

O29. THE EFFECTIVENESS AND EFFICACY OF SPLINTS FOR THUMB BASE OSTEOARTHRITIS: A PILOT RANDOMIZED CONTROLLED TRIAL

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Background: Self-management strategies have been reported to be effective for people with thumb base OA in spite of claims that thumb splinting can restore function there is limited evidence to support the effectiveness of these splints. Hand splints are currently recommended for hand OA by NICE and EULAR.

Methods: A three-arm randomized controlled pilot trial was conducted across five UK NHS outpatient therapy departments. Patients with symptoms of thumb base OA and with an AUSCAN score for thumb base pain > 5 and of hand function > 9 were recruited and randomized to receive optimal NHS Occupational therapy care, optimal NHS Occupational therapy care plus a biomechanically active splint or optimal NHS Occupational therapy care plus a biomechanically inactive (placebo) splint. Patients were assessed at baseline and at 4 weeks. The primary outcome was the AUSCAN Osteoarthritis Hand Index (Pain). Secondary outcomes included: AUSCAN (Function and Stiffness), Michigan Hand Outcomes Questionnaire, Global Rating of Change Scale. Mixed between-within subjects ANOVAs were conducted to compare the impact of the three interventions.

Results: Eighteen participants (27 OA thumbs) were recruited. Eleven females (78%) and 3 males (22%) completed the study with a mean age of 61.24 (s.d. = 9.40); 13 (92.86%) were right-hand dominant. Seven patients were treated for bilateral thumb base OA, 4 patients were treated for right thumb base OA and 3 for left thumb base OA. Statistically significant differences were reported between the 3 intervention groups over 4 weeks for AUSCAN Pain [F (2,18) = 5.892, P = 0.011], AUSCAN Stiffness [F (2,18) = 22.629, P < 0.001], MHQ ADL Both Hands [F (2,18) = 15.352, P < 0.001], MHQ Aesthetics Right Hand [F (2,18) = 4.545, P = 0.025], MHQ Aesthetics Left Hand [F (2,18) = 6.018, P = 0.010], and Global Rating of Change Scale [F (2,20) = 3.640, P = 0.047]. Table 1 shows the mean scores for the intervention groups.

Conclusion: Over a 4-week period patients who received thumb base splints recorded significantly less improvement in pain scores, hand disability and global change than patients who received optimal NHS

O29 TABLE 1. Mean scores for groups

	AUSCAN (Pain) 0–20	AUSCAN (Stiffness) 0–4	MHQ ADL (0–100)	MHQ Aesthetics Right Hand (0–100)	MHQ Aesthetics Left Hand (0–100)	Global Rating of Change (–7 to +7)
Optimal NHS care baseline	9.22 (3.42)	0.89 (0.93)	64.29 (26.85)	77.08 (14.99)*	81.25 (11.27)*	
Optimal NHS care follow-up	10.11 (1.17)*	0.89 (0.93)*	73.81 (20.83)*	54.17 (24.21)*	66.67 (20.49)	1.00 (4.56)*
Optimal NHS care plus splint baseline	10.67 (2.08)	1.33 (1.16)	35.71 (7.14)	79.17 (3.61)	52.08 (3.61)*	
Optimal NHS care plus splint follow up	14.33 (3.06)*	2.67 (0.58)*	21.43 (3.57)*	75.00 (25.00)	54.17 (19.09)	–4.33 (1.53)*
Optimal NHS care plus placebo splint baseline	11.00 (4.27)	1.67 (0.87)	58.33 (20.75)	61.81 (15.45)	47.92 (20.73)*	
Optimal NHS care plus placebo splint follow up	8.00 (1.87)*	1.44 (0.53)*	79.76 (18.30)*	65.28 (15.97)	65.97 (21.68)	–2.44 (2.35)

*Higher score indicates better outcome; *P < 0.05. Values are mean (s.d.).

OT care or optimal NHS OT care plus placebo splints. This study demonstrated that placebo splints were credible and that further work needs to be conducted on the effectiveness and efficacy of splinting for thumb base OA.

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