

Effect of Choreito, a traditional Kampo medicine, on detrusor smooth muscle function and bladder blood flow in a rat model of pelvic congestion with frequent urination

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Choreito, a traditional Kampo medicine, has long been used for the treatment of lower urinary tract symptoms. Previous our study has demonstrated that long-term administration of Choreito improves frequent urination in a rat model of pelvic congestion (PC). The aim of this study was to further examine in vivo and in vitro effects of Choreito administration on urinary bladder dysfunction in PC rats.

Female rats were divided into three groups. To produce PC, the bilateral common iliac veins and bilateral uterine veins were ligated. Sham rats were fed a standard diet, and PC rats were fed 1% Choreito diet or a standard diet from two weeks after surgery. At 4 weeks after the operation, bladder blood flow (BBF) and detrusor smooth muscle function were evaluated. BBF in the PC-control group decreased compared to the sham group, but that in the PC-Choreito group did not. Treatment with Choreito alleviated PC-induced enhancement of neurally-mediated contractions of isolated detrusor strips and upregulation of mRNA levels of alpha1D receptors, B1/B2 receptors and prostacyclin receptors in the bladder.

These results suggest that chronic administration of Choreito improves diminished BBF and increased neurogenic detrusor contractions, and lessens the expression of pain-related genes in a rat model of pelvic congestion.