Acute coronary syndrome patients with two minor high-bleeding risk criteria have the same bleeding rate that patients with one major criteria

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Background: In 2019 the Academic Research Consortium of high-bleeding risk (ARC-HBR) proposed a new and binary definition of high-bleeding risk (HBR) patients based on the presence of 1 major or 2 minor criteria.

Methods: Prospective study of all consecutive patients admitted for ACS in two different centers. We analyzed bleeding incidence in patients with 1 major criteria (1MC) vs. 2 minor criteria (2mC) using the 2019 ARC-HBR consensus. Bleeding events were collected according those fitting definitions 3 or 5 of the BARC consortium.

Results: We included 8,724 patients included and 40.9% we classified as HBR; 20.9% for 1MC and 20.0% for 2mC. In-hospital mayor bleeding rate was 8.6%; no-HBR patients had 0.3%, 2mC 15.1% and 1MC 29.7% ($p<0.001$ for the comparison). In contrast, the statistically highest in-hospital mortality was observed in patients with 2mC (11.4%), followed by patients with 1MC (8.0%) and no-HBR patients (2.0%).

During follow-up (median time 57.8 months) all-cause mortality rate was 21.0% and cardiovascular dead 14.2%. The incidence of post-discharge major bleeding was 10.5%. No-HBR patients had the lowest bleeding rate (7.4%) and no difference was observed in patients with 1MC (14.6%) or 2mC (15.8%) (figure). The multivariate analysis, adjusted by age, gender, medical treatment, atrial fibrillation and revascularization and considering all-cause mortality as competing risk, showed independent association of 1MC (sHR: 1.46, 95% 1.22–1.75) and 2mC (sHR: 1.31, 95% CI 1.05–1.63) with post-discharge major bleeding.

Conclusions: HBR patients according to the 2019 ARC-HBR containing 2mC or 1MC are at similar and higher risk of in-hospital or post-discharge bleeding events