Assessment of Frailty Helps Doctors and Patients Plan Better for Surgery

Panel to discuss how assessments of frailty can predict post-surgery health

New Orleans, LA, May 16, 2015 – Physicians are often confronted with having to judge their older patients’ ability to withstand the physical stress of surgery, as well as weigh the benefit of a procedure against a patient’s perceived health. Age alone is not the sole predictor for post-operative urological health, particularly in older adults. According to four new studies to be presented to the media during a special press conference at the 110th Annual Scientific Meeting of the American Urological Association (AUA) on Saturday, May 16 at 10:30 a.m. at the Ernest N. Morial Convention Center in New Orleans, LA, frailty, defined as the gradual loss of functional status, is considered by many to be a more accurate indicator of the likelihood of healthy post-surgical recovery.

The press session will be moderated by Tomas L. Griebling, MD, MPH, AUA spokesperson and professor and vice chair of the Department of Urology at the University of Kansas School of Medicine. He is also faculty associate at the Landon Center of Aging.

Study Details
Publication Number: MP16-12

Correlation Between Surgeons' and Patients' Subjective and Objective Perceptions of Frailty

Despite the availability of objective assessment tools, surgical decision-making relies on subjective judgments made by a physician and patient. In this study, researchers from Fox Chase Cancer Center/Emory University in PA and Emory University School of Medicine in GA, set out to examine the agreement between an individual patient’s and his or her surgeon’s rating of the patient’s “fitness” for surgery. As part of this study, patients were asked to rate their own frailty (ability to withstand the physical stress of their upcoming surgery) using a visual analog scale. The operating surgeons were also asked to independently rate their patients’ frailty using a similar method. These assessments were compared with a Frailty Index test and researchers conducted a statistical analysis between the two. Results Showed:

- Patients often disregard their age as having an effect on their ability to recover from surgery; however, physicians show a stronger correlation between a patient’s age and their risk of developing complications post-surgery.
- Physicians often underestimate the ability of a patient to undergo, survive and recover from the stress surgery puts on the patient’s body based on their age alone.
- Patients on the other hand, often overestimate their ability for the same.

Study Details
Publication Number: MP63-01

Modified Frailty Index Predicts Mortality and Adverse Outcomes in Patients Undergoing Renal Surgery: Analysis of the National Surgical Quality Improvement Program (NSQIP) Database

Frailty, a concept of growing interest in light of the nation’s aging population, is an objective measure that can be used by physicians to assess whether their patients are at an increased risk for post-operative complications. Researchers from Columbia University in New York, NY, set out to determine whether a modified frailty index could predict 30-day mortality, or other adverse outcomes, in patients undergoing renal surgery. Utilizing data accessed through the American College of Surgeons National Surgical Quality
Improvement Program (ACS-NSQIP) database, researchers created a modified frailty index by employing the Canadian Study of Health and Aging Frailty Index (CSHA-FI) and matching 11 variables such as diabetes, severe chronic obstructive pulmonary disease, pneumonia, heart disease, hypertension, vascular disease and stroke. Based on this modified version of the CSHA-FI, the 30 day post-surgery mortality of patients undergoing partial, simple and radical nephrectomies was measured. Results showed:

- Patients with a modified version of the CSHA-FI greater than or equal to 0.27, were six times more likely to die within 30 days of renal surgery.
- Higher rates were also strongly associated with an increased risk of septic shock, ventilator dependence (within 48 hours), unplanned intubation, longer operating times and even longer hospital stays.
- The modified version of the CSHA-FI is a simple tool for doctors to better predict adverse outcomes in patients undergoing renal surgery and potentially urologic surgery, in general.

**Study Details**
Publication Number: MP14-03

*Simplified Frailty Index Predicts Adverse Surgical Outcomes and Increased Length of Stay in Radical Prostatectomy Patients: An Analysis of the ACS-NSQIP Database*

Because no suitable measure exists to qualify frailty, physicians often assess preoperative frailty and its relationship to the potential occurrence of postoperative complications in a non-standardized manner using such descriptions as “appearing older than stated age.” As such, researchers from Columbia University in New York, NY, set out to evaluate whether a modified frailty index could predict postoperative complications such as mortality, surgical site infection, Clavien IV (life-threatening) complications, length of stay and combined adverse events in patients who underwent a radical prostatectomy. Utilizing data queried from the ACS-NSQIP, for the years 2005-2012, researchers employed the CSHA-FI and matched 11 variables comprising of diabetes, heart disease, prior cardiac surgery, hypertension, vascular disease and stroke, to create a modified frailty index. Four additional variables specific to cancer including: chemotherapy or radiation, weight loss, renal failure, and metastasis were also included. As a result, data showed:

- The modified frailty index indicated a significant correlation between 30-day morbidity and length of stay after a radical prostatectomy.
- The modified frailty index was *not* shown to significantly correlate with 30-day mortality.
- The index is effective in measuring risk assessment and in pre- and post-operative planning for patients with the potential to develop serious illness(es) within 30 days after surgery.

**Study Details**
Publication Number: MP64-07

*Simplified Frailty Index Predicts Adverse Outcomes in Radical Cystectomy: An Analysis of the ACS-NSQIP Database*

Frailty is an established predictor for adverse health outcomes and a very important attribute to consider when assessing an older patient as a surgical candidate. This explains why researchers from Columbia University in New York, NY, set out to assess whether a simplified frailty index could better predict adverse events in post radical cystectomy patients.

ACS-NSQIP data from 2005-2012 was utilized to measure 30-day morbidity and mortality, post-surgery.
Using the CSHA-FI, 11 variables including diabetes, heart disease, prior surgery, hypertension, vascular disease and stroke were matched to NSQIP to create a modified frailty index. Four variables specific to cancer: chemotherapy or radiation, weight loss, renal failure, and metastasis were also included. Outcomes assessed included, but were not limited to: 30-day mortality, surgical site infection, urinary tract infections and length of stay. Results showed:

- The modified frailty index was shown to significantly correlate with 30-day morbidity and length of stay after a radical cystectomy.
- On multivariate analysis, the frailty index predicted the risk of heart attack better than existing methodologies including the work relative value unit, Charlson Comorbidity Index Score, American Society of Anesthesiologist score and functional status.
- The modified frailty index was not shown to significantly correlate with 30-day mortality.
- The index is effective in measuring risk assessment and surgical planning more accurately for patients with potential to develop serious illness(es) within 30 days after surgery.

"Improving our assessment of preoperative functional status including the concept of frailty may serve as a predictor of adverse outcomes in geriatric patients undergoing urologic surgery," said Dr. Griebling. “Assessing frailty using simple tools can help patients and surgeons make more informed pre- and post-surgical decisions.”

**NOTE TO REPORTERS:** Experts are available to discuss this study outside normal briefing times. To arrange an interview with an expert, please contact the AUA Communications Office at 443-909-0839 or e-mail cfrey@AUAnet.org.

**About the American Urological Association:** The 110th Annual Meeting of the American Urological Association takes place May 15 – 19 at the New Orleans Convection Center in New Orleans, LA.

Founded in 1902 and headquartered near Baltimore, Maryland, the American Urological Association is a leading advocate for the specialty of urology, and has more than 21,000 members throughout the world. The AUA is a premier urologic association, providing invaluable support to the urologic community as it pursues its mission of fostering the highest standards of urologic care through education, research and the formulation of health policy.

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