USVH Disease of the Week #3: Dementia in Older Adults and Veterans

“Managing Common Behavioral Problems in Dementia: How to Improve Quality of Life for Patients and Families”

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Although memory loss is an early and prominent finding in most patients with dementia, the chief factor leading to institutionalization is disruptive behavior related to the disease. Common behavioral symptoms include depression, sleep disturbance, agitation, aggression, and psychotic features (delusions and hallucinations).

Behavioral symptoms can arise as a result of the dementing illness, a concomitant medical illness, or iatrogenic causes. A common error in management of behavioral disturbances is to treat them without identifying the symptom precipitant. Before treatment is instituted, disruptive behavior should be categorized and underlying causes sought. Unless both the physician and the patient's family have a clear understanding about the behavior being treated and the goals of treatment, the results are often unsatisfactory.

Depression

Depression affects up to 20% of patients with dementia. In Alzheimer's disease, depression may be due to disease-related neuronal loss or, less frequently, a reaction to the disease process (1). In patients with vascular dementia, depression commonly follows left cerebral hemisphere stroke. The prevalence of depression is also increased in patients with dementia related to Parkinson's disease. The diagnosis of depression in patients with dementia can be difficult, because apathy is common to both disorders.

Patients with dementia commonly have impaired insight, which makes psychotherapy useless. Thus, treatment primarily consists of pharmacotherapy, but physical and mental activity can be helpful in minimizing symptoms. When drug therapy is required, a selective serotonin reuptake inhibitor (SSRI) is a reasonable first-line treatment. Paroxetine hydrochloride (Paxil) and sertraline hydrochloride (Zoloft) are well tolerated by patients with dementia and have a favorable ratio of efficacy to side effects. When marked apathy is present, a more activating antidepressant that stimulates both the serotonergic and adrenergic neurotransmitter systems (eg, fluoxetine hydrochloride [Prozac], venlafaxine [Effexor]) is useful. For patients in whom insomnia is a prominent feature of depression, trazodone hydrochloride (Desyrel) is an effective sedating antidepressant. However, this agent should be used with care in men, because it can cause priapism, which may require surgical intervention.

Tricyclic antidepressants with low anticholinergic activity (eg, desipramine hydrochloride [Norpramin], nortriptyline hydrochloride [Aventyl HCl Pulvules, Pamelor]) are effective in patients with dementia and are less expensive than SSRIs. Tricyclic agents with prominent
anticholinergic activity (eg, amitriptyline hydrochloride [Elavil]) should be avoided, because anticholinergic drugs tend to worsen cognitive impairment and precipitate delirium.

Selected drugs with prominent anticholinergic activity to avoid in patients with dementia:

Tricyclic antidepressants
Amitriptyline HCl (Elavil), trimipramine maleate (Surmontil), protriptyline HCl (Vivactil)

Low-potency antipsychotics
Chlorpromazine HCl (Thorazine)

Antispasmodics
Oxybutynin chloride (Ditropan), hyoscyamine sulfate (eg, Cystospaz, Levsin) and related compounds (eg, Donnatal)

Antiemetics
Promethazine HCl (Phenergan), diphenhydramine HCl (eg, Benadryl), prochlorperazine (Compazine)

Anticholinergics
Trihexyphenidyl HCl (eg, Artane), benztropine mesylate (Cogentin)

Successful treatment of depression should be continued for at least 6 months, then the dosage should be slowly tapered. When response to treatment is inadequate, the most common reason is inadequate dosage. The dose should be increased every 1 to 2 weeks until depressive symptoms resolve, side effects occur, or the maximum allowable dose is reached. If depressive symptoms persist after a reasonable therapeutic trial, an antidepressant from a different class should be prescribed. When no response is achieved despite adequate trials of multiple agents, the diagnosis of depression should be reconsidered and the patient referred to a psychiatrist. More aggressive treatment in patients with refractory depression may include use of a monoamine oxidase inhibitor, stimulants, or electroconvulsive therapy. The need for continued therapy should be reassessed often, because worsening dementia may resolve depressive symptoms and signs.

Sleep disturbance

Families of patients with dementia can often tolerate agitation, delusions, and wandering as long as nighttime sleep remains uninterrupted. However, when behavioral disturbances occur day and night, families often feel compelled to resort to institutionalization. Educating families about strategies for preventing or correcting sleep problems may help delay nursing home placement.

Many factors can contribute to poor sleep habits in persons with dementia, including disrupted sleep patterns, alterations in circadian rhythm, concurrent medical problems that cause frequent urination, daytime use of sedating medication, and frequent napping. In our experience, the chief causes of sleep disruption are frequent napping and excessive expectation of sleep needs.
Families often report that the patient wakes and dresses for morning activities at 3 AM. On further questioning, they may reveal that the patient naps while watching television during the day and goes to bed at 8 PM. In this common scenario, the patient's early morning awakening is not abnormal. Daily sleep requirements do not increase as a person ages, and the patient is often sleeping more than the 7 to 8 hours required for most persons to feel rested. In addition, caregivers often see the patient's nap time as an opportunity to accomplish tasks around the house. This is a shortsighted view that many come to regret.

The first step in reestablishing a normal sleep pattern is to limit daytime napping. Leaving a patient with dementia in front of a television set almost always leads to napping. To prevent this, caregivers should engage patients in activities that are tailored to the degree of dementia, such as simple handicrafts, household tasks and, most important, regular physical exercise. Such activities can be carried out at home, but many patients and families benefit from the added structure of adult day care.

Once poor sleep hygiene has become established, it is much more difficult to eradicate. The first steps in correcting sleep problems are to set a more reasonable bedtime and prevent napping. The patient's activity level should be increased, and fluid intake should be decreased in the hours before bedtime. After a few difficult nights, the patient will begin to sleep for longer periods. For families who cannot accept the possibility that the problem will worsen before improving, limited use of a hypnotic or sedating drug (eg, trazodone, zolpidem tartrate [Ambien], a short-acting benzodiazepine) may be considered. However, long-term reliance on sleeping medication, especially benzodiazepines, is rarely successful.

Environmental lighting may also have a role in sleep disturbance. Light is an important modulator of circadian rhythms, which may be disrupted in dementia. Increased lighting during afternoon and early evening hours may improve sleeping patterns. Van Someren and associates (2) studied the effect of increased daytime illumination in 22 patients with dementia. Improvement in the rest-activity rhythm occurred in patients with intact vision but not in visually impaired patients. A clinical trial assessing the efficacy of melatonin in the treatment of sleep disturbance in Alzheimer's disease is under way, but results are not yet available.

The most difficult part of managing sleep problems is the need for continued adherence to a rigid schedule. Families should be taught that periodic disruption of the schedule will likely result in a return to irregular sleep patterns. Authorizing use of a hypnotic agent for periodic administration is helpful and provides families with a sense of control.

Agitation and aggression

Agitation occurs at some time in about half of all patients with dementia (3). Associated behaviors include aggression, combativeness, disinhibition, and hyperactivity. As with all behavioral problems, the first step in treatment is to identify the precipitants. Evaluation should include assessment for common systemic causes (eg, infection, dehydration, constipation, other illnesses) as well as changes in medication.

Families should be informed about potential causes of agitation, such as excessive stimulation, and about the need to make educated guesses about circumstances that trigger inappropriate
behavior. Patients with dementia often become agitated when rushed; therefore, avoiding time-critical events, if possible, is useful. The patient's day should be structured to provide a predictable routine. Orientation materials (eg, calendar, clock, family pictures) should be prominently displayed, and the living environment should be well lit, even in the daytime, to avoid misperception of stimuli. Behaviors that are disruptive but not harmful (eg, pacing) should be tolerated. Physical restraint is rarely necessary and usually serves to escalate the degree of agitation.

If environmental measures are insufficient to control agitated or aggressive behavior, medication is needed. High-potency neuroleptics (eg, haloperidol [Haldol], thioridazine hydrochloride [Mellaril]) are effective for controlling agitation, especially when psychotic features are present (3). Although there is no evidence to suggest that one neuroleptic agent is more effective than another, the atypical antipsychotics (ie, clozapine [Clozaril], risperidone [Risperdal], olanzapine [Zyprexa], and quetiapine fumarate [Seroquel]) have a lower frequency of extrapyramidal side effects (eg, parkinsonism, tardive dyskinesia). They are very useful in patients with Parkinson's disease because their selective dopaminergic blockade does not interfere with dopamine's therapeutic effect in the basal ganglia. However, atypical antipsychotics are expensive. Benzodiazepines can also be used to treat anxiety or infrequent agitation, but they are less effective than other agents for long-term treatment.

In general, when agitation is a consistent problem and neuroleptic treatment is required, start with a low dose (eg, 0.5 mg of haloperidol or 1 mg of risperidone) and administer it on a regular basis rather than attempting to treat specific episodes of agitation. Trying to treat a patient who is already agitated makes administering medication difficult, requires larger doses, and is likely to cause sedation and further clouding of thought.

The anticonvulsants carbamazepine and divalproex sodium (Depakote) are effective in treating behavioral disturbances in dementia and have a different side-effect profile than that of neuroleptics. In a double-blind study, Tariot and colleagues (4) examined the effect of carbamazepine on agitation in 51 nursing home patients. Global improvement was noted in 77% of patients receiving carbamazepine and 21% of those receiving placebo. Analysis of the data confirmed that the positive changes were due to decreased agitation and aggression. The drug was well tolerated, and no change in cognition or functional status occurred. The modal carbamazepine dose was 300 mg a day, and the mean serum level was 5.3 micrograms/mL. Carbamazepine also appears to be effective when added to neuroleptic therapy in patients with refractory agitation (5). Divalproex is an effective treatment for mania in bipolar affective disorder (6) as well as agitation in dementia (7).

Other classes of drugs are useful for treating agitation. Antidepressants, especially SSRIs and trazodone, are effective even in the absence of clear depressive symptoms. The acetylcholinesterase inhibitors, donepezil hydrochloride (Aricept) and tacrine hydrochloride (Cognex), decrease agitation, possibly by stimulating attention and concentration (8). The beta blocker propranolol hydrochloride (Inderal) inhibits impulsive behavior after frontal lobe injury and can be used to decrease agitation and aggressive behavior in dementia, but it may cause bradycardia and hypotension (9).
The need for continued pharmacologic treatment of agitation should be regularly reassessed. Medication for agitation should not be viewed as long-term therapy (10). In one study, neuroleptic treatment was discontinued after agitation was successfully treated in nine patients with dementia (10). A placebo was then administered, and behavior was monitored for the next 6 weeks. Eight of the nine patients did not need additional pharmacologic treatment. Interestingly, five of the patients were less agitated after drug treatment was stopped.

Delusions and hallucinations

Delusions (ie, false fixed beliefs) are common in dementia. Patients with Alzheimer's disease often become suspicious of family members and may accuse them of stealing. Some patients believe that intruders are trying to break into their house or that long-dead family members are alive. Visual and auditory hallucinations may also occur. Some hallucinations, such as seeing an imaginary child playing on the floor, are nonthreatening, whereas other hallucinations are threatening and may precipitate agitation or violence.

Before pharmacotherapy is initiated, the cause of the psychosis (eg, onset of another illness, a medication effect) should be determined, if possible. If no cause is found, environmental changes, such as increased lighting and decreased social isolation, can help. An increase in environmental noise (eg, from a radio or television) is beneficial in some patients but may increase delusions in other patients.

Psychotic features are disturbing to caregivers, even when the patient does not appear to be bothered by them. Nonthreatening delusions and hallucinations need not be treated. Families should be reassured about the benign nature of these features and informed of the potential side effects of drug therapy. When short-term pharmacologic treatment is needed, it should be initiated with low doses of a high-potency or atypical antipsychotic. Haloperidol is effective in patients with dementia, but dosages higher than 3 mg a day often lead to excessive sedation and parkinsonian side effects. Low-potency antipsychotics should be avoided because of their anticholinergic effects. For long-term treatment, we use one of the drugs suggested for agitation (eg, an SSRI, acetylcholinesterase inhibitor, or anticonvulsant) and begin tapering the antipsychotic medication as soon as possible.

Conclusion

Behavioral problems in patients with dementia are common. Fortunately, nonpharmacologic and pharmacologic therapies are often effective and can dramatically improve the quality of life for patients as well as their families. However, treatment is rarely successful immediately. The old treatment adage "start low and go slow" is a key to success.

References:


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