



Effects of Danhong injection on hemodynamics and the inflammation-related NF- κ B signaling pathway in patients with acute cerebral infarction

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ABSTRACT. The objective of the current study was to investigate effects of Danhong injection on hemodynamics, inflammatory cytokines, and the NF- κ B pathway in acute cerebral infarction. In total, 246 patients with acute cerebral infarction were divided into control (N = 121) and observation (N = 125) groups based on treatment. The control group underwent conventional treatment, while the observation group was treated with conventional medicine and Danhong injection. Fourteen days later, the curative effect, hemorheology, mRNA, and protein levels of inflammatory cytokines (IL-6, TNF- α , and IL-1 β) in peripheral white blood cells, and changes in the NF- κ B signaling pathway were analyzed. The observation group had a significantly higher curative effect compared to the control group. The hemodynamic indices (high shear viscosity, low shear viscosity, plasma viscosity, hematocrit, platelet aggregation rate, and erythrocyte aggregation index) were significantly improved in both groups, although changes were more remarkable in the observation group. Peripheral white blood cells from patients in the observation

group had significantly lower mRNA and protein levels of inflammatory cytokines IL-6, TNF- α , and IL-1 β after treatment compared to cells from patients in the control group. NF- κ B p65 in the cytoplasm of peripheral blood cells of the observation group increased significantly after treatment compared to that of the control group, while nuclear NF- κ B p65 decreased compared to that in the control group. In conclusion, Danhong injection has a significant curative effect on patients with acute cerebral infarction, lowers inflammation, and improves hemodynamic changes; therefore, it is worth clinical application.

Key words: Danhong injection; Acute cerebral infarction; Inflammation; Hemodynamics