

Aspirin, Clopidogrel and Lumbrokinase in Treatment for Venous Thrombosis in 16 Elderly

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【Abstract】 OBJECTIVE: To study the effect of aspirin, clopidogrel and lumbrokinase in treatment for multiple sites of venous thrombosis in elderly. METHOD: Doppler ultrasound was used to choose sixteen hospitalized and sixteen non-hospitalized patients with jugular vein thrombosis and deep vein thrombosis. They were given aspirin (100mg, once daily) + clopidogrel (75mg, once daily) + lumbrokinase (2 capsules, three times daily) for a three months course treatment. Blood coagulation, platelet count and vascular color Doppler ultrasound observations were made before and after treatment. At the same time, a control group had aspirin alone (100mg, once daily) for a three months course treatment. Venous Doppler ultrasound was taken in both groups before and after treatment. RESULTS: Combination therapy was effective, there was disappearance of thrombus, venous recanalization ($P<0.01$), thrombosis and platelet aggregation were significantly improved ($P<0.01$), but no change in platelet count ($P>0.05$). The effect of aspirin alone was not obvious in venous recanalization ($P>0.05$), degree of improvement in thrombosis and platelet aggregation ($P>0.05$). CONCLUSION: Combination therapy of aspirin, clopidogrel, and lumbrokinase helped in resolution of venous thrombosis and recanalization and had a unique role in the treatment of venous thrombosis.

[keywords] aspirin; clopidogrel; lumbrokinase; venous thrombosis; elderly

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Venous thrombosis is a common, frequent-occurring disease in the elderly and is non-age specific. Due to the complexity in the cause of the disease, there are not treatments yet. Majority of the seniors are less active or inactive in addition to diabetes, hypertension, hyperlipidemia, coronary heart disease, myocardial infarction and etc., thus have high incidence of venous thrombosis. Combination therapy of aspirin, clopidogrel and lumbrokinase in treating venous thrombosis in the elderly was effective.

1. MATERIAL AND METHOD

1.1 General Information Combination therapy group had eight patients with internal jugular vein thrombosis and eight patients with deep vein thrombosis. They were elderly men with an average age of 86 years. Color Doppler ultrasound showed one patient had a 9cm occlusion in the left internal jugular vein, one patient had

complete occlusion from right femoral vein to right popliteal vein, the others patients had partial occlusions. Aspirin alone treatment group also had eight patients with internal jugular vein thrombosis and eight patients with deep vein thrombosis. The average age was 84 years.

1.2 Treatment Method

Combination therapy group received aspirin tablet (100mg, once daily), clopidogrel sulfate tablet (75mg, once daily), lumbrokinase enteric capsules (2 capsules, 3 times daily, before meal). Aspirin alone group received aspirin tablet (100mg, once daily). One course of treatment was three months. Every half a month 4-item coagulation panel (TT, PT, APTT, Fibrinogen) and platelet count were checked. Color Doppler ultrasound examination was done once every week. Patients would then continue with the second treatment course.

1.3 Therapeutic Evaluation Results of color Doppler ultrasound before and after

treatment were compared. The patient is considered 1) cured, if there was complete resolution of the thrombus; 2) markedly improved, if the thrombus was mostly resolved; 3) improved, if the thrombus was partially resolved; 4) non-responsive if the thrombus had little change or no change.

1.4 Statistical Analysis Chi-square test (χ^2) was used.

2. RESULTS

2.1 Therapeutic Response The response rate in the combination therapy group (n=16) was 99% (compared with pre-treatment, $P < 0.05$). The 16 patients within the group continued with the treatment (even after the study) for over 12 months, and are still taking combination medications at present. The aspirin alone group had no significant improvement after treatment ($P > 0.05$), and plan to switch to the combination therapy treatment.

2.2 Comparison between combination therapy group and aspirin alone group There was a significant difference ($\chi^2 = 4.885$, $P < 0.05$).

2.3 Adverse Reaction No incidence of digestive tract and other organ hemorrhage, but individual abdominal distention and belching were reported.

3. DISCUSSIONS

Tripple-drug combination therapy is an effective treatment of for venous thrombosis in the elderly. Pharmacologically, combination of the three drugs had a complementary effect [1]. Throughout the two course of treatment all patients in the combination therapy were closely monitored by 4-item coagulation panel and platelet count every 15-20 days; none had any derangement. Most patients had a platelet count of no less than 100,000/ml, and coagulation parameters were never more than 1.5 times of the normal. International Normalized Ratio (INR) was always in the

normal range, and there was a significantly decrease in fibrinogen level (but still within the normal range). There were no adverse signs or symptoms reported by patients. The two patients with complete venous thrombosis (one of the left internal jugular vein and one of the right femoral vein) had recanalization as evidenced in the Color Doppler ultrasound results 3-6 months later. Those with partial occlusion also had recanalization after the combination therapy as well. Whereas the therapeutic response in the aspirin alone group was less than ideal. In seniors with liver disease, blood coagulation disorder or hematological conditions, the dosages of the combination therapy should be more precise or halved if indicated. And for those whose blood pressure is $> 180/100$ mmHg, the risk of bleeding needs to be closed monitored [2].

Each drug within the combination therapy has its distinct function, and it is logical to combine them in the treatment of venous thrombosis. Motilium and digestive enzyme may be used to treat side effects of lumbrokinase, such as abdominal distention or belching in some individuals.

4. REFERENCES

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