



# Evaluation of response to Clopidogrel therapy in patients with acute coronary syndrome by platelet aggregation method

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**Background:** Studies and clinical practice have shown the effectiveness of preventive administration of clopidogrel alone or associated with aspirin in various types of cardiovascular diseases. However, long-term administration of clopidogrel also identified situations of therapeutic inefficiency. One of the causes of inefficiency is the complex interindividual variability of the enzymes involved in the substance metabolism.

**Objective:** Study aims to identify cases of patients non-responders to therapy with clopidogrel and emphasize the importance of implementing routine genetic testing.

**Methods:** The study was performed on 24 patients hospitalized in the cardiology department, in Hedi Chaker Hospital, Sfax, Tunisie, after an acute coronary syndrome. They were sampled for the ADP platelet reactivity test. The result of this test classifies patients as nonresponders or resistant to clopidogrel (value of ADP test > 46 IU) and those whose therapy should be effective (ADP value between 19-46 IU). Clinically, efficacy of therapy was assessed by the number of patients that suffered cardiovascular events during the evaluation.

**Results:** The mean value of the test was  $25.63 \pm 3.66$  IU, but for 25% of patients the test indicated the probability of therapeutic resistance.

**Conclusions:** The high percentage of nonresponsive patients indicates the need for pre-treatment testing with this antiplatelet agent, which is included in all post-acute vascular event therapy regimens. The risk of long-term administration is possibly fatal ischemic recurrence.

**Key words:** Clopidogrel, treatment resistance, genetic testing

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