



Therapeutic results of the intra-arterial thrombolysis after full dose intravenous tissue plasminogen activator administration.

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Introduction

Intravenous (i.v) administration of tissue plasminogen activator (tPA) is accepted as a standard treatment for acute cerebral ischemia, but the clinical outcomes cannot be warranted in patients who are not recanalized after i.v. tPA or who are not indicated for i.v. tPA. In this study, outcomes from the groups of patients using the additional intra-arterial thrombolytic therapy were compared to assess whether i.v. tPA administration was advantageous.

Methods

Intra-arterial thrombolytic therapy (thrombolytic agents combined with mechanical intervention) was tried for those patients who were not indicated for i.v. tPA and who showed continuous major vessel occlusion after i.v. tPA.

Sixty-three patients were divided into two groups, a tPA group (n=29, intra-arterial thrombolysis after i.v. tPA) and non-tPA group (n=34, intra-arterial thrombolysis without i.v. tPA). These groups were sub-divided according to matched or mismatched diffusion weighted imaging/perfusion weighted imaging (DWI/PWI) upon magnetic resonance imaging. Treatment results were compared by recanalization rate, clinical outcomes, mortality, and significant intracerebral hemorrhage rate.

Results

Recanalization rate was 79.3% in the tPA group and 55.9% in the non-tPA group (?2, $p < 0.05$). Subgroup analysis between DWI/PWI mismatched in tPA group and DWI/PWI mismatched in non-tPA group also showed no statistical difference in recanalization rate, favorable clinical outcome, and mortality (?2, $p > 0.05$) but significant intracerebral hemorrhage rate was high in tPA group (?2, $p < 0.05$).

Conclusions

Additional intra-arterial thrombolytic treatment after full dose i.v. tPA administration might be an acceptable treatment option for the patients with DWI/PWI mismatching.

Learning Objectives

intraarterial thrombolysis is need in some patients and clinical result also good.
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