Severe aortic stenosis in octogenarian: is surgical aortic valve replacement a good option?

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Introduction: Aortic stenosis (AS) is the most prevalent valvular heart disease among the elderly, reaching 8,1% in 85 years-old patients. Symptomatic severe AS entails a high risk of morbidity and mortality without valve replacement, and increasing age is associated with higher surgical risk.

Purpose: To determine the prognostic impact of advanced age in patients with severe AS referred to surgical valve replacement.

Methods: We conducted a retrospective study encompassing patients referred to surgical aortic valve replacement due to severe AS, from January 2016 to December 2018. Clinical characteristics, diagnostic studies and follow-up were analysed. Patients were divided in two groups according to the age: <80 and ≥80 years old. Independent predictors of mortality and/or re-hospitalization were identified through a binary logistic regression analysis, considering $p = 0,05$.

Results: A total of 222 patients were included, with a 64,4% male predominance and a median age of 75 years old. 27,5% had concomitant surgical coronary artery disease and 87,4% waited in an out-patient setting. Median delay until surgery was 87 days and median follow-up after surgical referral was 517 days. 59 patients (26,8%) had ≥ 80 years old. Male gender (69,6% vs 50,8%; $p = 0,01$), smoking habits (14,3% vs 1,7%; $p = 0,024$), higher glomerular filtration rate (75,5 vs 63,2 ml/min; $p = 0,001$) and lower Euroscore II values (2,89% vs 4,64%; $p = 0,003$) were more common in younger patients. Global mortality rate (27,1% vs 15,5%; $p = 0,05$) and the composite of mortality or re-hospitalization (52,5% vs 36,6%; $p = 0,034$) were more frequent in older patients. Despite re-hospitalizations were also more common (37,3% vs 29,2%), they did not reach statistical significance ($p = 0,252$). After multivariate analysis, advanced age was not an independent predictor of mortality and/or re-hospitalization. In this population, only the presence of extracardiac arteriopathy ($p = 0,007$; $p = 0,006$) and pulmonary hypertension ($p = 0,004$; $p = 0,002$) were both independent predictors of mortality and the composite of mortality or re-hospitalization.

Conclusion: Older patients with AS have higher mortality, but advanced age was not an independent predictor of mortality and/or re-hospitalization. The decision to perform aortic valve replacement should be discussed in the Heart Team, considering patient's comorbidities and performing a comprehensive geriatric evaluation, not just focusing on age itself.