



## PALLIATIVE CARE CASE OF THE MONTH

“When being “down in the dumps” isn’t depression”

by

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**Case:** Mr. K is a 58-year-old male with diabetes and ischemic cardiomyopathy which contributed to end-stage heart failure necessitating circulatory support with a left ventricular assist device (LVAD) implanted one year ago. His post-operative course has been complicated with five admissions for infection resulting in several operative revisions and kidney injury. He was admitted with a similar presentation prompting a moment of reflection by his primary team.

Over the last year, Mr. K had declining involvement in his own care, which included poor attention to his medications and wound dressings. It was clear that Mr. K’s lack of involvement was contributing to his frequent admissions, but the root of Mr. K’s suspected apathy was unclear. The Palliative Care team was consulted to assess the patient’s goals of care.

Interviewing Mr. K was challenging. Though he was pleasant and cooperative, he was distractible. Attempts to elicit his values would take the listener on a long, circumferential and circumstantial path without a clear ending. Despite his confusing stories, he clearly explained a hope to regain his ability to perform tasks on his farm. He also succinctly described the importance of sharing his life with family, including several new grandchildren. While this information helped clarify his values and healthcare goals, the team questioned his cognitive ability. Because we were unable to distinguish between depression, apathy, and cognitive impairment, we asked for a formal psychiatry consult.

Mr. K described his mood as “down in the dumps” for the last two years; he felt his heart failure symptoms prevented him from performing even simple activities on his farm. Unfortunately, he had not noticed any improvement in his energy with LVAD implantation one year ago, but did reflect that he sustained damage to his liver and kidney. Despite prominent feelings related to his illnesses and poor functional status, he remained hopeful that he would recover. Though he provided an accurate general picture of his health state, he gave inconsistent or superficial answers to detailed inquiry about recent complications. He denied feelings of anxiety, hopelessness, guilt or suicidal thoughts and had not noticed any changes in appetite or sleep, or hallucinations. He still found interest in television shows and NASCAR racing.

On exam, he was disheveled and often violated social norms of the interview (interrupting his own storytelling to make an unrelated phone call, commenting on the TV programs currently showing). He had no abnormalities in muscle bulk, tone or movement. There was no dysmetria, tremor or gait disturbance but his Luria test (for executive motor control) was abnormal. His speech was broken into single sentence or phrase fragments with a rare moment of word searching with use of circumlocutions.

His affect was reactive, full and incongruent with his stated mood of depression. His thought content, while future oriented, was indeed impaired as noted by the Palliative Care team, with a particular focus on concrete thought processes. Memory of his own medical history was inconsistent, and his delayed recall of three objects was impaired. His inconsistencies also manifested when discussing insight for his own illness, with a tendency to oversimplify his condition or health consequences.

**Discussion:** Mr. K’s exam is consistent with a mild neurocognitive disorder (NCD) with mixed features (concentration, executive function, and mild memory and language impairments). NCD is a new diagnosis found in the update of the DSM-V. This update of psychiatric diagnosis guidelines re-organizes the previous diagnoses of mild cognitive impairment (MCI) and dementia to a neurocognitive disorder (NCD) of either mild or major impairments. NCD is defined as “a change from previous level of function with noted impairment in one of the following domains: complex attention; learning or memory; language; perceptual-motor; social cognition and executive function”<sup>1</sup>. The distinction between mild or major impairment is determined by the ability to live independently. Subtypes of NCD can be described by the dementia’s presumed etiology, for example Alzheimer’s type. The definition of NCD yields high inter-rater reliability among clinicians, but the diagnosis is too new to be sure of its prevalence. MCI, the closest approximation of mild NCD, has a prevalence of between 3-42% reported across studies of at-risk inpatients and outpatients.<sup>2</sup> The prognosis related to NCD is uncertain. Some patients with mild NCD progress to major NCD, but with others the disease is stable or may revert to normal cognition.

There are many hypotheses for the pathophysiology behind neuro-degeneration seen in NCD, including vascular deficits and inflammatory pathways, but no unifying theory has been confirmed. Effective pharmacologic treatment of NCD is currently lacking. Anticholinesterase inhibitors should be utilized only in mild to moderate Alzheimer’s dementia<sup>3</sup>, but recent guidelines to support this practice are either weak<sup>4</sup> or discouraging<sup>5</sup>. Promising agents currently include noradrenergic and polyphenolic compounds (ginkgo biloba, wine and some vegetables). Non-pharmacologic therapies (exercise, diet, cognitive stimulation) show variable effects, have poor generalizability, or impermanent results. Other non-pharmacological treatments (cognitive behavioral therapy) have focused on neuropsychiatric symptoms (mood disturbance, apathy, agitation and psychosis) and show improvement in symptoms but not underlying cognitive impairments.<sup>6</sup> Pharmacologic treatment of the same symptoms has not been found beneficial and may be associated with a more rapid decline<sup>7</sup>.

*Personal details in the case published have been altered to protect patient privacy.*

For palliative care consultations please contact the Palliative Care Program at PUH/MUH, 647-7243, beeper 8511, Shadyside Dept. of Medical Ethics and Palliative Care, beeper 412-647-7243 pager # 8513, Perioperative/ Trauma Pain 647-7243, beeper 7246, UPCI Cancer Pain Service, beeper 644 –1724, Interventional Pain 784-4000, Magee Women’s Hospital, beeper 412-647-7243 pager #: 8510, VA Palliative Care Program, 688-6178, beeper 296. Hillman Outpatient: 412-692-4724. For ethics consultations at UPMC Presbyterian-Montefiore and Children’s page 958-3844. With comments about “Case of the Month” call Dr. Robert Arnold at (412) 692-4834.



### (Discussion Continued)

Mr. K has several risk factors for NCD (heart failure with its metabolic and perfusion derangements, atherosclerosis, bypass surgery and the LVAD itself)<sup>8</sup>. Up to 60% of patients demonstrate some level of cognitive deficit both before and after implantation.<sup>9</sup> Additionally, depression is present in 20-30% of LVAD patients<sup>10,11</sup>, and is often missed, misdiagnosed<sup>12</sup> or even confused with cognitive impairment.

Given that depression and NCD often co-occur, it is important to routinely screen patients for both. The PHQ-2, a rapid two question screen for depression that has a sensitivity of 97% and specificity of 96%.<sup>13</sup> An optimal screening test for NCD remains to be determined, but the mini-Kingston standardized cognitive assessment-revised (mini-KSCAr) yields the highest sensitivity and specificity studied to date. (Detection of mild NCD: sensitivity 81% and specificity 85%; Detection of major NCD: sensitivity 100% specificity 91%. Comparators include Mini-Mental State Examination (MMSE), the clock drawing test (CDT), and Montreal Cognitive Assessment (MoCA)<sup>14</sup>. Identification of complex or concurrent disorders would likely benefit from referral to a specialist for standardized neurocognitive testing and treatment.

**Case Resolution:** At examination, Mr. K agreed to pursue rehabilitation on discharge in a care facility rather than his home. He clearly described the risk, benefits and alternatives to the choice supporting our assessment of capacity for this decision. However, we expect Mr. K's capacity will be limited for more complex decisions, and the primary team was alerted that appropriate evaluation of his capacity should be undertaken for each future healthcare decision.

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