

Clopidogrel "Nonresponsiveness": Platelet Monitoring before PCI: Is it Feasible? Is it Necessary?

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Antiplatelet therapy comprises the cornerstone strategy during and following PCI, however, ischemic events such as post-PCI MI and stent thrombosis still remain an important concern and highlights the need for improved treatment strategies. A major limitation of current treatment is the application of a "one size fits all" strategy that completely ignores the evaluation of the individual antiplatelet response. Pharmacodynamic studies have revealed the limitations of aspirin and clopidogrel treatment that include response variability, and a high prevalence of antiplatelet non-responsiveness associated with significant risk for recurrent ischemic events.

Aim: To test the feasibility to perform platelet reactivity in patients undergoing PCI and the incidence of clopidogrel "nonresponsiveness".

Methods: In all patients scheduled for a procedure, platelet reactivity using VerifyNow or Multiplate, was measured before or at the entrance to the cath lab, so the operator had this information before the PCI.

Results: In the study period platelet function was analyzed from 186 consecutive patients with more than 12 hours of Clopidogrel treatment, referred for elective or urgent diagnostic catheterization. The information was available within few minutes with the VerifyNow and after 40 minutes with the Multiplate. We found that among those on chronic Clopidogrel 77/186 [41%] were nonresponders.

Discussion: Measurement of platelet reactivity can be done in clinical practice in elective as well as in urgent patients before PCI. This information is important in decision making, however further studies are needed to guide us with this information.