

Plasminogen enhances the process of angiogenesis after cerebral ischemia in mice via thrombospondin

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Objective: We investigated the key role of plasminogen and thrombospondin in the process of angiogenesis after stroke in adult mice. Method: We used wild-type (Wildtype, WT, plg+/+ genotype) mice and plasminogen knockout (Knock-out, KO, plg-/- genotype) mice to conduct a permanent middle cerebral artery infarction model (MCAo). At different time points after operation. We performed function test; measure brain vascular distribution and calculate the vessel density; used western-blot to detect the expression of TSP-1 and TSP-2 after MCAo. Results: The total length of capillary formation of cerebral vascular endothelial cells in group KO mice was less than that in group WT. Before conducting MCAo, there was no significant difference in sensorimotor function between group KO mice and WT mice. 1 day after MCAo, the motor sensory dysfunction in two groups of mice reached the peak, and gradually recovered with time. The loss of motor sensory function in group WT was always less than that in group KO.

