perioperative frailty pathway on behalf of the Society for Perioperative Assessment and Quality Improvement. They focused on prehabilitation, including medication optimization, psychological support, physical exercise, and nutritional optimization, as well as perioperative geriatric co-management in a multidisciplinary team with standardized protocols, early mobilization, and advance discharge planning to avoid hospital readmission.

In our morbidity and mortality rounds, the root cause analysis of major adverse events often points to frailty as a major contributing factor resulting in failure-to-rescue (ie, death after an unanticipated complication). The 5-meter gait speed test could be one simple and practical screening test for frailty in our surgical patients. If we mobilize our valuable resources under the guidance of our geriatricians, we might be able to place such patients on an ERP or pathway to limit such adverse events.

See Article page 886.

Check for updates

Commentary: Something in the way they move: Does gait speed predict postoperative events following elective proximal aortic surgery?

David C. Liu, MD, and Kamal R. Khabbaz, MD

Surgeons have long known of intangibles that give pause to recommending a patient for cardiac surgery out of concern for increased risk. These intangibles were ascribed to the art of medicine, the so-called eyeball test. Evidence-based

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CENTRAL MESSAGE

Slow gait speed, a marker of frailty, is a risk factor for postoperative events after elective proximal aortic surgery.

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medicine has given a face to these intangibles we now define as frailty. Many studies have shown frailty to be a significant predictor of postoperative mortality and morbidity after cardiac surgery, including coronary surgery, valve surgery, and transcatheter aortic valve replacement.¹⁻³ Gait speed is a recognized surrogate for frailty.⁴ It is a simple test that is easy to administer.

Hobbs and colleagues⁵ used the preoperative 5-m gait speed test to determine whether it is a predictor of adverse postoperative events in patients undergoing proximal aortic

surgery. In their retrospective analysis, they identified 435 patients over a 7-year period who underwent elective proximal aortic surgery. Gait speed below a cutoff of 0.83 m/s defined a slow walker. Data were analyzed for composite outcomes, which were any postoperative event, including prolonged ventilation, renal failure, in-hospital mortality, and discharge location not home, and 1 and 5 years survival.

The slow walkers, as well as patients for whom there were no gait data, had significantly more comorbidities and higher European System for Cardiac Operative Risk Evaluation II score. It is not surprising that this group was associated with higher composite outcomes than the normal group. The slow group had higher reoperation rates, prolonged ventilation times, more renal failure, and more likely to be discharged to a facility. When gait speed was analyzed as a continuous variable, they found that an increase in 1 m/s in gait speed was associated with a 73% lower risk of experiencing a composite outcome. In-hospital mortality was higher in the slow group (3.0% vs 0.3%) and 1-year mortality was 4.5% versus 1.0%.

This study adds to the growing evidence that frailty is an important independent prognosticator of outcomes after any cardiac surgery. In patients undergoing proximal aortic surgery, the conclusions of the article by Hobbs and colleagues⁵ may contribute to the risk–benefit analysis when considering the surgical candidacy of a frail patient. It also raises the possibility of rethinking the proposed guidelines for operating on the proximal aorta. Should the guidelines take into account the frailty factor and recommend surgery at a larger diameter for frail patients? Moreover,

whereas the Society of Thoracic Surgeons short-term risk calculator does not address patients specifically undergoing proximal aortic surgery, it is commonly used to assess a patient's risk before undergoing cardiac surgery. The Society of Thoracic Surgeons risk model does not take into account a patient's frailty. The European System for Cardiac Operative Risk Evaluation II score crudely does by asking if there is poor mobility or not. Studies like this help better define and refine models that go into these risk calculators. The authors also raise an important question regarding the value of prehabilitation before surgery if the timeline allows. Prehabilitation is an important intervention that may improve outcomes and decrease the need for rehabilitation. The question remains: Would we deny proximal aortic surgery to a frail patient? The answer still lies in the art of medicine.

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