

ABSTRACT**ANALYSIS OF PERCENTAGE OF PLATELET AGGREGATION ON PATIENTS WITH CORONARY HEART DISEASE IN USE OF COMBINATION OF DUAL ANTIPLATELETS TICAGRELOR-ASPIRIN**

Background : Coronary heart disease (CHD) is a form of cardiovascular disease which has been the biggest cause of death in the last few decades. In Indonesia, based on the 2013 Riskesdas data it shows that CHD is the second largest cause of death after stroke, at 12.9%

Objective : This study aims to analyze platelet aggregation on patients with coronary heart disease in use of combination of dual antiplatelet ticagrelor-aspirin.

Methods : In this study, the percentage analysis of platelet aggregation was carried out in patients with a diagnosis of coronary heart disease who received a combination of ticagrelor-aspirin therapy. The maintenance dose of ticagrelor used is 90 mg every 12 hours, combined with low-dose aspirin which is 100 mg given every 24 hours. The percentage of platelet aggregation in this study was measured using the Light Transmission Aggregometry (LTA) tool using the addition of a selected agonist, ADP.

Results : Percentage of platelet aggregation in CHD patients receiving ticagrelor-aspirin therapy was then measured and from the mean percentage of platelet aggregation which is 41.56% with deviation standart of 16.32%, it is beyond the range of platelet aggregation cutoff that define ischemic and bleeding risks within the range of 19-49%. Based on the percentage value of aggregation between patients who have risk factors for smoking, hypertension, and DM with patients who does not have risk factors, it was concluded that in the group with a history of DM had a higher percentage of platelet aggregation when compared with patients with a history of Non DM, while patients with risk factors for smoking and hypertension have a lower aggregation percentage value compared to patients who have no history of smoking and hypertension. Although in DM patients the percentage of platelet aggregation is higher when compared with patients with a history of Non-DM, after being tested statistically these results are not statistically significant. However, it can be shown that in patients with a history of DM an increase in platelet activity, so that the antiplatelet used works better in patients with a history of Non-DM.

Conclusion : The mean percentage of platelet aggregation is beyond the range of platelet aggregation cutoff that define ischemic and bleeding risks, also there were no significant difference in percentage of platelet aggregation between groups of patients with a risk factors of smoking, hypertension, and DM.

Keywords : Coronary Heart Disease, platelet aggregation, light transmission aggregometry