Acute Coronary Syndromes

PLATELET REACTIVITY IN OLDER PATIENTS UNDERGOING INVASIVE MANAGEMENT OF NON-ST ELEVATION ACUTE CORONARY SYNDROME

Poster Contributions
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Background: Optimal platelet inhibition is paramount in patients undergoing percutaneous coronary intervention. High platelet reactivity (PR) is associated with thrombotic complications; low reactivity is associated with bleeding risk, particularly in older patients. Although wide inter-individual variation exists in response to antiplatelet agents such as adenosine diphosphate (ADP) receptor antagonists, few data exist regarding pre-procedure PR in older patients with non-ST-elevation acute coronary syndrome (NSTEACS), undergoing invasive treatment.

Methods: Platelet reactivity was evaluated in 49 ≥75 year old patients, who presented with NSTEACS, for invasive management, to a tertiary cardiac centre. Reactivity to ADP and thrombin receptor agonist peptide-6 (TRAP) was evaluated by multiple electrode aggregometry, using the point-of-care Multiplate™ Analyzer (Roche, Switzerland). High PR was defined as: ADP ≥ 46U or TRAP ≥ 113U (literature-derived; associated with thrombosis), low PR was defined as ADP ≤ 19U or TRAP ≤ 50 (associated with bleeding). All data are presented: mean (standard deviation).

Results: 49 patients (mean age 82.0 [4.6], 55.1% male) had a pre-procedural ADP of 22.8U (13.1) and TRAP of 87.3U (28.4). Significant inter-individual variation was observed (ADP ranged from 2.5 - 49.3U, TRAP ranged from 23.6 - 136.3U). 11 (22.4%) patients were classified as having high PR, and 24 (49%) had low PR, measured by either ADP or TRAP. Platelet reactivity status did not correlate with baseline variables, including age ($p = 0.64$), sex ($p = 0.68$), smoking status ($p = 0.24$), diabetes ($p = 0.78$), history of ischaemic heart disease ($p = 0.38$) or frailty ($p = 0.07$). A significant association between TRAP and platelet count was observed ($p = 0.02$).

Conclusion: Further optimisation of antiplatelet pharmacotherapy is required in older patients presenting with NSTEACS. Nearly half had low platelet reactivity, which could increase risk of bleeding. Recommendations, in particular those relating to drug dosage from randomized studies, consisting of primarily younger patients, may not be applicable to older cohorts. Further studies in this cohort are warranted.