Prevalence of clopidogrel non-responders among patients with stable angina pectoris scheduled for elective coronary stent placement.

Abstract: Dual antiplatelet therapy with aspirin and clopidogrel decreases the rate of stent thrombosis in patients undergoing percutaneous coronary intervention (PCI). However, despite intensified antiplatelet treatment, up to 4.7% of the patients undergoing coronary stenting develop thrombotic stent occlusion, suggesting incomplete platelet inhibition due to clopidogrel resistance. We evaluated the percentage of clopidogrel non-responders among 105 patients with coronary artery disease (CAD) undergoing elective PCI. All patients were treated regularly with aspirin 100 mg/d and received a loading dose of 600 mg clopidogrel followed by a maintenance dose of 75 mg/d before PCI. Clopidogrel non-responders were defined by an inhibition of ADP (5 and 20 Mol/L) induced platelet aggregation that was less than 10% when compared to baseline values 4 h after clopidogrel intake. Semi-responders were identified by an inhibition of 10 to 29%. Patients with an inhibition over 30% were regarded as responders. We found that 5 (ADP 5Mol/L) to 11% (ADP 20 Mol/L) of the patients were non-responders and 9 to 26% were semi-responders. Among the group of non-responders there were two incidents of subacute stent thrombosis after PCI. We conclude that a subgroup of patients undergoing PCI does not adequately respond to clopidogrel, which may correspond to the occurrence of thromboischemic complications. Point-of-care testing
may help to identify these patients who may then benefit from an alternative antiplatelet therapy.