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Authors

Rogers, Stephanie E

Klein, Liviu

Perissinotto, Carla Maria

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LESS IS MORE

The Importance of Cognitive Assessment Before Ventricular Device Placement

A Teachable Moment

Stephanie E. Rogers, MD, MS, MPH, PA
Department of Geriatrics, University of California, San Francisco.

Liviu Klein, MD, MS
Division of Cardiology, University of California, San Francisco.

Carla Maria Perissinotto, MD, MHS
Department of Geriatrics, University of California, San Francisco.

Story From the Front Lines

A 76-year-old man with systolic heart failure presented to the advanced heart failure service after optimal medical management including biventricular pacing failed to improve his symptoms. A left ventricular assist device (LVAD) as destination therapy was offered to the patient after he was determined not to be a transplant candidate owing to advanced age. The risks and benefits of such a device were discussed with the patient and his family. Although the family had noticed some subtle hints of changes in his memory, such as repeating questions, word-finding difficulties, and missing appointments, these issues were not brought to the attention of the medical team, nor were they evident during multiple clinical encounters. Formal cognitive testing was not documented.

The patient and his family opted to proceed with LVAD placement, which improved the patient's heart failure symptoms. However, his postoperative course was complicated by worsening behavioral outbursts, wandering and getting lost, locking himself in a room (requiring a locksmith), and, most distressing, multiple attempts at pulling out his heart pump driveline and disconnecting the batteries. Formal neuropsychiatric testing revealed a diagnosis of long-standing dementia. The family had difficulty caring for him at home, and placement in a facility was difficult owing to the reluctance of any facility to undertake the complex management of an LVAD, especially in a patient who was uncooperative and confused.

Teachable Moment

Recent studies have shown that as many as 81% of patients who meet the criteria for dementia never have a formal diagnosis.¹ Spontaneous detection by physicians less accurately classifies a patient with dementia than a brief, structured, cognitive assessment tool.² The present case illustrates an example of how failing to formally assess older adults for cognitive impairment

before a procedure can lead to unintended harms or outcomes. A diagnosis of cognitive impairment or dementia can help clinicians anticipate how a patient may tolerate or adhere to the requirements of a recommended therapy and in turn allow patients and families a better understanding of the risks and benefits of an intervention.

The American College of Surgeons and the American Geriatrics Society recently published their Best Practices Guidelines,³ which included a recommendation to preoperatively assess for cognitive impairment in any patient older than 65 years without a known history of cognitive impairment or dementia. Dementia is the strongest risk factor for the development of postoperative delirium,⁴ and cognitive impairment is also associated with an increased risk of perioperative mortality, worse surgical outcomes, longer hospital stays, increased risk of postoperative functional decline,³ and increased postdischarge institutionalization.⁴ In light of this, identifying individuals with cognitive impairment before an intervention is critical to allow a more comprehensive discussion of risks and benefits.

As a result of this case, the formal LVAD evaluation at our institution now includes routine cognitive testing using the Montreal Cognitive Assessment test even in asymptomatic patients. If they score 21 or lower of a possible 30, formal neuropsychiatric testing is performed to further evaluate. During the first year of implementation of this new process, 3 previously undetected cases of considerable cognitive impairment (likely to interfere with the patients' ability to properly care for and use the LVAD) were detected through routine testing, and these patients did not undergo the intervention. This formal cognitive assessment now guides the consent process, allows families and medical teams to make better-informed decisions, and may help prevent unintended harms or outcomes.

Corresponding

Author: Stephanie E. Rogers, MD, MS, MPH, PA, Department of Geriatrics, University of California, San Francisco, 4150 Clement St, 181G, San Francisco, CA 94121 (stephanie.rogers@ucsf.edu).

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