Poster Abstracts

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THE TREATMENT OF NEP1-40 TO THE RATS BRAIN DAMAGES AFTER ACUTE CARBON MONOXIDE POISONING

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Objectives: To evaluate the treatment of NEP1-40 to the rats brain damages after acute carbon monoxide poisoning. Regeneration of neural cells is a critical process for repairing the damaged brain after acute carbon monoxide poisoning. Nogo has been identified as an inhibitor of neurite outgrowth that is specific to the brain. In this study, the Nogo-A receptor (NgR) antagonist NEP1-40 was used to study the effects of inhibition of NgR on the regeneration of neural cells.

Methods: Rats were assigned into 4 groups with 10 rats randomly.As follow: normal group, in which rats received no CO poisoning and no reatment;model group, in which rats received CO poisoning and no treatment;medium group, in which rats received CO poisoning and Sodium chloride injection(for 3 days);NEP1-40 group, in which rats received CO poisoning and NEP1-40 injection(for 3 days). Histopathological studies :Hematoxylin and eosin (HE) stain and Nissl stain is used to measure the histopathology. Immunofluorescence staining is used to measure the expression of synapsin I and GAP-43. Western Blotting is used to measure apoptosis related indicators,such as Bcl-2,Bax,c-PARP. TUNEL Staining and Caspase-3 assay is also used to measure apoptosis.

Results: After NEP1-40 was injected into the CO poisoned rats, the neurological deficits can be improved. And the positive areas of GAP-43 were increased after NEP1-40 injection.

Conclusion: NEP1-40 is beneficial for axon reconstructing in CO poisoned brain.And it can also improve the capability of antioxidant in the CO poisoned brain. In the meamwhile, NEP1-40 injection inhibit the apoptosis in the brain.