitive impairment. Validated tools such as the anticholinergic cognitive burden scale can be used to estimate the total anticholinergic burden and facilitate reduction of anticholinergic exposure.

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Patients with a diagnosis of dementia should be offered a medication review. Many commonly prescribed medications carry an increased anticholinergic burden which can exacerbate cognitive impairment. Validated tools such as the anticholinergic cognitive burden scale can help determine the burden of specific medications.[12] Common examples are summarised in table 2, p19.

NICE recomends group cognitive stimulation therapy (CST) for dementia.[3] Although the discernible differences in cognitive scores are small, CST is associated with significant improvements in quality of life and has been shown to be cost effective [3,13]

NICE recommends CST as a time-limited therapy that includes discussions and activities designed to allow reminiscence of the past with clear visual prompts to allow for reality orientation.

Cognitive rehabilitation aims to set achievable functional goals with the patient and their family or carers and cognitive training addresses standardised tasks of varying difficulty that aim to stimulate different cognitive processes.

Non-cognitive symptoms

Non-cognitive symptoms in dementia include agitation, psychosis, depression and insomnia. In the first instance, patients should be assessed for any medical or environmental change that may be driving these symptoms. Table 3, p19, summarises interventions for non-cognitive symptoms recommended by NICE.

CONCLUSION

If patients or GPs have concerns about an individual's memory they should review common reasons for changes in cognition including: thyroid disease, fluctuating blood sugar, depression, anxiety and alcohol dependence. If dementia is still suspected, the patient should be referred to a memory clinic, regardless of the cognitive scores.

Once a diagnosis has been made or excluded by specialists, patients will usually be discharged back to primary care. If dementia has been diagnosed, patients should have an annual review in primary care. It is important that GPs feel supported by dementia specialists for further advice on treatment and management and have good communication channels. Specialist dementia nurses are also available (Admiral nurses) in most areas, see Useful information box, right.

Where there are more complex needs, referrals or re-referrals to specialist services will be needed. Depending on local provision, this may include a referral to the community mental health team for the assessment of depression, anxiety or psychosis or neurology for cases where it is felt the dementia is rapidly progressing and may signify an underlying neurological condition. If a patient is under 65, a referral to the young onset dementia service should be considered.

Competing interests: None

REFERENCES

1 Matthews FE, Arthur A, Barnes LE et al. A two-decade comparison of prevalence of dementia in individuals aged 65 years and older from three geographical areas of England: results of the Cognitive Function and Ageing Study I and II. *Lancet* 2013;382(9902):1405-12
2 Matthews FE, Stephan BCM, Robinson L et al. A two decade dementia incidence comparison from the Cognitive Function and Ageing Studies I and II. *Nat Commun* 2016;7:11398
3 National Institute for Health and Care Excellence. NG97. Dementia: assessment, management and support for people living with dementia and their carers. NICE. London. 2018. www.nice.org.uk/guidance/ng97
4 Ford E, Greenslade N, Paudyal P et al. Predicting dementia from primary care records: A systematic review and meta-analysis *PLoS One*. 2018 Mar 29;13(3):e0194735
5 Kales HC, Gitlin LN, Lyketsos CG. Assessment and management of behavioral and psychological symptoms of dementia *BMJ* 2015;350:h369
6 Robinson L, Tang E, Taylor J-P. Dementia: timely diagnosis and early intervention. *BMJ* 2015;350:h3029
7 National Institute for Health and Care Excellence. CG90. Depression in adults: recognition and management. NICE. London. 2009 (Updated 2018) www.nice.org.uk/guidance/cg90
8 Simmons BB, Hartmann B, Dejoseph D. Evaluation of suspected dementia. *Am Fam Physician* 2011;84:895-902
9 Fox C, Maidment I, Moniz-Cook E et al. Optimising primary care for people with dementia. *Ment Health Fam Med* 2013;10(3):143-51
10 Yokomizo JE, Simon SS, Bottino CM de C. Cognitive screening for dementia in primary care: a systematic review. *Int Psychogeriatrics* 2014;26(11):1783-1804
11 British National Formulary www.bnf.nice.org.uk
12 Campbell NL, Maidment I, Fox C. The 2012 update to the anticholinergic cognitive burden scale. *J Am Geriatr Soc* 2013;61:S1-232
13 D'Amico F, Rehill A, Knapp M et al. Maintenance cognitive stimulation therapy: an economic evaluation within a randomized controlled trial. *J Am Med Dir Assoc* 2015;16(1):63-70

Useful information

For patients and carers
Age UK
www.ageuk.org.uk

Alzheimer's Society
www.alzheimers.org.uk

Admiral nurses
www.dementiauk.org/admiral-nurses

For healthcare professionals
NICE
www.nice.org.uk/guidance/ng97