Abstract: P1613

HLM classification for prognostic stratification of patients with heart failure undergoing transcatheter valve intervention

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Introduction: Severe valvulopathy as aortic stenosis (AS) and mitral insufficiency (MI) usually worsen the prognosis of patients affected by Heart failure (HF), with higher rehospitalization and mortality rates. New transcatheter approaches have been introduced for patients with a very high surgical risk. To better classify HF patients in term of prognosis, we recently proposed the HLM staging system, analogous to TNM used in Oncology, which evaluates heart damage (H), lung involvement (L) and malfunction (M) of peripheral organs (JACC 2014;20;63(19):1959-60).

Purpose: The aim of this study is to compare HLM and NYHA classification in order to assess the most accurate prognosis of HF patients candidates for transcatheter valve implantation/repair in term of rehospitalization for major cardiovascular and cerebrovascular events (MACCE) and cardiovascular mortality.

Methods: We enrolled patients suffering from HF due to severe AS or MI candidates to transcatheter valve intervention according to guidelines. Each patient was classified according to NYHA and HLM, at the entrance and at the discharge. Clinical follow-up was performed at 6 and 12 months to verify re-hospitalization for MACCE and cardiovascular mortality.

Results: 152 patients with HF and severe valvulopathy were enrolled (50% male, mean age 79.6 ± 9.3 years). The percentage related to severe aortic stenosis were: 72,37%, severe mitral regurgitation: 27,63%. At 6 months of follow-up after transcatheter valve implantation/repair, the HLM showed a greater area under the ROC curve (AUC) than NYHA, in terms of rehospitalization (HLM = 0.799 vs NYHA = 0.518) and mortality (HLM = 0.808 vs NYHA = 0.522); similar results were observed at 12 months of follow-up, for rehospitalization (AUC for HLM = 0.846 vs NYHA = 0.509) and mortality (AUC for HLM = 0.866 vs NYHA = 0.517).

Conclusions: According to our preliminary results, HLM classification has a greater prognostic power compared to NYHA in terms of re-hospitalization and cardiovascular mortality in patients with HF undergone transcatheter valve intervention. HLM provides a more comprehensive assessment of cardiac, pulmonary and peripheral organs involvement, rather than only cardio-pulmonary symptoms evaluation. HLM might be extremely useful in patients with HF and severe valvopathy in order to better identify the right patient at the right moment to undergo intervention.