

CYP2C19*17 Polymorphisms And Platelet Aggregation In Coronary Artery Disease Patients With Clopidogrel

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Background:

Clopidogrel is the alternative therapy for patients with Coronary Artery Disease (CAD) that couldn't use Aspirin as antiplatelet. There's some factors that contribute to clopidogrel effectiveness, such as obesity, Diabetes Mellitus, Smoking, and genetic polymorphisms.

Objective:

The aim of this study is to analyze the CYP2C19*17 polymorphism related with platelet aggregation as marker of Clopidogrel effectiveness.

Methods:

Cross sectional study was used. Some criteria were used for patient recruitment such as: compliance with drug therapy (measured by Morisky Medication Adherence Scale), without diabetes mellitus, no obese and no smoking. Patients used clopidogrel for 3 months. Blood sample was collected for genetic polymorphism analysis and platelet aggregation. Genetic

polymorphisms would analyze by Polymerase Chain Reaction and Platelet Aggregation with Light Transmission Aggregometry.

Result

20 CAD patients used for this study. 30% patients have polymorphisms in CYP2C19*17. 80% patients have hipoaggregation and 20% have normoaggregation. In this study, 30% patients that have CYP2C19*17 polymorphisms still have a normal platelet aggregation. None of them have a high level of platelet aggregation.

Conclusion:

Patients with CYP2C19*17 polymorphisms have a normal and low level of platelet aggregation.

Keyword: clopidogrel, CYP2C19 polymorphisms, platelet aggregation