Dealing with Dementia

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Gail's Forgetfulness

Gail, 74, has a one-year history of gradual decline in cognition (forgetfulness, repetitive questions, problems with banking, shopping and paying bills).

Two months ago, her son noticed a sudden worsening in cognition, with unsteady gait and trouble speaking for a few days.

- History: Diabetes for five years; on oral hypoglycemics; 25 lbs overweight; smokes five cigarettes a day.
- Mini mental-state examination: 23/30
- Clock drawing: Mildly abnormal
- Blood pressure: 165/85 mmHg
- HbA1c: Elevated
- Gait is halting with small steps and left plantar reflex is upgoing.

What is Gail's diagnosis?

For the answer, see page 94.

Dementia immediately suggests memory loss, but other symptoms should trigger cognitive assessment by the family physician.

Dementia may present with a "geriatric giant" symptom (*i.e.*, falls, confusion, immobility, failure to thrive and fatigue) or one of the ABCs: **A**ctivities of daily living, **B**ehaviour or **C**ognition (Table 1).

How should an asymptomatic patient be screened?

Although the 1999 Canadian Consensus Guideline felt there was insufficient evidence to take a position for or against screening,[1] the American Academy of Neurology recommended screening in patients with an elevated prevalence of cognitive impairment due to age or presence of memory dysfunction.[2]

Screen high-risk, asymptomatic elderly patients with the following characteristics:

- Over 80 (prevalence of dementia > 25%)
- Over 65 with other clinical factors:
  - post-cerebrovascular accident (CVA),
  - delirium/depression,
  - vascular risk factors (*i.e.*, hypertension, CVA, transient ischemic attack, coronary artery disease, diabetes mellitus, hyperlipidemia and atrial fibrillation)
  - positive family history of dementia

How should these patients be screened?

A full mini mental-state examination (MMSE) could be performed, plus additional tests of language, visuospatial and

Diagnosing Gail

Gail's computed tomography scan shows atrophy with extensive periventricular white matter, ischemic changes and two lacunar infarcts.

It is felt she has Alzheimer's disease (AD) with cerebrovascular disease (CVD), based on the one-year history of gradual progressive memory loss and the sudden worsening with localizing neurologic symptoms, signs and neuroimaging changes of CVD.

For Gail's treatment, see page 95.

Table 1
The ABCs of dementia

Activities of daily living
- Finances
- Shopping
- Driving
- Cooking

Behaviour
- Anger
- Irritability
- Apathy
- Depression
- Agitation

Cognition
- Forgetfulness
- Repetitive questions
- Word-finding problems
- Planning meals/shopping
- Misplacing objects/getting lost

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executive function (*i.e.*, clock drawing, naming four-legged animals in one minute [normal ≥ 12] and Trails B [takes 10 to 20 minutes]).

A dementia quick screen (not validated) can also be performed. It takes two to three minutes to complete and involves asking the patient to do a clock drawing (10 past two o'clock), a three-item recall and to name four-legged animals. If the patient answers any one these incorrectly, a comprehensive cognitive assessment should be done.

What is the most commonly diagnosed dementia?

Alzheimer's disease (AD) is the most common dementia (40% to 50%) and is typified by slow, progressive memory loss and one or more of the following:

- aphasia,
- agnosia,
- apraxia and
- loss of executive function.

Look for red flags that may suggest other types of dementia (Table 2).

What about treatment?

Approximately 80% of dementias (AD, vascular dementia [VAD] and mixed AD/VAD) should receive the same treatment—aggressive treatment of vascular risk factors (*i.e.*, hypertension, TVA/CVA, atrial fibrillation, diabetes, hyperlipidemia and smoking) and a trial with acetylcholinesterase inhibitor [AChEI], including donepezil, galantamine and rivastigmine).

At present, only 21% of persons with dementia in Canada receive an AChEI trial,[3] although it is considered the standard of care for mild to moderate AD and there is randomized, controlled trial evidence supporting treatment of VAD with donepezil[4,5] and mixed AD/VAD with galantamine.[6] There is also randomized, controlled trial evidence for treatment with rivastigmine of Lewy Body[7] disease and Parkinson's dementia.[8]

Table 2

Red flags of dementia

Red flag checklist	What could it be?
1. ❑ Cognitive decline within 3 months of CVA/TIA ❑ Focal neurological symptoms ❑ Focal neurological signs ❑ Abrupt onset/stepwise decline ❑ Executive function worse than memory	Vascular dementia or mixed AD/vascular dementia
2. ❑ Visual hallucinations ❑ Pronounced fluctuation in cognition over hours/days ❑ Parkinsonism (especially rigidity)/bradykinesia ❑ Executive function worse than memory ❑ Neuroleptic sensitivity ❑ Unexplained falls/loss of consciousness	Lewy Body dementia
3. ❑ Behavioural changes: disinhibition/apathy ❑ Impulsivity/poor judgment ❑ Executive function worse than memory ❑ Language problems	Fronto temporal dementia

AD: Alzheimer's disease
CVA: Cerebrovascular accident
TIA: Transient ischemic attack

Gail's Treatment

Gail's treatment consists of initiation of acetylcholinesterase inhibitor therapy and aggressive treatment of vascular risk factors |(*i.e.*, better diabetic control, initiation of statin therapy, antihypertensive therapy, smoking cessation, weight loss and a walking program).

Take-home message

- Any "ABC" complaints necessitate comprehensive cognitive assessment.
- Screen for cognitive impairment over age 80 and between age 65 to 80 if risk factors are present.
- Use a red-flag approach for dementia diagnosis.
- 80% of dementias are treated the same—a trial of AChEI and treatment of vascular risk factors.
- An AChEI trial is standard of care for mild to moderate AD.

How can I tell if my patient is responding to AChEI therapy?

Response is usually judged after 10 to 12 weeks of therapy. Subjective reports from the patient and family on the improvement or lack of deterioration is most important.

Trust caregiver impression over objective response (comparison to baseline of MMSE, clock drawing and other cognitive testing). Besides cognition remember to think "ABC" and global impression.

Often families report improvement in social connectedness (more "tuned in," aware, interactive, like his or her "old self ") and behaviour (apathy, agitation, anxiety, irritability).

There is no conclusive evidence between various AChEI in mild to moderate AD. If one AChEI does not work or is not tolerated, switch to a trial with a second AChEI. Memantine, a gama-aminobutyric acid antagonist, is available for use in Canada as a sole or add-on agent for AD in moderate to severe stages. Discontinue therapy when it is felt quality of life is significantly compromised.

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