Emergent coronary angiography in a 90-plus population – outcomes at 5-years follow-up

R. Alves Pinto, T. Proenca, M. Martins Carvalho, S. Torres, C.X. Resende, P.D. Grilo, A.F. Amador, C. Costa, J. Calvao, A. Cabrita, C. Marques, P. Dias, F. Macedo

Sao Joao Hospital, Porto, Portugal

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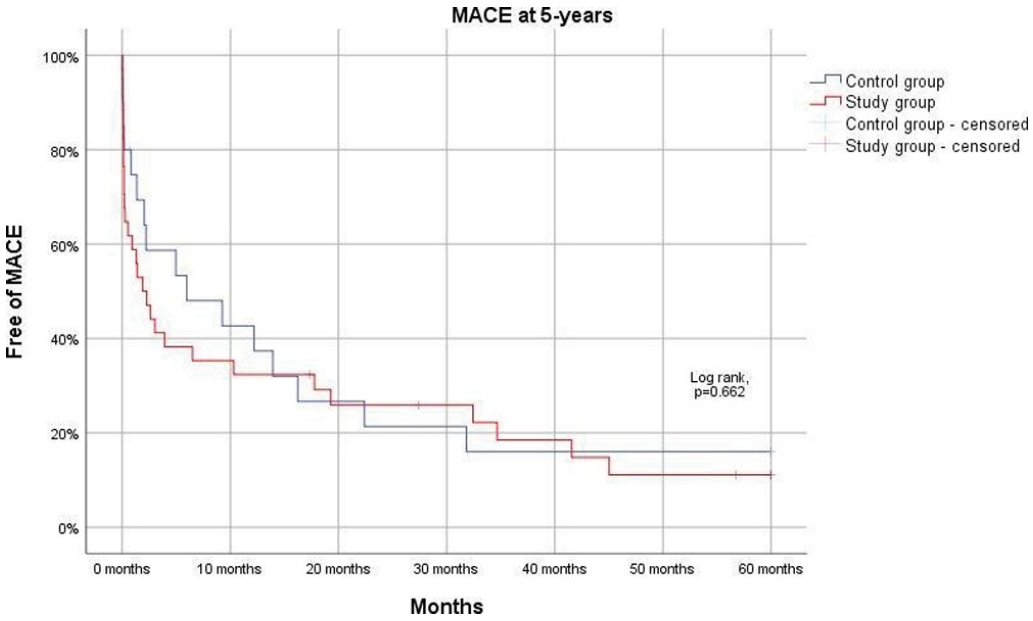
Introduction: Elderly people represents a vulnerable and increasing population presenting with acute coronary syndrome (ACS). Several data suggest the benefit of an early revascularization in ST-elevation (STE)-ACS or non-STE-ACS with positive troponin. However questions persist considering the unavoidable adverse prognosis, patient's functional and cognitive status, comorbidities and preferences.

Purpose: To evaluate a group of very old patients who underwent emergent coronary angiography (CA).

Methods: We retrospectively analyzed a group of very old patients (≥90 year-old) who underwent emergent CA from January 2008 to September 2020. Clinical features were collected; survival and MACE were compared with an aged-matched control population with ACS not submitted to emergent CA. MACE was defined as a composite of all-cause death, ischemic stroke, ACS or hospitalization for acute heart failure.

Results: A total of 34 patients were enrolled: 56% female, with mean age 92±2 year-old. As for the cardiovascular risk factors, 88% had hypertension, 49% dyslipidaemia, 12% diabetes and 15% were previous smokers. Concerning other comorbidities, 27% had atrial fibrillation, 21% chronic kidney disease, 12% had cerebrovascular disease and median modified Rankin scale for neurologic disability was 2. Almost all patients had STE-ACS, 68% anterior and 29% inferior, inferolateral or inferoposterior infarction; 3% had infarction of indeterminate location. In CA, 65% had multivessel disease, 14% of them involving left main coronary artery; coronary intervention was performed in 71% of patients (mostly stent implantation), the remaining 29% had no invasive treatment. Concerning to clinical status, median troponin was 131 517 ng/L and median BNP 496 pg/mL; 36% of patients evolved in Killip class III or IV and only 32% of patients had normal left ventricular systolic function. Regarding mortality, 38% of patients died in the index-event versus 25% in the aged-matched control group (p=0.319). During five years of follow-up, there was no significant difference in mortality between the two groups (Log Rank, p=0.403) and more than 50% of patients died in two years. Comparing MACE occurrence, both groups were similar (Log Rank, p=0,662), with more than 80% having at least one event in five years.

Conclusion: Very old patients submitted to emergent CA had a high percentage of multivessel disease, left ventricular dysfunction and mortality during hospitalization. Compared to an aged-matched control group, they showed no survival or MACE benefit of emergent CA strategy during a five-years follow-up. Although this is a small study, these findings highlight the efforts that should be made to optimize care in this vulnerable population, under-represented in the clinical trials. Special caution should be given to avoid possible unnecessary discomfort in this setting.



MACE analysis