

Slow Gait Ups Surgery Risks

BY BRUCE JANCIN

ORLANDO — Five-meter gait speed is a simple and effective test to identify a subset of elderly patients at threefold increased risk of in-hospital mortality and major morbidity after cardiac surgery, according to a prospective study.

"We believe that pending further validation, [these results] should be applicable in clinical practice due to our all-comers design reflecting real-world patients, as well as the test itself being highly feasible and inexpensive, and finally the incremental value above traditional risk scores which we've demonstrated," Dr. Jonathan Afilalo said at the annual scientific sessions of the American Heart Association.

Slow gait speed is a marker for frailty syndrome. The hypothesis tested, and subsequently confirmed, in the FRAILITY ABC'S study was that frailty as reflected in a slow 5-meter gait speed helps explain the wide range in outcomes among elderly patients undergoing nonemergent cardiac surgery, said Dr. Afilalo of McGill University, Montreal.

The 5-meter gait speed test requires only a stopwatch and a couple of marks on the floor. The patient is placed on the starting line and asked to walk a few meters past the 5-meter finish line. This is repeated three times, and the times are averaged. Through receiver operator curve analysis, Dr. Afilalo and his coworkers identified 6 seconds as the optimal threshold for frailty in the study.

Of 131 study participants scheduled for cardiac surgery, all aged over 70 years, 60 (46%) had slow gait speed. They were significantly more likely to be female and to have diabetes than were patients with normal gait speed. However, the frail subgroup was not undernourished and wizened. Their mean body mass index was 1.3 kg/m² greater than in patients with normal gait speed. And while the frail subgroup's mean Society of Thoracic Surgeons risk score of 20.7 was significantly higher than the 16.3 in the normal-gait-speed subgroup, both groups would be considered high risk.

"Importantly, gait speed did not track age, risk score, or left ventricular ejection fraction, suggesting that it is truly providing unique information," he noted.

The primary study end point was the combined rate of in-hospital all-cause mortality, need for reoperation, renal failure, deep sternal wound infection, stroke, or prolonged ventilation. This occurred in 35% of elderly patients with slow and 13% with normal gait speed.

Particularly striking was the unexpected difference in mortality: 10% in the subgroup with slow gait speed compared with 1% in those with normal gait speed.

A postoperative length of hospital stay greater than 14 days, a secondary end point, occurred in 35% of the slow-gait group compared with 18% of those with normal gait speed. Forty-six percent of patients with slow preop gait speed were discharged to a rehabilitation or convalescent facility, as were 20% of

those with normal gait speed.

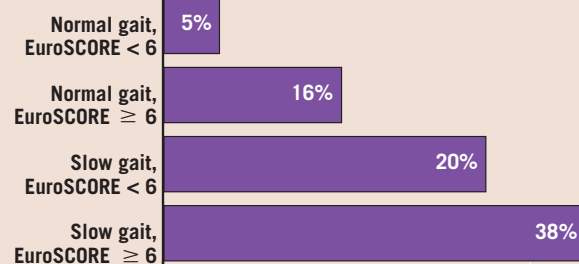
In a multivariate logistic regression analysis, slow gait speed was linked with a 3.05-fold increased risk of in-hospital mortality or major morbidity independent of established predictors including the STS risk score, EuroSCORE, and Parsonnet risk score.

Indeed, a patient with any

given score on the EuroSCORE or another standard risk measure who had slow gait speed had at least a two- to threefold greater risk of adverse outcome compared with a patient who had the same risk score and a normal gait speed (see box).

Dr. Afilalo reported no relevant financial relationships. ■

Slower Gait Predicts Higher Morbidity/Mortality for Cardiac Surgery Patients



Note: Based on a study of 131 patients scheduled for cardiac surgery.
Source: Dr. Afilalo

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Tel.: +33 (0)1 47 56 24 56 - Fax: +33 (0)1 47 56 24 55
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Tour Vista - 52-54, quai de Dion-Bouton - CS80001
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