

Outcomes of nonagenarians with acute coronary syndrome

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Funding Acknowledgement: Type of funding source: None

Background: Myocardial infarction (MI) in nonagenarians is associated with high morbidity and mortality. Nonetheless, this population has typically been underrepresented in cardiovascular clinical trials.

Objective: The aim of this study was to evaluate outcomes of nonagenarian patients presenting with MI who underwent either conservative or invasive management.

Methods: We retrospectively included all consecutive patients equal to or older than 90yo admitted with non-ST segment elevation (NSTEMI) or ST segment elevation MI (STEMI) in four tertiary care centers between 2005 and 2018. Patients with type 2 myocardial infarction were excluded. We collected patients' baseline characteristic and procedural data. In-hospital and at 1-year follow-up all-cause mortality and major adverse cardiovascular events were assessed.

Results: 523 patients (mean age 92.6±2 years; 60% females) were analyzed. Overall, 184 patients (35.2%) underwent percutaneous coronary intervention (PCI), increasing over the years, mostly in STEMI group (from 16% of patients in 2005 to 75% in 2018). PCI was preferred in those sub-

jects with less prevalence of disability for activities of daily living ($p<0.01$). The use of a radial access (76.6%) and bare metal stents (52.7%) was predominant. No significant differences were found in the incidence of major bleeding events or MI-related mechanical complications between both strategies. During index hospitalization, 99 (18.9%) patients died. Whereas no differences were found in the NSTEMI group ($p=0.61$), a significant lower in-hospital mortality was observed in STEMI group treated with PCI ($p<0.01$). At one-year follow up, 203 (38.8%) patients died, most of them due to a cardiovascular cause (60.6%). PCI was related to a lower all-cause mortality in either NSTEMI ($p<0.01$) or STEMI groups ($p<0.01$) however, lower cardiovascular mortality was only found in STEMI group ($p=0.03$).

Conclusion: An invasive approach was performed in over a third of nonagenarian patients, carrying prognostic implications and with a few numbers of complications. PCI seems to be the preferred strategy for STEMI in this high-risk population in spite of age.

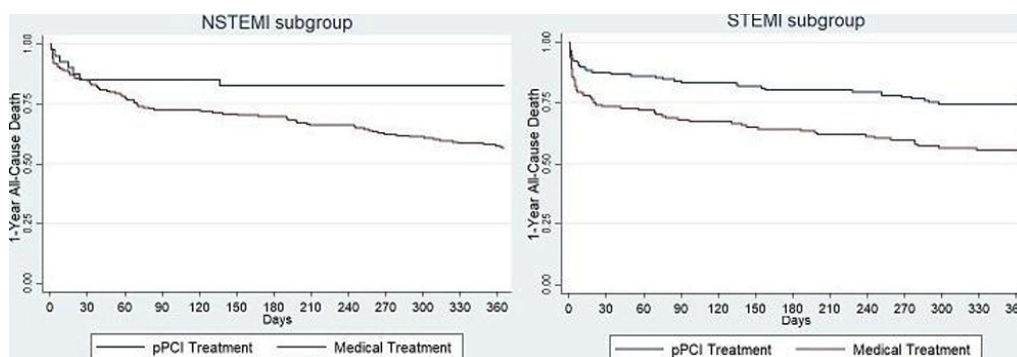


Figure 1