Acute Coronary Syndromes

SHORT AND LONG-TERM MORTALITY AFTER STEMI VERSUS NON-STEMI: A SYSTEMATIC REVIEW AND METAB-ANALYSIS

Poster Contributions
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Authors: Aude Marceau, Jean-Michel Samson, Nathalie Laflamme, Stéphane Rinfret, Institut Universitaire de Cardiologie et de Pneumologie de Quebec, Quebec, Canada, Centre Hospitalier Universitaire de Quebec, Quebec, Canada

Background: Acute coronary syndromes may manifest as ST-Elevation Myocardial Infarction (STEMI) or Non-ST Elevation Myocardial Infarction (NSTEMI). Although patients who present with STEMI or NSTEMI share the same cardiac risks factors, it is not clear in the literature if STEMI patients have a better or worse prognosis than NSTEMI patients, both on a short and long term perspective.

Methods: We performed a systematic review and meta-analysis of all observational studies that compared the short and long term clinical outcomes of STEMI vs NSTEMI patients. In the search criteria, we restricted to publications later than 2000, as the definition was more consistent thereafter. The 30-day post-myocardial infarction (MI) mortality was selected as the short-term outcome, and 6-12 months post-MI was chosen as the long-term outcome. In the studies, all factors that could influence prognosis were recorded, including cardiac risk factors, Killip class, time to presentation, door to balloon delays. Mortality data were pooled using random-effects model. All factors recorded were examined to see if they were related to mortality, using meta-regression and sensitivity analysis.

Results: A total of 23 studies involving 52,441 patients met our inclusion criteria. All were retrospective cohort studies. At 30 days, STEMI was associated with a higher mortality compared to NSTEMI (OR = 1.55, 95% CI [1.16 - 2.06] p = 0.00025). In the meta-regression, none of the factors examined was associated with increased risk. At one year, STEMI and NSTEMI shared similar mortality risks (OR = 1.02, 95% IC [0.8 - 1.3] p = 0.8478). In the meta-regression, the only factor associated with increased risk was age (p=0.013).

Conclusions: In this meta-analysis, the first to compare short and long term mortality in STEMI and NSTEMI patients, both types of ACS share a similar long-term prognosis, despite a worse short-term prognosis after STEMI. Younger age in STEMI is a factor related to better long-term prognosis.