
Effect of Clopidogrel Treatment in Patients with no-ST-elevation Myocardial Infarction

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Abstract: Objective To evaluate the efficacy of combined use of clopidogrel in the treatment of non ST segment elevation myocardial infarction. Method: Sixty patients diagnosed with acute non ST segment elevation myocardial infarction were randomly divided into three groups: standard treatment group (control group), combined clopidogrel 1-month group (1-month group), and combined clopidogrel 6-month group (6-month group). The observation indicators were cardiovascular events that occurred within six months. As a result, 13 cases (65%) in the control group, 6 cases (30%) in the 1-month group, and 1 case (5%) in the 6-month group experienced cardiovascular events. The comparison between the January group and the control group, as well as the June group, showed $P < 0.05$. Conclusion: The combination of standard treatment and clopidogrel in the treatment of acute non ST segment elevation myocardial infarction can effectively prevent cardiovascular events, and the combined use of 6 months is more effective than 1 month of treatment.

Keywords: Clopidogrel; Non ST segment elevation myocardial infarction; Cardiovascular events

Acute coronary syndrome (ACS) is an emergency in coronary heart disease, covering a range of clinical types from unstable angina (UAP) to non ST segment elevation myocardial infarction (NSTEM I), ST segment elevation myocardial infarction, and sudden death. NSTEM I is a common life-threatening cardiovascular emergency in ACS. Despite the rapid progress in understanding its pathophysiology and the rapid development of new drug and interventional treatments, there is still some controversy over the exact treatment measures. Whether it is drug therapy or interventional therapy, the ultimate goal is to reduce the recurrence of cardiovascular events and the occurrence of heart failure. This study provides some clinical evidence for the effective treatment of NSTEM I using standard therapy combined with clopidogrel.

In recent years, people's understanding of ACS has been deepening, and it is currently believed that the rupture of unstable plaques and surface thrombosis are the pathological basis for most ACS cases. The activation of platelets is the initiating factor. Pathologically, NSTEM I is believed to be a white thrombus formed by platelet aggregation, resulting in obstruction of the coronary artery. Therefore, antiplatelet therapy is crucial for NSTEM I. The new drug therapy has brought about significant changes in its prognosis, but effective methods are still controversial. The standard treatment is to use aspirin as an antiplatelet drug, which inhibits platelets by inhibiting cyclooxygenase. However, the position of aspirin as the preferred single antiplatelet drug has changed. The aggregation of platelets occurs through various pathways, among which the activation of adenosine diphosphate (ADP) receptors is an important link. Clopidogrel inhibits the aggregation of blood platelets by antagonizing ADP receptors, thereby blocking the activation of ADP mediated glycoprotein GP IIb/IIIa reactivators. Clopidogrel itself has no activity and is metabolized by the liver to become an active compound. The peak level of antiplatelet activity of the metabolite is approximately 1 hour; However, if there is no load dose of medication, it takes about 5 days to achieve the maximum platelet inhibitory effect. The combination of the two can enhance the

inhibition of platelets and reduce the formation of thrombosis by inhibiting platelets, thereby reducing acute coronary events. Consistent with the results of the CURE experiment . Karnon et al.demonstrated that the combined use of clopidogrel can be used as a routine treatment for NSTEM I. Antiplatelet therapy requires sustained action because the human body produces a certain amount of newly generated platelets every day. When the number of newly generated platelets exceeds 10% of the total, platelet function is restored. Therefore, we observed a significant decrease in the incidence of recurrent angina, myocardial infarction, and sudden death in the 6-month group, with no serious complications.

The use of standard therapy combined with clopidogrel in the treatment of acute non ST segment elevation myocardial infarction can effectively prevent the occurrence of cardiovascular events, and the use of 6 months is significantly more effective than 1 month.

Reference:

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