An easy way to screen PAD patients for frailty

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GRIP STRENGTH MEASUREMENT FOR FRAILTY ASSESSMENT IN PATIENTS WITH VASCULAR DISEASE AND ASSOCIATIONS WITH COMORBIDITY, CARDIAC RISK AND SARCOPENIA
CHICAGO, Illinois, May 2018 – Elderly patients who face surgery are often frail, a condition that is measured in different ways, often by a walking test.

Frail patients face more surgical risks, and knowing who is frail helps determine how they are treated. For vascular patients with peripheral artery disease or who have had an amputation, however, a walking test is not practical.

New research from Wake Forest University has found that testing the grip strength of vascular patients is a reliable way to detect frailty prior to surgery. Frailty has been shown to exist in up to 37% of patients undergoing vascular procedures, with subsequent increased risk of perioperative complications and non-home discharge.

Grip strength is one frailty test used in frailty indexes and scales. It is simple, non-invasive, is easily administered during intake – and doesn’t require walking.

Previous work has demonstrated a strong association between frailty and risk of perioperative adverse events, including complications, readmission and long-term mortality in patients undergoing abdominal and cardiac surgery.

As reported in the May 2018 edition of the *Journal of Vascular Surgery*, researchers from Wake Forest and the University of Michigan, led by vascular surgeon Dr. Matthew Corriere, evaluated the use of grip strength to screen vascular patients for frailty. In 311 patients with vascular disease, they found 27.7% of patients qualified as frail.

Comparing grip strength with other standard measures of frailty, the research found that reduced grip strength correlated significantly with:

- An increase in comorbid conditions (Charlson Comorbidity Index);
- An increase in cardiac risk factors (Revised Cardiac Risk Index); and,
- Reduced muscle mass (sarcopenia, as measured by psoas area).

“Grip strength may have specific applicability for frailty assessment in patients with symptomatic PAD, including those with previous amputation, particularly if disease-related walking impairment confounds interpretation of waking-based measures,” notes Dr.
Corriere. “Although frailty may not be a modifiable risk factor, improved screening may facilitate individualized treatment selection, counseling and resource expectations.”

Nationwide, the concern about frail surgical patients is growing. According to the most recent census reports, the elderly population in the United States is rapidly expanding. Residents age 65 and over grew from 35 million in 2000 to 49.2 million in 2016, accounting for 12.4 percent and 15.2 percent of the total population, respectively. This growth presents significant challenges to our health care system to deliver safe, effective and affordable treatments.

Based on the results of this analysis, said Dr. Corriere, “our group plans to implement routine grip strength measurement during clinic intake for new patients as a larger scale quality improvement initiative, with plans to re-evaluate approaches to perioperative testing, pre-habilitation, and discharge planning.”

To download the complete article (link available until June 30, 2018), click: vsweb.org/JVS-Grip.