Abstract:

Objective: To assess the effect of Chahuang ointment, a Chinese herbal ointment, on the prevention of phlebitis in patients with peripherally inserted central catheters.

Method: This was a multicenter randomized controlled trial, with 171 eligible patients randomly assigned into one of three groups: the Chahuang ointment group, the Mucopolysaccharide Polysulfate cream group, and the control group. The degrees of vein injuries at 72 hours after peripherally inserted central catheter insertion were the primary outcome. Secondary outcomes were the vascular wall thickness, tissue edema and microthrombus evaluated by Color Doppler Flow Imaging, the vascular endothelial growth factor, and endothelin-1 (ET-1) expression in vivo.

Results: Compared with the control group, the Chahuang ointment group showed significantly lower incidence of postoperative phlebitis, tissue edema, and microthrombus at 72 hours after peripherally inserted central catheter insertion (all P<0.01). The VEGF and ET-1 expression were significantly inhibited in the Chahuang ointment group after 3 days of treatment (both P<0.01). There were no statistical differences in the degree of vein injuries, microthrombus, or tissue edema between the Chahuang ointment and mucopolysaccharide polysulfate groups (all P>0.05).

Conclusion: Chahuang ointment was shown to provide effective prevention and protection against phlebitis after peripherally inserted central catheter insertion.

Reference: