

Becker-Witt C, Brinkhaus B, Jena S, Weber K, Linde K, Streng A, Wagenpfeil St, Melchart D, Willich SN. Efficacy of acupuncture in patients with pain due to osteoarthritis of the knee - the Acupuncture Randomised Trial (ART). *Biometrical Journal*. 2004 (Suppl.); 46: 34.

Efficacy of acupuncture in patients with pain due to osteoarthritis of the knee - the Acupuncture Randomised Trials (ART)

Objective: In a randomised controlled trial we investigated whether acupuncture is more effective compared to no acupuncture or minimal acupuncture in patients with osteoarthritis of the knee. This study is part of a large acupuncture research initiative of German health insurance companies (Modellvorhaben der Techniker Krankenkasse). **Materials and methods:** Patients (age 50-75 years) with pain due to osteoarthritis of the knee (radiologic alterations in knee \geq 1-2 according to Kellgren) were randomised to treatment with semi-standardised acupuncture (AC), minimal acupuncture (MA, superficial needling at non-acupuncture points) or to waiting list control (WL). AC and MA was administered by specialised acupuncture physicians in 31 outpatient centers and consisted of 12 sessions per patient over 8 weeks. Patients completed standardised questionnaires at baseline and end of week 8. Main outcome parameter was the difference between the Western Ontario and McMaster Universities Osteoarthritis (WOMAC) Scores before randomisation and at the end of week 8. Main secondary outcome parameter was quality of life (SF-36).

Results: A total of 294 patients (66% female, $64,0 \pm 6,5$ years) were included from March 2002 to January 2003. Change in WOMAC Score from baseline to 8 weeks was significantly different between AC and WL ($-2,4 \pm 2,1$ (mean \pm sd) vs. $-0,2 \pm 1,4$; $p < 0,001$) and between AC and MA ($-2,4 \pm 2,1$ vs. $-1,6 \pm 1,8$; $p = 0,005$). On the Physical Component Scale (PCS) of the SF-36 a significant difference between AC and WL ($36,4 \pm 9,4$ vs. $31,9 \pm 7,5$; $p < 0,001$) and between AC and MA ($36,4 \pm 9,4$ vs. $32,6 \pm 8,7$; $p = 0,004$) was found at week 8. No significant differences between the three treatment groups were observed for the Mental Component Scale.

Conclusion: Acupuncture in patients with pain due to osteoarthritis of the knee was associated with marked improvement in pain, function and physical quality of life compared to minimal acupuncture and no acupuncture treatment.