

CASES THAT TEST YOUR SKILLS

Mrs. S, 85, is showing signs of cognitive impairment. Is depression or dementia causing her forgetfulness? Treatment decisions made now will determine her ability to function through her final years.

Treating late-life decline: When more is less

Sumer Verma, MD

Lecturer on psychiatry, Harvard Medical School
Associate professor of psychiatry,
Boston University School of Medicine

History A fading memory

Mrs. S, 85, lives alone in her home of 40 years. Over the past 3 years, she has complained increasingly about headaches, fatigue, and back pain. The cause of these vague physical difficulties has not been determined.

Her daughters say that Mrs. S has become increasingly forgetful. She often does not remember family visits, has difficulty organizing her bank accounts, repeatedly misplaces her pocketbook, and on one occasion became lost on her way to the supermarket. Once fairly social, she has become increasingly isolated.

How would you address Mrs. S' impaired memory?

What medical or psychiatric problems might her forgetfulness indicate?



Dr. Verma's observations

This case illustrates the fundamentals of geriatric care, the first of which is to preserve—if not enhance—the patient's function (*Box*). Forty years ago, Kral¹ identified “benign senescent forgetfulness” as a normal aspect of aging. Current research, however, suggests that “senescent forgetfulness” is not always benign. Alexopoulos, Krishnan, and others^{2,3} have shown that depression manifesting in late life is accompanied by significant white-matter change and substantially increases the risk of developing dementia.

Well past the point of isolated forgetfulness, Mrs. S is exhibiting functional decline and cognitive impairment in multiple domains. The question is, are these symptoms the result of a medical problem such as Alzheimer's disease or dementia, a psychiatric disorder, or both? The workup and management of these complaints can dramatically affect subsequent outcomes.

Vague medical complaints of unknown cause should not necessarily imply that the problem is psychiatric. The clinician should rule out common medical causes of cognitive decline, including:

- drug toxicity, especially after anxiolytic and sedative-hypnotic agents have been administered

Box

10 FUNDAMENTALS OF GERIATRIC CARE

1. **Preserve**—if not enhance—the patient’s function
2. **Respect equilibrium**; even apparently simple drug interventions can unintentionally upset a precarious adaptive reserve and trigger functional decline
3. **Beware** of drug-drug interactions; most older persons are taking multiple medications
4. **Start low** and go slow, but do not stop at subtherapeutic dosages
5. **Carefully** consider a psychotropic’s side-effect profile
6. **Nondrug** interventions are almost always safer than drugs
7. **Drugs** do not replace compassion and caring
8. **Two** (or more) drugs are not better than one
9. **One drug** does not fit all patients
10. **Primum non nocere**

- endocrine dysfunction, such as hypothyroidism
- and CNS neoplasms (*Table 1*).

A detailed history (still the best diagnostic procedure), a thorough physical evaluation, and routine lab tests can usually help rule out most of these causes. On the other hand, affirmative diagnosis when psychiatric symptoms are evident can minimize testing that can be emotionally, physically, and financially draining to the patient. In Mrs. S’ case, the prominence of the cognitive decline and attendant social withdrawal clearly point to depression or dementia.

The significant overlap between depression and dementia further complicates the diagnosis. Neuropsychological testing can uncover distinguishing factors, but it may help to empirically consider that all late-life depression with cognitive impairment may be secondary to early dementia.

Initiating early drug treatment of dementia with a cholinesterase inhibitor such as donepezil, galantamine, or rivastigmine may slow the trajectory of

decline. Vascular risk factors—hypertension and diabetes in particular—also need to be controlled. Low-dose aspirin may help prevent microembolic phenomena.

A selective serotonin reuptake inhibitor (SSRI) can alleviate the depression. If mild paranoia is noted, adding an atypical antipsychotic at a low dosage (olanzapine, 1.25 to 5 mg once daily or risperidone, 0.5 to 1.0 mg/d divided in two doses) may help.

Above all, encourage the patient to remain physically and mentally active. To this end, the clinician should enlist the family and other caregivers to help motivate the patient. Involvement in a day program or similar program may alleviate the patient’s social isolation.

Treatment New surroundings

Since her initial evaluation 1 year ago, Mrs. S reluctantly has moved into an assisted living facility at her daughters’ insistence. She adjusted well—at least for the first month or so. She then started calling her daughters at all hours, complaining of being alone and scared. She was taken to a new internist, who prescribed oxazepam, 15 mg bid, for an “anxiety disorder.”

Instead of adjusting to her new surroundings, Mrs. S began to withdraw further. She stayed in her room most days, not even venturing to the dining room for meals. Her personal hygiene deteriorated. According to staff reports, “Mrs. S did not mix with the other residents,” and was becoming “increasingly paranoid.” Her calls to her family had escalated into bitter complaints that people were stealing her belongings.

Table 1

COMMON CAUSES OF DEMENTIA

Reversible

Depression

Delirium

Drug toxicity

Anxiolytics

Sedative-hypnotic drugs

Irreversible

Alzheimer’s-type dementia

Vascular dementia

Less common causes

Lewy body dementia

Parkinsonian dementia

Pick’s disease

Mrs. S again visited the internist who, upon hearing that the patient was becoming more paranoid, assumed that she was exhibiting psychotic features. The internist diagnosed Mrs. S as having late-onset Alzheimer's-type dementia with delusions and added haloperidol, 0.5 mg tid, to her regimen.

Dr. Verma's observations

The decision to transfer a loved one to a nursing home is difficult for all concerned. I have often seen caregiver "burnout" play a major role in the family's decision.

After 40 years in her own home, Mrs. S is not likely to adjust readily to living in a "regimented" environment, no matter how comfortable and elegant it may seem. The phenomenon is often called "transfer trauma" and manifests as a sharp decline in function upon moving to a new environment. Most individuals do adapt with time; involving Mrs. S. in a socialization program and insisting on her presence during meals and at other facility events would have hastened her adjustment. Above all, clinicians should be supportive and avoid resorting to medication too soon.

Because Mrs. S' functional decline was so sharp, however, trying a nondrug therapy would have been easier said than done. Indeed, the internist resorted too quickly to medication, prescribing a short-acting benzodiazepine at first and, when this was perceived as ineffective, adding a neuroleptic antipsychotic.

How would you help Mrs. S adjust to her new surroundings? How would your treatment plan differ from that of the internist?



Table 2

ANTIPSYCHOTICS: SIDE-EFFECT PROFILES

	Haloperidol 0.75-2 mg/d	Clozapine 25-100 mg/d	Risperidone 0.5-2 mg/d	Olanzapine 5-15 mg/d	Quetiapine 25-700 mg/d*	Ziprasidone 40-160 mg/d*
Anticholinergic effects	+/-	++	-	-	-	-
Sedation	++	++++	+	+	++	+
Extrapyramidal symptoms	++++	-	+	-	-	-
Tardive dyskinesia	++	-	-	-	?	?
Hypotension	+	+++	++	-	+	-
QTc prolongation	+	?	-	-	-	+
Weight gain	+	+++	+	++	+	+/-
Diabetes mellitus	+	+	+	+	+	?

* Side effects are probably more severe at higher dosages, but the data are not clear.

Treating late-life decline

Psychotropics are a double-edged sword. Used appropriately, they can reduce distressing symptoms and enhance function. Drugs, however, are increasingly replacing human contact. As we see here, medication side effects in nursing homes can be deleterious. Federal regulations enforced under the Omnibus Budget Reconciliation Act of 1987 have helped reduce the inappropriate use of psychotropics as “chemical restraints.” Still, the emotional distress for patient and caretaker during transitions often leads to inappropriate reliance on psychotropics for predictable adjustment symptoms.

Benzodiazepines have been found to cause sedation, falls, and cognitive clouding and thus should be avoided in older patients. Haloperidol has long been used in psychosis, but its use in older patients is contraindicated because of its side-effect profile. Extrapyramidal symptoms (EPS) are a common side effect of neuroleptics in older persons and are associated with a high incidence of tardive dyskinesia, gait disturbance, akathisia, and cognitive impairment.

Atypical antipsychotics have a more benign side-effect profile (*Table 2*) and should constitute first-line treatment—but only after human contact, stimulation, and care have been attempted.

Continued treatment Another setback

A week after starting on haloperidol, Mrs. S fell and fractured her hip. She was transferred to the general hospital, where a surgical repair was performed. Her recovery was slow and difficult. She would not participate in physical therapy and required much coaxing to walk or stand up, often insisting that she could no longer do either. She developed urinary incontinence and became increasingly unable to care for herself. She remained in the hospital for 1 week, then was transferred to a rehabilitation facility.

Dr. Verma’s observations

A causal relationship between Mrs. S’ fall and the haloperidol/oxazepam combination is more than likely. Older persons have diminished proprioception, walk on a wider base, and struggle

with postural sway. EPS combined with sedation can therefore have disastrous consequences, as this case clearly illustrates. Benzodiazepines, anticholinergics, antihistamines, and the typical neuroleptics are known to impair mobility.

Many antidepressants, especially tertiary tricyclics such as amitriptyline and imipramine, may lead to falls by causing orthostatic hypotension secondary to alpha-adrenergic receptor blockade.

Check for pre-treatment orthostatic changes in blood pressure before prescribing psychotropics to older patients. An ECG can also help rule out rhythm abnormalities and assess baseline QTc interval.

Agents with the most benign side-effect profiles—atypical antipsychotics, SSRIs, and newer antidepressants such as bupropion and venlafaxine—are recommended for older patients. For Mrs. S, a low dosage of a novel antipsychotic instead of haloperidol and oxazepam would have preserved her physical function and might have greatly reduced her chances of falling.

Agents with the most benign side effect profiles are recommended for older patients

Follow-up ‘Not helping’

Mrs. S has been in the nursing home for about 3 1/2 weeks. Staff members consistently report that she “is not helping herself,” is “always weepy,” and “feels her family (has) abandoned her.” She is now taking oxazepam, 15 mg bid, haloperidol, 0.5 mg bid and 1.0 mg at bedtime, and diphenhydramine, 50 mg at bedtime, to help her sleep.

Staff members also report that Mrs. S is “confused and very forgetful ... (she) may have Alzheimer’s disease.” Urinary and bowel incontinence are an increasing problem, and she has lost about 15 pounds since she entered the facility. Laboratory readings are normal, but oral intake is poor.

Could Mrs. S’ functional decline have been avoided? How would you improve her function at this point?

▶

continued

Treating late-life decline

Related resources

- ▶ Salzman C. *Psychiatric medications for older adults—the concise guide*. New York: Guilford Press, 2001
- ▶ Jacobson SA, Pies RW, Greenblatt DJ. *Handbook of geriatric psychopharmacology*. Washington DC: American Psychiatric Publishing, 2002.

DRUG BRAND NAMES

Amitriptyline • Elavil	Olanzapine • Zyprexa
Bupropion • Wellbutrin	Oxazepam • Serax
Clozapine • Clozaril	Quetiapine • Seroquel
Donepezil • Aricept	Risperidone • Risperdal
Galantamine • Reminyl	Rivastigmine • Exelon
Haloperidol • Haldol	Venlafaxine • Effexor
Imipramine • Tofranil	Ziprasidone • Geodon

DISCLOSURE

Dr. Verma reports that he is on the speakers bureau of Eli Lilly and Co. and Abbott Laboratories, serves as a consultant to Eli Lilly and Co., and receives grant support from Eli Lilly and Co. and GlaxoSmithKline.

Dr. Verma’s observations

A well-intentioned but ill-conceived drug regimen has compounded problems caused by the prior intervention. As Mrs. S becomes increasingly unable to function—and the staff becomes more frustrated with her deterioration and lack of initiative—more drugs are added. The three agents she is taking all carry a significant risk for sedation, and the anticholinergic effects of both haloperidol and diphenhydramine compound Mrs S’ difficulties by causing delirium and cognitive difficulties.

If this regimen is not modified, Mrs. S likely will stay bed-bound, her cognition will remain impaired or worsen, and her incontinence will continue unchecked. She will require more and more nursing time as her condition deteriorates further. Decubiti, sepsis, and even premature death are all likely sequelae.

In retrospect, an initial intervention with an antidepressant and/or an acetylcholinesterase inhibitor might have

prevented such a precipitous decline. It is conceivable that Mrs. S could even have avoided institutional placement. At this point, I would gradually wean her off haloperidol and oxazepam, then aggressively treat her depression, resorting to electroconvulsive therapy if necessary.

In today’s atmosphere of cost containment, care decisions are too often dictated by shortsighted formulary lists, not sound clinical reasoning. In this case, the use of more cost-effective drugs with well-documented higher toxicity ultimately led to excess disability, which in turn required increased effort (and cost) by the treatment team.

Psychosocial interventions can be time-consuming, but they might have prevented Mrs. S’ rapid decline and saved substantial staff time. A higher-functioning patient uses far fewer staff resources, and the added expense of treating a hip fracture exceeds any savings from the use of a less-expensive medication.

References

1. Kral VA. Senescent forgetfulness: benign and malignant. *Can Med Assoc J* 1962;86:257-60.
2. Alexopoulos GS, Meyers BS, Young RC. The vascular depression hypothesis. *Arch Gen Psychiatry* 1997;54:915-22.
3. Krishnan KR, Hays JC, Blazer DG. MRI defined vascular depression. *Am J Psychiatry* 1997;154:497-501.

Side effects and drug-drug interactions associated with many psychotropics can be dangerous to patients in late life, so proceed carefully when treating cognitive decline. Consider newer agents with less-adverse side effects when drug treatment is necessary.

BottomLine