Trends in major bleeding events in patients with acute coronary syndrome

A. Cordero, D. Escribano, V. Bertomeu-Gonzalez, J. Moreno-Arribas, M. Monteagudo, J.M. Lopez Ayala, P. Perez-Berbell, M.A. Quintanilla, P. Zuazola

University Hospital of San Juan, Alicante, Spain

Funding Acknowledgement: Type of funding sources: None.

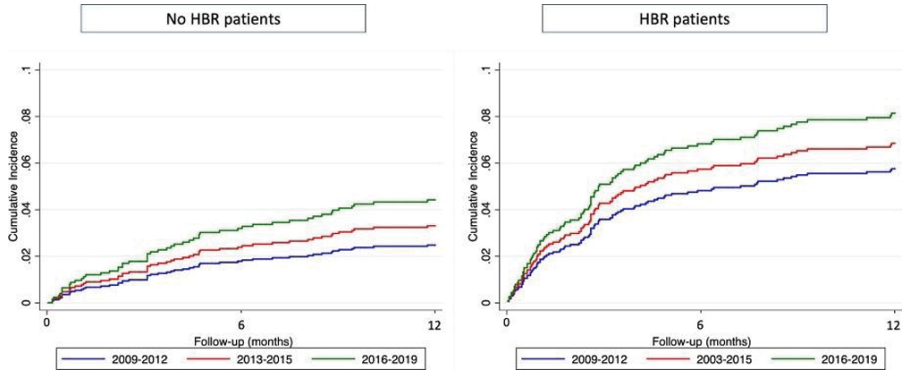
Background: Bleeding events incidence has gained a crucial role in acute coronary patients (ACS) due to its independent effect prognostic value.

Methods: We assessed the trend of in-hospital and first-year-after-discharge major bleeding events (MB) in all ACS admitted in a single center between January 2009 and Agoust 2019. MB was defined as those fitting definitions 3 or 5 of the BARC consortium. Patients were categorized as high-bleeding risk (HBR) if according to the 2019 Academic Research Consortium HBR consensus if they met at least one major or two minor criteria. Inclusion period was divided in 3 groups: 2009–2012 (n=884; 27.4%), 2013–2015 (n=1,047; 32.5%); 2016–2019 (n=1,294; 40.1%). Post-discharge MB was assessed by competing events regression models, taking all-cause mortality as a competing event, and results are presented as sub-hazard ratio (sHR).

Results: We included 3225 patients, mean age was 68.4 (29.7), 25.7% females, 1,108 32.1% had diabetes and 44.0% STEMI. Radial access was perfume in 92% of the angiographies in the 3 time-periods. A significant decrease in dual antiplatelet treatment (DAPT) before angiography was noted (69.0%; 56.3%; 53.6%; p=0.001) with a decreasing pattern in clopidogrel and increase in ticagrelor and prasugrel. A total of 1,591 (46.2%) were categorized as HBR patients. A non-significant trend to higher incidence of in-hospital MB was noted through the 3 time periods: 1.39%; 1.43%; 2.55% (p=0.056) and it was mainly driven by the significant increase only in HBR patients: 2.21%; 3.55%; 6.26% (p=0.003). Multivariate analysis identified age (OR: 1.06 95% CI 1.03–1.08, p<0.001) and the time period 2016–2019 (OR: 1.96 95% CI 1.01–3.84; p=0.031) as main variables associated to higher in-hospital MB.

In contrast, postdischarge MB did not change overtime (p=0.155) and trends were the same in HBR and non-HBR patients (figure). The competing risk regression analysis, adjusted by age, gender, previous cardiovascular disease, revascularization and medical treatments, identified that the leading factors for postdischarge MB were diabetes (sHR: 1.37; 95% CI 1.01–2.92), time-period 2016–2019 (sHR: 1.52; 95% CI 1.01–2.30), HBR patient (sHR: 1.91; 95% CI 1.28- 2.87) and and previous heart failure (sHR: 2.26; 95% CI 1.264.40)

Conclusions: This continuous 10-year registry highlights the increasing trend of in-hospital mainly driven by the incidence in HBR patients. In contrast, postdischarge MB increased in all patients.



Post-discharge MB incidence