Cardiovascular Disease in Special Populations – Cardiovascular Disease in the Elderly

Acute coronary syndromes in the elderly: prognostic impact of anaemia


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Funding Acknowledgement: Type of funding sources: None.

Introduction: The increase in life expectancy is a reality and cardiovascular disease incidence rises with it. The elderly are fragile patients with high prevalence of multiple comorbidities. Anaemia is one of them and, in most cases, has multifactorial causes. After an acute coronary syndrome (ACS), the thrombotic versus haemorrhagic risks in these patients are hard to balance.

Aim: The aim of this study is to evaluate prognostic impact of anaemia in the elderly after an ACS.

Methods: Retrospective analysis of consecutive patients admitted to a single Intensive Coronary Unit between 2009 and 2016 with the diagnosis of ACS. Patients younger than 80 years old were excluded. A complete blood count was collected upon admission and anaemia was defined for haemoglobin values below 12.5mg/dL. Cox regression analysis and Kaplan-Meyer curves were conducted to determine prognostic value of anaemia in this specific population. Multivariate analysis with other comorbidities and antithrombotic therapy was also performed.

Results: A total of 353 patients (median age of 84.0±6.0 years old; 52.1% males; 51.3% with anaemia) were enrolled. In cox regression analysis, anaemia predicted mortality (HR 1.614; 95% CI 1.199–2.172; P=0.002). In multivariate analysis – including gender, presence of hypertension, diabetes, chronic kidney disease and atrial fibrillation (AF) at admission, anaemia proved to be an independent predictor of mortality (HR 1.521, 95% CI 1.199–2.069; P=0.007). Adding all previous and discharge antithrombotic therapy – antiplatelet inhibition and oral anticoagulants – to the equation, anaemia maintained its prognostic value (HR 2.157; 95% CI 1.130–4.116; P=0.020). Both AF and being discharged from the hospital with ticagrelor also increased mortality risk in these patients (HR 2.188, 95% CI 1.177–4.070, P=0.13 for AF; HR 1.906, 95% CI 1.011–3.594, P=0.046 for ticagrelor at discharge).

Conclusions: After an ACS, anaemia proved to be an independent predictor of mortality in the elderly. This emphasizes the importance of its adequate aetiology investigation and treatment and careful selection of antithrombotic therapy following an ACS.