Clinical impact of peripheral artery disease on acute coronary syndrome

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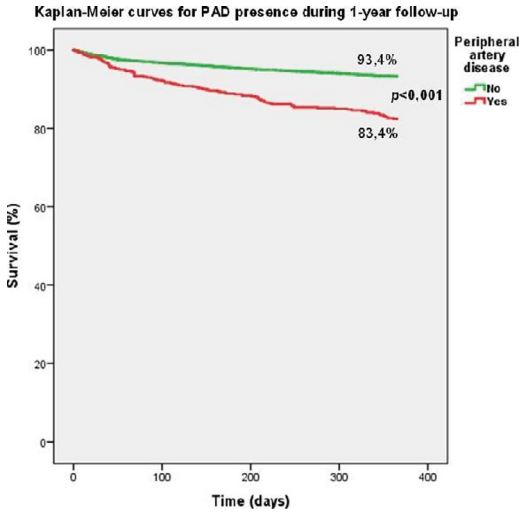
Introduction: Peripheral artery disease (PAD) and acute coronary syndrome (ACS) are two diseases with high morbidity and mortality and, sometimes, may be present simultaneously, making patient management more complex.
Purpose: This study sought to characterize and evaluate the prognostic impact of PAD in patients with an ACS.
Methods: This was a retrospective study of patients admitted with an ACS, periodically included in a national multicenter registry, between October 2010 and September 2019.
Results: Of a total of 26036 patients, 1429 had previous history of PAD. This group had a higher predominance of men (79,5% vs 72,0%, p<0,001) and was older (71±11 years vs 66±14 years, p<0,001). Besides having a higher burden of cardiovascular risk factors, they also had more past history of myocardial infarction (MI), stroke and chronic kidney disease.
In patients with PAD, non-ST segment elevation MI was the most frequent type of MI (58,6% vs 45,0%, p<0,001) and left ventricular ejection fraction assessed during hospitalization was lower (49±13% vs 51±12%, p<0,001). These patients were submitted less frequently to a coronary angiography (74,0% vs 85,2%, p<0,001) and, when performed, more cases of multivessel coronary artery disease were found (70,6% vs 50,4%, p<0,001). Nevertheless, they were less likely to undergo revascularization, with fewer angioplasties performed (47,8% vs 64,7%, p<0,001), despite the greater number of coronary artery bypass grafting (9,0% vs 6,0%, p<0,001). Both during hospitalization and at discharge, ticagrelor, beta-blockers and ACE inhibitors were less prescribed in the PAD group. Statins prescription was also lower, but only at discharge.
In a multivariate regression analysis, we found that, during hospitalization, the presence of PAD was associated with a significant higher risk of myocardial reinfarction (OR 1,90 (CI 1,18–3,06)) and death (OR 1,43 (CI 1,03–2,00)). In addition, there was a tendency for more strokes (OR 1,88 (CI 0,98–3,61)). During a 1-year follow-up, PAD was also independently associated with a significant increase in mortality (HR 1,50 (CI 1,16–1,95)).
Conclusions: PAD is a disease present in patients with a higher number of comorbidities and is associated with more severe coronary events. Nevertheless, these patients seem to receive less evidence-based therapy. In this study, PAD was independently associated with a significant increase in short and medium-term major adverse events.



Kaplan-Meier curves of 1-year follow-up