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ABSTRACT

04 - Valvular heart disease and general cardiology

JE19-482

Correlation between acute pulmonary embolism severity index (PESI) and prognostic of acute pulmonary embolism

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Background Prognostic assessment is important for the management of patients with acute pulmonary embolism (PE). The Pulmonary Embolism Severity Index (PESI) score has been previously validated in studies, but its widespread use in clinical practice and validity is uncertain.

Purpose We sought to validate the PESI as a predictor of short- and intermediate-term mortality.

Methods Consecutive patients admitted at our institution with a confirmed PE between January 2008 and December 2017 were screened. Information on clinical presentation, diagnostic work-up, treatment and mortality during a 30 day and 1-year follow-up was collected. To facilitate analyses, raw PESI score was dichotomized into low risk (I—II) vs. high risk (III—V) groups.

Results The cohort included 224 subjects (mean age, 58.6 ± 18.2 years; 47% male). Among these patients, 61.3% were at low risk. No significant difference in baseline characteristics between the 2 groups was found. One-year follow-up was available in 97.4% of patients. There was a significant difference in 30-day mortality between the two groups in favour of the low risk group (6.3% vs 24.1%, $P < 0.001$). This difference is maintained at 1 year.

In multivariate analysis, the PESI (class III—IV versus I—II, OR 6.2, 95% CI 2.6—11.2) was an independent predictors of an adverse outcome (death, cardiogenic shock and need for mechanical ventilation).

The discriminatory power of the PESI score to predict long-term mortality, expressed as the area under the ROC curve, was 0.81 (95%CI, 0.62—0.88) at 1 year.

Conclusions Our data indicate that the PESI score is a reproducible scoring tool in real life to risk stratify patients with acute PE, can be used to predict the prognosis of patients with PE and helps in definitive the optimal management.

Disclosure of interest The authors declare that they have no competing interest.

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Impact of Pre-Existing Left Bundle Branch Block in Transcatheter Aortic Valve Replacement Recipients

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Background The impact of pre-existing left bundle branch block (LBBB) in transcatheter aortic valve replacement (TAVR) recipients is unknown. The aim of this study was to determine the impact of pre-existing LBBB on clinical outcomes after TAVR.

Methods This multicenter study evaluated 3404 TAVR candidates according to the presence or absence of LBBB on baseline electrocardiogram. TAVR complications and causes of death were defined according to Valve Academic Research Consortium 2 definitions. Follow-up outpatient visits or telephone interviews were conducted at 30 days, 12 months, and yearly thereafter.

Results Pre-existing LBBB was present in 398 patients (11.7%) and was associated with an increased risk of permanent pacemaker implantation (PPI) (21.1% vs. 14.8%; adjusted OR: 1.51, 95% CI: 1.12—2.04) but not death (7.3% vs. 5.5%; adjusted OR: 1.33, 95% CI: 0.84—2.12) at 30 days. At a mean follow-up of 22 ± 21 months, there were no differences between patients with and without pre-existing LBBB in overall mortality (adjusted HR: 0.94, 95% CI: 0.75—1.18) and cardiovascular mortality (adjusted HR: 0.90, 95% CI: 0.68—1.21). In a sub-analysis of 2421 patients without PPI at 30 days and with complete follow-up regarding the PPI, pre-existing LBBB was not associated with an increased risk of PPI or sudden cardiac death. Patients with pre-existing LBBB had a lower LVEF at baseline and at 1-year follow-up ($P < 0.001$ for both), but those with low LVEF exhibited a similar increase in LVEF over time following TAVR compared to patients with no pre-existing LBBB ($P = 0.327$) (Fig. 1).

Conclusions Pre-existing LBBB significantly increased the risk of early (but not late) PPI after TAVR, without any significant effect on overall mortality or cardiovascular mortality. Pre-existing LBBB was associated with lower LVEF pre-TAVR, but did not prevent an increase in LVEF post-TAVR similar to patients without LBBB.

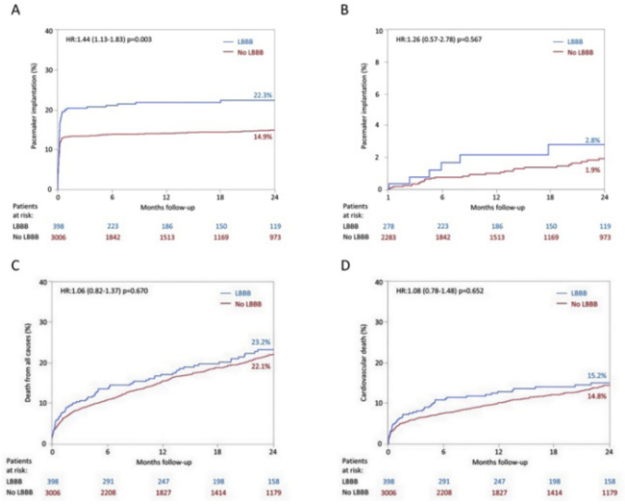

Fig. 1 Clinical events at 2-Year Follow-Up, According to Pre-Existing LBBB.

Disclosure of interest The authors declare that they have no competing interest.

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