

## Predictors of mortality in patients with left-side infective endocarditis, the ESC-EORP EURO-ENDO registry

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**Background/Introduction:** Infective endocarditis (IE) is associated with high in-hospital mortality, ranging from 16% to 25%, despite improvement in diagnostic and therapeutic strategies, mainly due to complications and heterogeneity of the disease. Baseline risk stratification is essential, in order to focus an aggressive management toward high-risk patients.

**Purpose:** We sought to assess the association between surgery and 30-day mortality rate as related to vegetation size.

**Methods:** The ESC-EORP EURO-ENDO registry is a prospective multi-centre observational study of patients presenting with definite or possible IE in Europe and ESC-affiliated/non-affiliated countries. Patients were included from January 2016 to 31 March 2018 in 156 centers from 40 countries. Clinical data, blood test analysis and multi-modality imaging tests (echocardiography, computed tomography, PET-CT, magnetic resonance) were collected. Primary endpoint was 30-day mortality. Multivariable logistic regression analysis was performed to assess variables associated with 30-day mortality. Besides, univariable analysis was performed to assess best vegetation size cut-off related to 30-day mortality.

**Results:** Among 2171 patients with left-side IE, 257 patients (11.8%) died during the first 30 days of IE diagnosis. Patient characteristics and univari-

able analysis are summarized in TABLE 1. Cut-off value for best vegetation size related to 30-day mortality was vegetation length >14mm, with a HR =2.00 (95% CI 1.59–2.51, p<0.0001) and a Harrell's Concordance of 0.58. After multivariable logistic regression analysis, factors associated with 30-day mortality risk were: vegetation size >14mm (OR =2.68, 95% CI [1.96–3.67], p<0.0001), previous stroke or transient ischemic attack (TIA) (OR =1.60, 95% CI [1.07–2.40], p=0.0235), creatinine >2mg/dL (OR =2.45, 95% CI [1.73–3.47], p<0.0001), presence of embolic events (OR =2.64, 95% CI [1.86–3.74], p<0.0001), hemorrhagic stroke (OR=3.71, 95% CI [1.80–7.64], p=0.0004), presence of heart failure or cardiogenic shock (OR =3.50, 95% CI [2.57–4.77], p<0.0001) and no cardiac surgery during the event (OR =4.07, 95% CI [2.93–5.67], p<0.0001). The C-statistic of the logistic model to predict 30-day mortality was 0.795.

**Conclusion:** Left-side infective endocarditis had a high 30-day mortality rate (11.8%). Presence of a large vegetation size (>14mm), embolic events, hemorrhagic stroke, renal failure, presence of heart failure or cardiogenic shock were associated with an increase in 30-day mortality. Performing cardiac surgery had a protective effect.