Abstract: P3743

A routine nursing questionnaire adds predictive value to conventional risk scores for TAVI (Transcatheter Aortic Valve Implantation) outcome

Authors:
S X Gharibeh1, D Zweiker2, J Binder1, G Toth-Gayor1, A Schmidt1, A Zirlik1, R Zweiker1, 1Medical University of Graz - Graz - Austria, 2Wilhelminen Hospital - Vienna - Austria,

Topic(s):
Aortic Valve Intervention

Citation:

Background:
Previous studies indicate that frailty is associated with poor outcome following TAVI.

Purpose:
This study aimed to investigate whether a questionnaire routinely administered by nurses might serve as a surrogate for frailty and predict outcome in TAVI patients in addition to conventional risk scores.

Methods:
This is a retrospective single-centre study performed at a university clinic with a high volume of TAVI. We included 461 consecutive patients (age 82±6 years, 60.5 % female) scheduled for TAVI between 2012 and 2016. Based on seven questions addressing levels of patients’ self-dependence assessed by nurses on admission, TAVI patients were divided into a "frail" group (at least one answer indicating limited self-dependence) and a self-dependent group (all other patients). We sought to assess (1) prevalence of frail TAVI patients, and (2) impact of frailty on two-year mortality assessed by Cox regression in addition to established risk scores.

Results:
The prevalence of frail TAVI patients was 40.3%. Frail patients had significantly higher two-year mortality than self-dependent (non-frail) patients (25.3% vs 14.9%, p=0.014, Figure). In multivariate analysis stratified for age and left-ventricular function, body mass index (BMI), atrial fibrillation (AF) and frailty were significant predictors of increased two-year mortality (BMI, per kg/m2: HR 0.95 [95% CI 0.90-0.99], p=0.028; AF: HR 2.07 [1.35-3.18], p=0.001; frailty: HR 1.81 [1.18-2.76], p=0.006).

In addition to the Society of Thoracic Surgeons (STS) risk of mortality score, both AF and frailty significantly predicted increased two-year mortality (AF: HR 2.02 [1.32-3.09], p=0.001; frailty: HR 1.55 [1.01-2.38], p=0.045).

Conclusion:
This study shows that a routine nurses’ questionnaire covering levels of self-dependence serves as risk indicator for long-term mortality after TAVI. This unconventional geriatric assessment adds predictive power for two-year-mortality to a conventional risk score (such as STS) and might be used to stratify patients for greatest benefit from TAVI.
A routine nursing questionnaire adds predictive value to conventional risk scores for TAVI (Transcatheter Aortic Valve Implantation) outcome.

Authors: S X Gharibeh, D Zweiker, J Binder, G Toth-Gayor, A Schmidt, A Zirlik, R Zweiker

1 Medical University of Graz - Graz - Austria, 2 Wilhelminen Hospital - Vienna - Austria

Topic(s): Aortic Valve Intervention

Background: Previous studies indicate that frailty is associated with poor outcome following TAVI.

Purpose: This study aimed to investigate whether a questionnaire routinely administered by nurses might serve as a surrogate for frailty and predict outcome in TAVI patients in addition to conventional risk scores.

Methods: This is a retrospective single-centre study performed at a university clinic with a high volume of TAVI. We included 461 consecutive patients (age 82±6 years, 60.5% female) scheduled for TAVI between 2012 and 2016. Based on seven questions addressing levels of patients' self-dependence assessed by nurses on admission, TAVI patients were divided into a "frail" group (at least one answer indicating limited self-dependence) and a self-dependent (non-frail) group (all other patients). We sought to assess (1) prevalence of frail TAVI patients, and (2) impact of frailty on two-year mortality assessed by Cox regression in addition to established risk scores.

Results: The prevalence of frail TAVI patients was 40.3%. Frail patients had significantly higher two-year mortality than self-dependent (non-frail) patients (25.3% vs 14.9%, p=0.014, Figure). In multivariate analysis stratified for age and left-ventricular function, body mass index (BMI), atrial fibrillation (AF) and frailty were significant predictors of increased two-year mortality (BMI, per kg/m²: HR 0.95 [95% CI 0.90-0.99], p=0.028; AF: HR 2.07 [1.35-3.18], p=0.001; frailty: HR 1.81 [1.18-2.76], p=0.006).

In addition to the Society of Thoracic Surgeons (STS) risk of mortality score, both AF and frailty significantly predicted increased two-year mortality (AF: HR 2.02 [1.32-3.09], p=0.001; frailty: HR 1.55 [1.01-2.38], p=0.045).

Conclusion: This study shows that a routine nurses' questionnaire covering levels of self-dependence serves as risk indicator for long-term mortality after TAVI. This unconventional geriatric assessment adds predictive power for two-year mortality to a conventional risk score (such as STS) and might be used to stratify patients for greatest benefit from TAVI.