Dementia, Depression, and Delirium

2.0 Contact Hours

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Dementia, Depression, and Delirium

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Objectives:

At the completion of this course, the learner will be able to:

1. Delineate a philosophy of assessment useful when evaluating dementia, depression, and delirium in older adults.
2. Describe the prevalence, causes, symptoms, and treatment of dementia.
3. Describe the prevalence, causes, symptoms, and treatment of depression.
4. Describe the prevalence, causes, symptoms, and treatment of delirium.
5. Compare the differences and similarities between dementia, depression, and delirium on several clinical dimensions.

Introduction

Assessment of cognitive and behavioral disturbances is always complex, regardless of the age of the patient. However, older adults present unique challenges to assessment because they are more likely to be experiencing multiple medical problems, many of which have overlapping symptoms and confounding health outcomes. Three commonly confused conditions among older adults are dementia, depression, and delirium.

There is a high risk for misdiagnosis of these conditions, and the potential consequences are serious. Dementia is not usually reversible, but delirium and depression can often be reversed, especially if they are diagnosed early. Imagine the tragedy of diagnosing an older adult with irreversible dementia when the person actually has a treatable delirium or depression.

This course explains the similarities and differences between dementia, depression, and delirium. First, a philosophy of assessment is delineated. Next, each of the three conditions is described according to prevalence, causes, symptoms, and treatment. Finally, the differences and similarities between the disorders are compared on several dimensions. It is hoped that this course will help health care professionals more accurately assess and treat dementia, depression, and delirium among older adults, both in long-term care settings and in the community.

Philosophy of Assessment

When assessing dementia, depression, and delirium in older adults, it is important to approach the assessment process with an attitude of cognitive complexity. Cognitive complexity includes considering several types of diagnostic information as well as making cautious decisions as opposed to quick assumptions. The following suggestions can be thought of as a philosophy of assessment, both in regard to diagnosing dementia, depression, and delirium, and in general when working with older adults:

- *Gather and consider data from a variety of sources,* including a medical and medication history, a complete physical exam, interviews with the patient and family, a mood evaluation, a mental status exam, appropriate laboratory tests (e.g., blood, urine), imaging procedures, and referrals/consultations with other specialists, if necessary, such as a neurologist, neuropsychologist, or psychiatrist. Abandon any notions of competitiveness or territoriality in regard to correctly diagnosing the person; instead, embrace it as a team effort.

- *Avoid confirmatory bias,* which is the tendency to only look for information that confirms your original hypothesis while ignoring information that disputes it. If you originally think that the person has depression, but a test result indicates that the person might (also) have delirium, do not minimize the importance of the test information in order to confirm your original diagnosis.
- *Consider multiple hypotheses.* Older adults often experience dementia and depression together, or they have a delirium superimposed on a dementia. A singular diagnosis does not always reflect reality.
- *Recognize the ethical importance of accurate assessment.* The consequence of accurate assessment is appropriate treatment and a return to quality of life for the patient. The consequences of inaccurate assessment could be prolonged, unnecessary suffering, a worsening of symptoms, or even death.

Dementia

Prevalence

The number of people in the United States with dementia is difficult to estimate, partly because of diagnostic challenges and partly because many different diseases can cause dementia (e.g., Alzheimer's disease, Parkinson's disease, vascular disease, etc.). Over five million people have Alzheimer's disease alone, and millions more have dementia due to other causes.

Causes

Dementia can be caused by one or more medical conditions. Most dementias are caused by (a) *Alzheimer's disease*, which accounts for 50-70% of all dementias; (b)

vascular disease, which accounts for 15-20% of all dementias and includes major strokes, smaller strokes, or a narrowing of blood vessels to the brain; or (c) *Lewy body disease*, which accounts for up to 20% of all dementias.

Other causes of dementia include HIV/AIDS, head trauma, Parkinson's disease, Huntington's disease, Pick's disease, Creutzfeldt-Jakob disease, normal pressure hydrocephalus, and Wernicke-Korsakoff syndrome. Dementia caused by multiple medical conditions is called *mixed dementia* or *dementia due to multiple etiologies*. The most common form of mixed dementia is dementia due to both Alzheimer's and vascular disease.

Symptoms

A person with dementia experiences multiple cognitive and behavioral problems, including:

- Impaired memory (especially the ability to remember recent events and newly learned facts);
- Impaired language (a decreased ability to communicate to others and understand what is being communicated);
- Impaired orientation (not knowing who one is, where one is, and/or what time it is);
- Impaired judgment (problems making decisions regarding personal, financial, and/or medical affairs);
- Impaired executive functioning (difficulty planning and carrying out daily tasks and making decisions).

These symptoms, along with changes in personality and behavior, often interfere with the person's ability to function in work, social, or other interactive situations.

Treatment

The appropriate treatment for dementia depends on its cause. However, some medications have been found to be helpful for more than one kind of dementia. Two kinds of medications have been approved by the U.S. Food and Drug Administration for the treatment of cognitive symptoms of Alzheimer's disease; these medications are sometimes also used to treat vascular dementia and Lewy body dementia.

Cholinesterase inhibitors increase levels of *acetylcholine* (a neurotransmitter that plays a key role in memory and learning) in the brain. Cholinesterase inhibitors postpone the worsening of symptoms for approximately 6-12 months in about half of the people who take them. Tacrine (Cognex®) was the first cholinesterase inhibitor made available to the public. It was approved in 1993, but it is rarely used anymore because of associated side effects, including potential liver damage. The cholinesterase inhibitors most commonly prescribed now include donepezil (Aricept®), rivastigmine (Exelon®), and galantamine (Razadyne®). Memantine (Namenda®) is a different kind of medication that regulates *glutamate* (a neurotransmitter that plays a key role in the processing of information) in the brain. It also can slow the progression of dementia in some of the people who take it.

Behavioral symptoms of dementia are often the most challenging for caregivers and can include agitation, aggression, suspicion, delusions, hallucinations, wandering, sundowning, sleep disturbances, and repetition. Sometimes, anti-anxiety or anti-psychotic

medications are useful for treating behavioral symptoms. However, negative side effects and medication interactions are common when these types of medications are used, so behavioral management strategies often work best. Behavior management entails identifying what might be triggering a difficult behavior and then devising an intervention that either changes the person's environment or the caregiver's reaction to the behavior.

Depression

Prevalence

When a person has depression that creates cognitive impairment that looks like dementia, it's often called *pseudodementia*. Estimates suggest that between 2% and 32% of older individuals who experience cognitive problems actually have pseudodementia as opposed to dementia, making accurate diagnosis all the more important. While depression is common among older adults, it is also one of the most treatable conditions affecting this population.

Causes

Many theories have been offered about the causes of depression. Most likely, depression results from a combination of biological, psychological, and social factors. In other words, anatomical or chemical changes in the brain most certainly play a role, but dysfunctional thought processes, stressful life events, and the loss of social connections can be significant factors as well.

Symptoms

Depression is characterized by a depressed mood that lasts at least two weeks and/or the loss of interest or pleasure in nearly all activities; it also includes guilt, social withdrawal, and sleep and appetite disturbances. Older adults who are depressed often complain of physical ailments for which no physical cause can be found. Depression can also create cognitive symptoms such as difficulty thinking clearly, problems concentrating, and difficulty making decisions. However, even though depressed people may complain of memory impairment, they usually perform well on clinical tests of memory.

Treatment

Although depression is reversible, treating it can be as complex as treating dementia, requiring a flexible approach and multiple treatment modalities (e.g., medication, psychotherapy, or a combination of both). Medications to treat depression include *monoamine oxidase inhibitors* and *trycyclics*, which make neurotransmitters such as norepinephrine and serotonin more readily available in the brain. Another class of medications called *selective serotonin reuptake inhibitors* raises the overall level of serotonin in the brain.

Psychotherapy may occur individually or in a group, where the therapist and client(s) work on strategies to help manage or reduce depressive symptoms. Older adults who are depressed also respond well to structured activities that incorporate pleasant experiences into their days. Depression is often successfully treated; however, symptoms (including the ones that look like dementia) typically do not go away immediately. Both

medications and psychotherapy may require several weeks before a noticeable decrease in symptoms is seen. In addition, people who have depression may experience relapses.

Delirium

Prevalence

Delirium, or a sudden change in consciousness that creates extreme confusion, most frequently occurs in older adults who are hospitalized. Ten percent of people over the age of 65 who are hospitalized for a general medical condition are delirious at admission; 10-15% go on to develop delirium during their hospital stay. Nursing homes are another common place where delirium is found. Approximately 6-12% of nursing home residents develop delirium every year. Each of these estimates is considered conservative because delirium often goes undetected in all settings.

Causes

Delirium is caused by an acute medical condition that either disrupts brain metabolism or alters the level of neurotransmitters in the brain. Both disturbances can significantly affect brain functioning. Examples of conditions that can cause delirium include urinary tract infections, cardiac disorders, meningitis, diabetes, hypothermia, electrolyte imbalances, heat stroke, head trauma, falls, substance intoxication, substance withdrawal, and medication interactions.

Symptoms

People with delirium exhibit a severe disturbance of consciousness (e.g., a reduced awareness of one's surroundings and/or severe attention problems). They also display changes in cognitive functioning (e.g., problems with memory, orientation, language, or perception) that is not caused by dementia. The symptoms develop over a short period of time – such as hours or days – and fluctuate throughout the day.

Treatment

The proper treatment for delirium depends fully upon its cause and may include an adjustment of medications, an increase in fluids or nutrition, or resolution of an infection. Quick and accurate treatment is essential, because some deliriums – if left untreated – can cause permanent brain damage or even death. For instance, untreated meningitis or electrolyte imbalances due to dehydration can be life-threatening. People with delirium almost always require hospitalization for treatment.

Comparison of Dementia, Depression, and Delirium

The following chart delineates the similarities and differences between dementia, depression, and delirium along several clinical dimensions. This chart can be used as a reference point for forming diagnostic hypotheses and formulating next steps in assessment and treatment.

	Dementia	**Depression**	**Delirium**
Onset of Symptoms	Usually gradual	Can be sudden or gradual	Usually sudden
Progression	Usually slow, but sudden drops in functioning may alternate with periods of stabilization	Can be rapid or slow	Rapid
Duration	Anywhere from months to years	Anywhere from months to years; almost always at least six weeks	Anywhere from hours to less than one month
Awareness, Alertness, and Attention	Awareness, alertness, and attention may decrease as disease progresses	Generally normal, but can be easily distracted; difficulty concentrating	Diminished awareness; fluctuating alertness and attention
Orientation	Disorientation to place and time is common; disorientation to person is rare except possibly in late stages	Selective disorientation may occur	Disoriented, sometimes to person, place, and time
Memory	Short-term memory is impaired; long-term memory eventually becomes impaired as well; few complaints of memory loss	Detailed complaints of memory problems, but relatively normal performance on clinical tests if motivation is adequate	Short-term memory is impaired; memory is difficult to assess because of attention problems
Thought Processes	Impaired judgment;	Intact, but	Extremely

	difficulty making abstractions	characterized by thoughts of helplessness, hopelessness, and/or worthlessness; sometimes suicidal ideation is present	disorganized thinking
Perception	Delusions and hallucinations possible, depending on the cause of dementia	Delusions and hallucinations only present in very severe cases	Persecutory delusions and auditory and visual hallucinations prominent; difficulty distinguishing between reality and perceptual disturbance
Mood	May be depressed; often displays inappropriate affect	Depressed mood; preoccupation with the self	Drastic and rapid fluctuations in mood
Sleep Patterns	Sleep may be fragmented; increased agitation in the evening	Disturbed sleep, often with early morning awakening	Disturbed sleep; sometimes, sleep cycle is reversed
Speech	May be sparse; difficulty finding words	Generally understandable	Disorganized, rambling, and/or incoherent
Behavior During Assessment	Often displays good effort on clinical tests; may deny any problems; may seek feedback on performance	Often displays little effort on clinical tests; often responds "I don't know," but can give the correct answer upon further probing	Extremely distracted and difficult to assess; will often give random, incorrect answers on clinical tests

Conclusion

The assessment of dementia, depression, and delirium in the older population may seem daunting. This is understandable given the intricacy of the three conditions, the overlap in symptomatology, and the consequences of misdiagnosis. This course was designed to help health care professionals increase the accuracy of their diagnoses by (a)

offering them a philosophy of assessment that includes cognitive complexity and ethical responsibility, and (b) providing basic and comparative knowledge of the three conditions. It is hoped that this course will equip health care professionals with the competence, knowledge, and skills to provide accurate assessment and treatment to the many older adults who are experiencing dementia, depression, and/or delirium.

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