

DEMENTIA Is Not DEMENTIA Is Not DEMENTIA



Many clinicians use the terms *dementia* and *Alzheimer's disease* (AD) interchangeably. This is incorrect; dementia is to AD as *car* is to *Corvette*. *Dementia* is a global term that describes chronic and permanent loss of cognitive function, whereas *AD* is a type of dementia. Nurses can provide better care when they are aware of which type of dementia is present in a patient, because the same nursing intervention may result in disparate patient responses. Differentiating the type of dementia is a clinical challenge, especially in situations where more than one type of dementia is present (i.e., mixed dementias). Certain behaviors are associated with specific types of dementia. The five most common types that nurses typically encounter are described below: AD, vascular dementia (VaD), frontotem-

poral dementia (FTD), Lewy body dementia (LBD), and Parkinson's disease dementia (PDD).

ALZHEIMER'S DISEASE

The most commonly occurring type of dementia is AD, which is thought to be caused by the accumulation of beta-amyloid protein plaques in the brain due to some combination of genetics, environment insults, and lifestyle (Shagam, 2009). The hallmark of AD is progressive and irreversible loss of memory. More specifically, individuals with AD exhibit declines in executive functioning, visuospatial judgment, and language (Shagam, 2009). The clinical picture is that of a person who rapidly forgets new information while older memories simultaneously disappear over time (Levy & Chelune, 2007). When conversing with someone affected

by AD, the nurse may note that the speech remains fluent and grammatically correct but the content is illogical (Levy & Chelune, 2007). Many individuals with early AD can appear superficially normal, retaining appropriate social etiquette behaviors until the disease progresses into the later stages (Levy & Chelune, 2007).

In the past, AD could only be diagnosed posthumously, by examining the brain tissue microscopically. Researchers at the University of Pittsburgh recently developed Pittsburgh Compound-B, which binds with beta-amyloid plaque and can be visualized using nuclear imaging (Shagam, 2009). By using Pittsburgh Compound-B with nuclear imaging, trained radiologists can identify AD in early stages and distinguish between AD and other forms of dementia (Shagam, 2009).

VASCULAR DEMENTIA

The second most common type of dementia is VaD, accounting for 20% of all dementias (Black, 2011; Levy & Chelune, 2007). Cerebrovascular insults that interrupt blood flow to particular areas of the brain, resulting in hypoxia and tissue damage, cause VaD. The onset can be abrupt, in the case of an immediate reduction of blood flow to the brain from a myocardial infarction or cerebrovascular accident. VaD can also progress slowly, in the case of numerous small strokes that result in multiple-infarct dementia. Magnetic resonance imaging, which

abilities over long periods of time—or until another cerebral vascular event compromises additional brain tissue (Levy & Chelune, 2007). Nurses should recognize that individuals with VaD are typically aware of their own deficits, which contributes to depression, stubbornness, and apathy (Black, 2011).

FRONTOTEMPORAL DEMENTIA

Originally called Pick's disease, FTD may occur at earlier ages than other dementias and has been observed in people as young as 35 (Zanni & Wick, 2007). FTD is thought to have genetic origins,

and anxiety among family members and may result in the person with FTD becoming acquainted with the judicial system. A lawyer with whom I collaborate contacted me concerning his client, a woman in her mid-50s, who was arrested repeatedly for shoplifting. I suggested the possibility of FTD and advised a thorough neurological evaluation. Another unique feature of FTD is hyperorality, a condition where the individual places inanimate objects in his or her mouth and may exhibit gluttony (Zanni & Wick, 2007). This behavior can present special challenges in both tertiary and long-term care, where the older adult attempts to eat any unmonitored food tray or swallows plastic catheter plugs. Additionally, individuals with FTD may neglect personal hygiene as well as exhibit muscle weakness, muscle atrophy, muscle rigidity, and tremors (Zanni & Wick, 2007).

Caring for individuals with dementia is challenging. Knowing the type of dementia may help nurses to build on the older adult's existing strengths.

shows lacunar infarcts and changes in the white matter, can help distinguish VaD from AD (Shagam, 2009).

Although specific signs and symptoms of VaD are dependent on the affected areas of the brain, individuals with VaD share some common physical symptoms: shuffling gait, walking with small rapid steps, urinary incontinence, and unilateral limb weakness or paralysis (Black, 2011; Levy & Chelune, 2007). Family members may additionally relate that the older adult with VaD becomes lost in familiar environments, exhibits slurred speech, and has difficulty understanding and following directions (Shagam, 2009). Unlike those with AD, individuals with VaD are typically able to learn and retain new information (Levy & Chelune, 2007). They are also more likely to respond to cueing (Levy & Chelune, 2007). Another difference involves activities of daily living (ADLs). Individuals with AD gradually lose their abilities to perform ADLs; those with VaD usually maintain their

where the genes that code for tau or ubiquitin proteins are altered. The result is the formation of insoluble protein deposits in neurons, with resulting atrophy of the frontal and temporal lobes (Shagam, 2009). The frontal and temporal lobes are responsible for speech, personality, and inhibition of inappropriate behavior. When the frontal and temporal lobes are compromised, the following behaviors become evident: hesitant speech and word-finding difficulty, progressing to aphasia (the inability to connect words to their meaning or to speak fluently); personality changes, including the acquisition of new artistic or musical talents (rare); and lack of social awareness and inhibition, resulting in inappropriate behavior (Shagam, 2009). Individuals with FTD also lack accurate appraisal of their limitations, which exacerbate their inappropriate behavior (Massimo et al., 2012). It is the inappropriate behavior that often generates concerns

LEWY BODY AND PARKINSON'S DISEASE DEMENTIAS

Another type of dementia is LBD. Lewy bodies are atypical masses of alpha-synuclein, ubiquitin alpha B-crystallin, and neurofilament proteins that accumulate in the brain stem and brain cortical cells. The presence of these proteins in brains results in LBD. Diagnostic criteria include a minimum of two of the following symptoms: Parkinson motor signs (shaking, rigidity, and balance abnormalities); vacillating attention and concentration; and persistent visual hallucinations (Shagam, 2009). Controversy exists whether LBD and PDD are really endpoints on the same continuum. PDD is dementia with Lewy bodies that occurs after the development of Parkinson's disease (Zanni & Wick, 2007). Unlike LBD, the diagnosis of PDD is predicated on an initial diagnosis of Parkinson's disease for 1 full year (Zanni & Wick, 2007) prior to the appearance of cognitive symptoms (Mollenhauer et al., 2010).

At least two of the following four symptoms must also be present for a diagnosis of PDD: fluctuating attention, difficulties with planning and organization, visuospatial problems, or inability to use correct words and comprehend complex sentences (Shagam, 2009; Zanni & Wick, 2007). Furthermore, the individual may experience hallucinations, paranoid delusions, and daytime somnolence (Mollenhauer et al., 2010).

Differentiating between the two is difficult. Individuals with LBD do not respond to medications designed to increase dopamine levels but will respond to medications traditionally used to treat AD (Mollenhauer et al., 2010; Shagam, 2009). Also, those with LBD often exhibit atypical reactions to the very antipsychotic agents used to manage delusional behavior or hallucinations (Shagam, 2009). These reactions include facial tics, loss of coordination, sedation, immobility, and neuroleptic malignant syndrome (Shagam, 2009). Neuroleptic malignant syndrome

appears as high fever, rigidity, and muscle breakdown and can result in death. Nuclear imaging can help distinguish between the two (Mollenhauer et al., 2010).

Caring for individuals with dementia is challenging. Knowing the type of dementia may help nurses to build on the older adult's existing strengths. For example, someone with VaD who responds to cueing may benefit from a rigorous restorative care program in which progressive ADL independence is the goal. At the same time, simply telling an older adult with FTD to leave others' food trays alone will not work; the individual needs to be moved to a different area and redirected until all food trays are removed from the unit. Ultimately, nurses will be better able to provide more individualized care by recognizing these types of dementia.

REFERENCES

Black, S.E. (2011). Vascular cognitive impairment: Epidemiology, subtypes, diagnosis and management. *Journal of the Royal Col-*

lege of Physicians of Edinburgh, 41, 49-56. doi:10.4997/JRCPE.2011.121

- Levy, J.A., & Chelune, G.J. (2007). Cognitive-behavioral profiles of neurodegenerative dementias: Beyond Alzheimer's disease. *Journal of Geriatric Psychiatry and Neurology, 20*, 227-238. doi:10.1177/0891988707308806
- Massimo, L., Libon, D.J., Chandrasekaran, K., Dreyfuss, M., McMillan, C.T., Rascovsky, K.,...Grossman, M. (2012). Self-appraisal in behavioural variant frontotemporal degeneration. *Journal of Neurology, Neurosurgery, & Psychiatry*. Advanced online publication. doi:10.1136/jnnp-2012-303153
- Mollenhauer, B., Förstl, H., Deuschl, G., Storch, A., Oertel, W., & Trenkwalder, C. (2010). Lewy body and parkinsonian dementia: Common, but often misdiagnosed conditions. *Deutsches Arzteblatt International, 107*, 684-691. doi:10.3238/arztebl.2010.0684
- Shagam, J.Y. (2009). The many faces of dementia. *Radiologic Technology, 81*, 153-168.
- Zanni, G.R., & Wick, J.Y. (2007). Differentiating dementias in long-term care patients. *The Consultant Pharmacist, 22*, 14-16, 18, 21-18.

Rita A. Jablonski, PhD, RN, ANP-BC
Associate Professor
School of Nursing
University of Alabama at Birmingham
Birmingham, Alabama

The author has disclosed no potential conflicts of interest, financial or otherwise.

doi:10.3928/00989134-20121204-05