Specific effects of acupuncture on rheumatoid arthritis of the hand-double-blind, randomized clinical trial

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Background: Rheumatoid Arthritis (RA) is a chronic inflammatory autoimmune disease characterized by functional disability and reduced health related quality of life. Due to concerns about long-term efficacy, adverse effects, expensive and high variability of the current pharmacological therapies, acupuncture is widely used.

Objective: To assess specific effects of acupuncture on the pain, the functional deficits and the quality of life, on RA patients, in a double-blind, randomized-controlled study.

Methods: 105 RA patients, classified with the Turning Point syndrome according the Heidelberg Model of Traditional Chinese Medicine, were randomly assigned to either the verum acupuncture group (n=35), the sham acupuncture group (n=35) or the control group (n=35) and were followed-up in a four-week course therapy.

Findings: After four weeks of follow-up, verum acupuncture patients reported a statistical significant improvement in all the objective outcomes (hand grasp force (Z=-5.086, p<0.001), arm force (Z=-5.086, p<0.001) and pressure algometry (Z=-5.086, p<0.001)) as also, for the patient reported outcomes (self-reported pain (Z=-5.099, p<0.001); seven of the eight SF-36 domains medians significantly increased; functional status (Z=-4.895, p=0.000) and the number of swollen (Z=-2.862, p=0.004) and tender (Z=-3.986, p=0.000) joints decrease. In the sham acupuncture group, no, significant benefits were observed in the objective outcomes. Patients only treated with western therapy showed a significant decrease of the force (Z=-2.179, p=0.029), the pressure algometry decrease (Z=-3.227, p=0.001) and the physical function (Z=-2.506, p=0.012), as also, a significant HRQoL decrease for five of the eight SF-36 domains.

Discussion: To our understanding, this is the first clinical acupuncture studies with double-blinded controls to prove specific and objective effects of verum acupuncture in RA and the first to exclude bias caused by differences in the control arms. It is conceivable that incorporation of TCM pattern diagnosis in the management of RA provides better ways to improve efficacy and identify evidence of acupuncture treatments, optimizing health outcomes, multidisciplinary collaborations amongst different professionals and researchers of both conventional medical and TCM practices.

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