Anti-inflammatory effect of mixture of Jingyoganghwaltang and Cheongsimhwan on Croton oil induced hemorrhoid model in rat

Jong-Cheng Mou
Ho Oriental Clinic, Korea

Hemorrhoids are one of the most common diseases in humans. About half of the people older than age 50 years have symptomatic hemorrhoids. Swelling and inflammation are typical hemorrhoid symptoms. In Traditional Korean Medicine, Jingyoganghwaltang and Cheongsimhwan have been used to treat diseases in anal fistula. Cheongsimhwan reduces a fever and has anti-inflammatory effects. This study investigated the effect of a mixture of Jingyoganghwaltang and Cheongsimhwan on croton oil induced hemorrhoid model in rats. Male rats aged 6 weeks were divided into three groups: Control, Croton oil stimulated group, and drug (a mixture of Jingyoganghwaltang and Cheongsimhwan) treated group. After three days of drug treatment, the animals except the control group were stimulated for 60 seconds by inserting the croton oil mixture (DW:pyridine:diethyl ether: 6% of croton oil in diethyl ether=1:4:5:10) into the anus. After 4 hours, all rats were sacrificed under deep anesthesia, and retro-anal tissue was excised for histological, immunohistochemical analysis and western blotting. The weight of retro-anal tissue of the drug treated group was decreased to 86.4±2.9% (compared to 100% of the croton oil treated group). In a histological study of rectro-anal sections, severe inflammation can be observed in the croton oil treated group, and the drug treated group showed the reduction of inflammation. Additionally, the drug treated group showed the decrease in contents of ICAM1, MMP2 and MMP9 compared to the croton oil stimulated group. These results suggest that the treatment with Jingyoganghwaltang and Cheongsimhwan demonstrates the anti-inflammatory effects in croton oil induced hemorrhoid model in rats.

Biography

Jong-Cheng Mou has completed his PhD and Postdoctoral studies in College of Korean Medicine, Semyung University. He majored in Korean Medicine and published several papers in reputed journals. After graduation, he manages the clinic of Korean Medicine in Korea. He has taught Korean Medicine to students in College of Korean Medicine, Semyung University.

sauni001@hanmail.net

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