Predicting frailty risk in older patients

About half of all surgery in the US is performed on patients over 65. These older patients have been found to be at increased risk for postoperative complications.

Complications often lead to disability, loss of independence, poorer quality of life, high costs, and mortality.

Though many patients over 65 do well after surgery even though they appear feeble preoperatively, others who seem healthier emerge from surgery diminished.

Frailty, defined as a person’s physical reserve and ability to withstand stress to the body, is being recognized as a marker of decreased reserves in older patients. How can clinicians know which patients will do well and which are frail?

A team of researchers from Johns Hopkins recently published the first study to look at frailty as a predictor of surgical outcomes. The report by Martin A. Makary, MD, MPH, and colleagues appeared in the Journal of the American College of Surgeons.

Predicting outcomes

“There’s been a hunger for some sort of scientific way to predict surgical outcomes in older patients,” Dr Makary told OR Manager.

He and his team have developed a quick 5-point assessment for measuring frailty. Criteria include weakness, weight loss, exhaustion, low physical activity, and slowed walking speed (sidebar). One point is given for each problem. Patients scoring 4 to 5 are classified as frail, 2 to 3 are intermedi-ately frail, and 0 to 1 are not frail. The complete criteria and rationale are reported in the journal article.

“Measuring frailty has been a concept that’s been floating around in principle before we did the study,” says Dr Makary. “Many physicians talk about the ‘eye-ball’ test as a way to look at somebody to determine their overall strength and physiological reserve.

“Our test is just a way to quantify that in a standardized way that can be used by researchers and clinicians around the country.”

The researchers found the assessment can be performed in 10 minutes. In his practice, the nurse or surgeon conducts the assessment, depending on resources.

Powerful findings

For the study, Dr Makary and his team gave the frailty test to 594 patients over age 65 who had elective surgery between July 2005 and July 2006. Patients scored as frail were found to be:

• 2.5 times more likely to suffer a postoperative complication
• 1.5 times more likely to spend more time in the hospital
20 times more likely to be discharged to a nursing home or assisted living facility after previously living at home.

The nursing home frailty findings were so powerful, says Dr Makary, “especially in an era where we’re trying to maximize resources.”

The frailty score also strengthened the predictive ability of other commonly used risk assessment models for surgical patients, such as the American Society of Anesthesiologists physical status scale and measures developed by Lee and Eagle and their groups.

**Perioperative interventions**

“The main use of the frailty score is risk assessment, not so much risk modifications,” says Dr Makary.

At a minimum, surgeons who use the frailty score will be alerted to special needs of older patients and can integrate frailty into their preop discussions of the risks and benefits of surgery.

When possible, steps can be taken before surgery to address frailty, such as conditioning to increase strength, maximizing nutrition, and administering pharmacological therapy if needed.

Postoperatively, closer monitoring of nutrition, hydration, and mobilization could help prevent complications. 

—Judith M. Mathias, RN, MA
References


