

P6252

Diagnostic and prognostic accuracy of preoperative NT-proBNP added to revised cardiac risk index in elderly patients with hip fracture

I. Iglesias Garriz, M.D. Ruiz-Villa, J. Idoate, S. Jimenez Mola, A. Sanchez-Robles, F. Fernandez Vazquez

Hospital de Leon, Leon, Spain

Background: The identification of patients at highest risk after surgery for hip fracture could be of clinical value to implement post-operative actions to lessen mortality. We sought to investigate the utility of Revised Cardiac Risk Index (RCRI) and NT-proBNP in this scenario.

Methods: Patients older than 75 years with hip fracture treated with surgery were prospectively included. The end-point was overall mortality at 30 days.

Results: We enrolled 410 patients surgically-treated for hip fracture, 31 (7.6%) died during the 30-day follow-up. Patients who died were 3.5 years older (95% CI 1.3 to 5.6); $p=0.001$, and had a lower prevalence of diabetes mellitus. The prevalence of heart failure was more prevalent among patients

who died: difference of proportions 35.7% (95% CI 16.0 to 55.3); $p<0.001$ and more patients were not in sinus rhythm with a difference of 25.4% (95% CI 5.6 to 45.1); $p<0.001$. Adding NT-proBNP to a logistic regression model with RCRI as an independent variable, improved the diagnostic and prognostic metrics, with significant changes in specificity (0.59 vs 0.70, $p<0.001$) and predictive values: positive likelihood ratio (LR) 1.89 vs 2.49, $p<0.001$, negative LR 0.38 vs 0.33, $p<0.001$. The C-statistic (0.69 vs 0.77, $p=0.002$) and the net reclassification improvement were also improved.

Conclusion: Adding preoperative NT-proBNP to RCRI to appraise the risk of overall 30-day mortality rate after hip surgery improves the prediction accuracy of RCRI alone.