563 EFFECTS OF A SOFT THUMB BASE SPLINT IN PERSONS WITH CARPOMETACARPAL OSTEARTHRITIS: A RANDOMISED CONTROLLED TRIAL

M. Hermann, T. Nilsen, C.S. Eriksen, B.S. Christensen, I.-K. Haugen, I. Kjeken. Diakonhjemmet Hosp., Oslo, Norway

Purpose: To assess the effectiveness, regarding pain, hand strength, function in daily activities, of a prefabricated soft splint for persons with osteoarthritis of the CMC1-joint.

Methods: In this randomised controlled trial, 59 persons with CMC1-OA were included. The control-group (n=29) received hand exercises and the splint-group (n=30) received hand exercises and splint. The following assessments were performed at baseline and after 2 months: Grip- and pinch strength in Newton (N) were measured with Grippit. Pain during resisted grip was measured on a numeric rating scale (NRS)(0=no pain). Thumbsweb-space was measured with Grippsize and joint mobility was recorded in millimetre (mm). Self-reported hand function was assessed with AUSCAN on two point Likert scales (0=no problem). Patients were recommended to perform hand exercises twice a day and the splint-group were instructed to wear the splint when having pain and/or when performing heavier manual tasks. At two months we also measured grip strength and pain both with and without splint in the splint-group and conducted a semi-structured interview were we asked splint-group about their experience with the splint.

Results: The mean age of the participants was 70.5 years (SD 6.7), mean disease duration was 15.2 years, and one third had CMC-OA grade 3 or more. Nine participants were provided with a splint for their right thumb, 4 for left thumb and 17 participants for both thumbs. There were no significant differences between the groups in any outcome after two months. In the splint-group, pain during resisted grip was significant less when wearing the splint compared to without. Most participants were satisfied with the splint and reported the splint as useful, especially during household management.

Conclusions: The results indicate that a soft prefabricated splint has an immediate pain-relieving when worn, but no long term effect in terms of reduced inflammation and pain, or improved strength or activity performance in patients with CMC1-OA.

564 EFFICACY AND SAFETY OF GINGER IN OSTEARTHRITIS PATIENTS: A META-ANALYSIS OF RANDOMIZED PLACEBO-CONTROLLED TRIALS

V.N. Folmer 1, E.M. Bartels 1, H. Bliddal 1, R.D. Altman 2, C. Juhl 3, W. Zhang 4, R. Christensen 1,3,1 1 Musculoskeletal Statistics Unit, The Parker Inst., Copenhagen Univ. Hosp., Frederiksborg, Copenhagen, Denmark; 2 David Geffen Sch. of Med., Univ. of California, Los Angeles, CA, USA; 3 Inst. of Sports Sci. and Clinical Biomechanics, Univ. of Southern Denmark, Odense, Denmark; 4 Academic Rheumatology, Univ. of Nottingham, Clinical Sci. Building, City Hosp., Nottingham, United Kingdom

Purpose: To assess the clinical efficacy and safety of ginger for symptomatic treatment of osteoarthritis (OA), using meta-analysis of all published randomized placebo-controlled trials (RCTs).

Methods: A systematic search of the bibliographic databases Medline, Embase, Cinahal and Scifinder, as well as The Cochrane Central Register of Controlled Trials was carried out, identifying RCTs comparing any oral ginger treatment with placebo in OA patients. Major outcomes for efficacy were reduction in pain and disability, and harm was assessed generically as the number of withdrawals due to adverse events. Efficacy effect size (ES) was calculated through semi-structured face-to-face interviews. Risk ratio (RR) was used in indirect comparison. Inconsistency was evaluated by the I-squared index ($I^2$). All effect sizes were reported with 95% confidence intervals (95% CIs).

Results: Out of 76 retrieved references, 34 abstracts were scrutinized according to the eligibility criteria. Five placebo-controlled trials (593 patients) contributed to the meta-analysis on pain, where the majority of studies applied an inappropriate intention-to-treat (ITT) population in the analyses. Pain reduction, following the use of ginger, revealed a small degree of heterogeneity among the trials ($I^2=27$%), with a statistically significant ES of −0.30 (95% CI: −0.50, −0.09, $P=0.005$), in favor of ginger. In terms of reduction in disability, ginger was also significantly better than placebo ES = −0.22 (95% CI: −0.39, −0.04; $P=0.01$; $I^2=0$%). Patients given ginger were more than twice as likely to discontinue treatment due to adverse events as were those given placebo (RR = 2.23 [95% CI: 1.04, 5.22]; $P=0.04$; $I^2=0$%).

Conclusions: Based on the small number of trials and inappropriate/ unclear use of ITT analyses, our overall confidence in the estimates corresponds to moderate quality evidence. Ginger treatment seems efficacious and reasonably safe in OA patients, realizing that further research could have an impact on our confidence in this herbal remedy. Further studies are required to confirm the efficacy of this therapy. Considering the balance between desirable and undesirable effects, use of ginger therapy may be a therapeutic option for the OA patient with an interest in herbal remedies, where after a few months treatment, the effect should be evaluated.

Acknowledgements: This study was supported by grants from The Oak Foundation.

565 DESIGNING AND TESTING A WEB-BASED PHYSICAL ACTIVITY INTERVENTION FOR PATIENTS WITH OSTEARTHRITIS IN HIP AND/OR KNEE

D. Bosson. Nivel Inst., Utrecht, Netherlands

Purpose: Due to elevated fear of pain, catastrophizing thoughts and joint stiffness, a large group of patients with hip and/or knee osteoarthritis (OA) remain sedentary. Although inactivity may enhance in short-term pain reduction, prolonged inactivity may augment functional decline. Therefore, we developed a web-based intervention that provides a highly individualized behaviorally based physical activity (PA) program. The aim of this study is to describe the development, preliminary effectiveness and usability of a 9 week website intervention on PA behavior change in individuals with hip and/or knee OA.

Methods: We used an iterative design methodology for the creation of a web-based intervention. The intervention incorporates core principles of the behaviour graded activity theory. A pilot study prototype was tested through a non-randomized pilot study among 20 patients with OA. PA levels and pain scores were measured trough online questionnaires (week 0, 6 and 12). Subsequently, a heuristic evaluation and a thinking aloud approach were performed to determine the usability of the intervention. Information about user satisfaction was collected through semi-structured face-to-face interviews. Usability tests revealed some usability issues, participants considered the intervention as helpful. In particular, users were enthusiastic to perform physical exercises in their own time and at their own pace.

Conclusions: This paper outlines the development and usability of a web-based PA intervention for patients with hip and/or knee OA. The preliminary results from the pilot study suggests that the intervention is promising in the promotion of PA, even though effects were not statistical significant.

Therapy - Pharmacologic

566 CHONDROITIN SULFATE AND NOT ACETAMINOPHEN EFFECTIVELY REDUCES SYNOVITIS IN PATIENTS WITH KNEE OSTEOARTHRITIS: RESULTS FROM A PILOT STUDY

J. Monfort 1, C. Orellana 2, F. Montañés 1, N. Garcia 3, L. Tio 3, P. Benito 1 1 Hosp. del Mar of Barcelona, Barcelona, Spain; 2 Corporació Sanitària Parc Taulí, Sabadell, Spain; 3 IMIM, Inst. Municipal de Investigaciones Mèdiques, Barcelona, Spain