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PLATELET REACTIVITY IN METABOLIC SYNDROME: RELATIONSHIP BETWEEN GLYCEMIC CONTROL, OBESITY AND ON-TREATMENT PLATELET REACTIVITY

Oral Contributions

Room 207 A

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Background: Patients with metabolic syndrome (MS) have higher platelet reactivity than those without MS. The aim of this study was to evaluate the relationship between platelet reactivity and each component of MS.

Methods: Data were prospectively collected from patients on dual-antiplatelet therapy undergoing elective percutaneous coronary or peripheral artery intervention at a tertiary center. MS was diagnosed with ≥ 3 of the following criteria: Body mass index (BMI) ≥ 30 kg/m², hypertension (blood pressure $>130/85$ mmHg), triglycerides (TG) ≥ 150 mg/dL, high density lipoprotein (HDL) (men <40 mg/dL, women <50 mg/dL), HbA1c $\geq 5.7\%$ or history of diabetes. P2Y₁₂ reaction units (PRU) are presented as median [interquartile range] and compared across groups with Mann-Whitney/Kruskal-Wallis test.

Results: Of the 767 patients in the cohort, 459 (59.8%) met criteria for MS. PRU was higher in patients with MS compared to patients without MS (208 [116-280] vs 177 [103-244], $p = 0.001$). In patients with MS only, PRU increased with worsening glycemic control (Figure 1A), even after adjusting for age, gender and other MS criteria (OR 1.17 [1.003-1.368], $p=0.04$). PRU was higher in patients with abdominal obesity but did not differ significantly in patients with obesity by BMI (Figures 1B-C). There were no differences in PRU according to the presence of hypertension, TG, or HDL criteria.

Conclusion: Higher platelet reactivity in MS appears to be related predominately to abnormal glycemic control and abdominal obesity.

