Depression and Dementia: What Clinicians Need To Know (Part 1)

Once considered merely an adjunct to dementia, depression has become a known possible part of the dementing process itself. From recognizing the various expressions of depression in dementia patients to understanding the many possible causes of symptoms of depression, physicians and other caregivers or healthcare professionals must be prepared to deal with this common problem.

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A few years ago, the topic of this article would have been "Distinguishing depression from dementia." However, our understanding of dementia, particularly of Alzheimer's disease (AD), has progressed to the point that the current title could have been, "Depression in dementia," underlining that depression is not just an adjunct to dementia, but can be a part of the dementing process.

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There have always been obvious ties between depression and dementia. Evidence of this link can be found in the way the rapid growth of the elderly population has affected the occurrence of both dementia and depression equally. As outlined below, it can be a difficult diagnostic challenge to differentiate between depression and dementia. In fact, it has been estimated that 10% to 15% of elderly patients with depression are misdiagnosed as having dementia.[1]

Better understanding of dementing processes, such as in AD, includes depression as an intrinsic part of dementia, and recognizes that the clinical picture of depression sometimes precedes apparent cognitive decline. Whether early or late in dementia, the frequency of depressive symptomatology reaches a highly significant 50%.

There are, of course, many reasons for this high rate of occurrence. These include the emotional and physical stresses of old age (including the higher rates of other medical illnesses), the emotional strain of an incipient dementing illness with its accompanying pattern of insight and denial in the patient, and the biological lowering of neurotransmitters involved in dementia.

Expression of Depression in Dementia

Sadness and demoralization can be present in all phases of dementia, but major affective disorder is more common in the very early phase, frequently occurring before the apparent cognitive decline. Studies have shown that more than one-third of patients with late-onset depression develop AD within two years. Among those patients whose depression takes the form of a depression with cognitive impairment (formerly known as pseudodementia), an astoundingly high 89% will develop AD in the following three to 10 years. It is there-

Table 1

Symptoms of Depression (SIG: E CAPS)

Depressed mood plus:

- **S**leep disturbance
- **I**nterest reduction
- **G**uilt
- **E**nergy changes
- **C**oncentration impairment
- **A**ppetite change
- **P**sychomotor disturbance
- **S**uicidal thoughts

Table 2

Medications/Substances That May Cause Symptoms of Depression and Alzheimer's Disease

Depression	**Alzheimer's Disease**
• Certain antihypertensives	• NSAIDs
• Benzodiazepines	• Antihistamines
• Antineoplastics	• Agents with anticholinergic properties
• Anti-inflammatories	• Antiarrhythmics
• H_2 antagonists	• Antihypertensives
• Hormones	• Antibiotics
• Antibiotics	• Sedatives
• Antipsychotics	• Analgesics
• Alcohol	• Corticosteroids

Adapted from Tariot PN.[4]

fore clear that patients diagnosed with and treated for late-onset depression must be monitored, over the years following diagnosis, for signs of AD.[2]

In the late-onset depression discussed above, the classic American Psychiatric Association Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) presentation of depression can be seen, and the famous SIG:E CAPS is a useful mnemonic tool (Table 1). If, in fact, depression and AD frequently co-exist, some symptoms that are shared by AD and depressive disorders (*i.e.*, flattened affect and apathy, paucity of speech, slowed gait, decrease in interests, generalized psychomotor slowing and poor concentration) are probably responsible for depression being misdiagnosed as only AD. However, these same symptoms, in moderate to severe AD, usually are the result of a dementing rather than depressive process, and will respond poorly to antidepressants.

A masked form of depression, as opposed to the classic one referenced above, is extremely common in elderly depressions. Contributing to the difficulty of diagnosis of this masked form of depression is that the disorder is masked not only to caregivers (*e.g.*, family physician, nurses, family members) but also to patients themselves. Some of these "masks" include: when patients assume, along with their caregivers, that depression is a normal aspect of getting old or a normal reaction to difficulties; when patients are irritable, hostile and difficult; when patients are demanding, regressed and scared; and when patients have multiple somatization and pains. The history of a change in behavior with the appearance of distress expressed by these masks is, of course, the cornerstone of proper diagnosis.

Confounders to Diagnosis

To complicate matters further, numerous medical conditions can mimic the symptoms of depression, as well as those of AD. These include endocrine disorders (hypothyroid, hyperthyroid, diabetes, electrolyte imbalance, hyponatremia, hypokalemia, hyperkalemia), infectious diseases (tertiary syphilis, acquired immune deficiency syndrome), systemic diseases (rheumatoid arthritis, renal disease), cardiovascular disease (myocardial ischemia, angina), cancer, central nervous system diseases (stroke, Parkinson's disease), neurological disorders, vitamin B_{12} deficiency and other psychiatric disorders.[3] Similarly, a wide range of pharmaceutical agents and substances may produce depressive symptoms, changes in cognitive function or sedation that may mimic both these conditions.[4] (Table 2).

Special Issues

Tearfulness or lability of affect can be very dramatic symptoms and, surprisingly, often are more distressing to caregivers than to patients. Clearly depressive manifestations in dementia, these symptoms do not necessarily represent a depressive illness and, indeed, only a minority of patients suffering from them have a psychiatric disorder alone or respond to an antidepressant.[5]

Table 3

Clinical Features of Depression With Cognitive Impairment and of AD

Clinical Features	Depression with Cognitive Impairment	AD Alone
Onset	Onset dated and more accurate	Insidious onset, broadly and vaguely dated
Duration	Short duration (weeks) and rapid progression	Long (months to years) and slow progression
Mood	Diurnal variation, mood usually depressed	Day-to-day fluctuation in mood; sometimes apathy or irritability
Intellectual functions	Many complaints; patient highlights disabilities; "don't know" answers; fluctuating cognitive loss	Minimizes, rationalizes or conceals disabilities; often unaware of memory loss; "near miss" answers; stable cognitive loss
Memory	Equal memory loss for recent and remote events	Memory loss greatest for recent events
Other cognitive functions	Attention and concentration usually preserved; no apraxia or agnosia	Faulty attention and concentration; apraxia or agnosia
Self-image	Poor	Normal
Associated symptoms	Associated with depressed or anxious mood, sleep disturbance, appetite disturbance, suicidal thoughts	Associated with unsociability, uncooperativeness, hostility, emotional instability, confusion, disorientation and reduced alertness
Reason for consultation	Typically self referral	Brought by family or friend
History	Psychiatric history and/or family or personal problems	Family history of AD is not uncommon
Interview	Patient is in distress; "depressing" interview	Patient is usually unconcerned

As mentioned above, the old concept of pseudo-dementia has been replaced by depression with cognitive impairment. Even with a proper diagnosis of depression with cognitive impairment and appropriate antidepressant therapy, the absolute need to follow these patients over time should be emphasized, as a majority may develop AD in subsequent years. Table 3 provides the distinguishing clinical features of depression with cognitive impairment and of dementia alone.[6,7]

Part 2 of this article, in the next issue of *The Canadian Alzheimer Disease Review*, will examine the various risk factors for suicide in these patients and outline nonpharmacologic and pharmacologic approaches to the treatment of depression in this population.

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