

Methods: The community-dwelling older people (65 and older) were recruited from different social senior groups and from the Hacettepe University Hospital Geriatric Outpatient Clinic. 102 patients were screened and 62 subjects with unilateral knee OA were evaluated. We used a standardized questionnaire, consisting of sociodemographic data, cognitive function, and history of falls during the previous year. Thirty one elderly with a history of falls and also 31 without a history of falls were studied. Physical performance was evaluated with Short Physical Performance Test (SPPPT). Walking speeds were measured with Six Metre Walk Test. Fear of falling (FOF) was assessed by a question (Do you have fear of falling? yes/no)

Results: There were no differences between faller and non-faller elderly people in terms of age (76 ± 8.4 years) and BMI (30.4 ± 3.1 kg/m²). A statistically significant difference was found in terms of walking speeds and short physical performance test ($p < 0.005$, $p < 0.005$).

Conclusions: As a result of this study, it was shown that the elderly people with knee OA and who have history of falls present worse performance in functional mobility and require a longer period of time to walking.

References:

- [1] Huang MH, Lin YS, Yang RC, Lee CL. A comparison of various therapeutic exercises on the functional status of patients with knee osteoarthritis. *Semin Arthritis Rheum* 2003; 32: 398–406.
- [2] Hinman RS, Bennell KL, Metcalf BR, Crossley KM. Balance impairments in individuals with symptomatic knee osteoarthritis: a comparison with matched controls using clinical tests. *Rheumatology* 2002; 41: 1388–1394.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2017-eular.3885

SAT0742-HPR THE EFFECT OF A NEOPRENE KNEE SLEEVES ON KNEE JOINT PROPRIOCEPTION IN PATIENTS WITH TOTAL KNEE PROSTHESIS

M. Eymir¹, S. Narin¹, V. Karatosun². ¹School of Physical Therapy and Rehabilitation; ²Faculty of Medicine Surgery Medicine Department of Orthopaedics and Traumatology, Dokuz Eylül University, Izmir, Turkey, izmir, Turkey

Background: Proprioception has been defined as the perceived sense of knee joint position (joint position sense) and movement (kinesthesia) (1). The sensory input from the joint capsule, muscles, ligaments, skin improve proprioceptive acuity. With total knee arthroplasty (TKA) surgery articular cartilage, menisci, articular ligaments are removed. Also articular effusion and hematoma formation increase following surgery. Therefore, proprioceptive acuity decrease after TKA surgery (2). The proprioceptive improvement might prevent patients with TKA from falling down and increase their sense of security during physical activities. The clinical effect of neoprene knee sleeves on knee proprioception has been evaluated by studies in both injured and uninjured populations (3). But there is not any study research on the effect of neoprene knee sleeves on knee proprioception in patients with TKA.

Objectives: The aim of this study was to determine the effect of the neoprene knee sleeves on knee joint proprioception in patients with TKA.

Methods: Sixty patients (50 female/10 male) with a median age 64.95 ± 8.84 years were included in the study. Knee joint proprioception of all the patients was evaluated with and without a neoprene knee sleeves preoperatively and at discharge. Patients attempted to replicate target angles (in knee joint angle 15°, 30°, 60°) using active knee extension movements in sitting position. The average of the 3 repetitions of active joint repositioning test was recorded position sense score. The angular displacements from the target angles (in knee joint angle 15°, 30°, 60°) at the end of the active reproduction tests were recorded as position sense deficit scores.

Results: Preoperatively ($p < 0.001$) and after surgery ($p < 0.001$) patients' proprioceptive acuity measured with neoprene knee sleeves in knee joint angle 15°, 30°, 60°, had a significant improvement. When the proprioceptive acuity measured without neoprene knee sleeves before and after surgery were compared, had a significant decrease in proprioceptive acuity ($p < 0.001$) in early stage after TKA surgery. Also when the proprioceptive acuity measured with neoprene knee sleeves in knee joint angle 15°, 30°, 60° before and after surgery were compared, no significant statistical differences were observed ($p > 0.05$).

Conclusions: In patients with TKA due to osteoarthritis, application of neoprene knee sleeves has increased the proprioceptive acuity. The current results suggest that neoprene knee sleeves might be used for improving proprioception in early stage of patients with TKA.

References:

- [1] Herrington L, Simmonds C, Hatcher J. The effect of a neoprene sleeve on knee joint position sense. *Research in Sports Medicine*. 2005; 13(1):37–46.
- [2] Pap G, Meyer H, Weiler H-T, et al. Proprioception after total knee arthroplasty: a comparison with clinical outcome. *Acta Orthopaedica Scandinavica*. 2000;71(2):153–9.
- [3] Chuang S-H, Huang M-H, Chen T-W, et al. Effect of knee sleeve on static and dynamic balance in patients with knee osteoarthritis. *The Kaohsiung Journal of Medical Sciences*. 2007;23(8):405–11.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2017-eular.4399

SAT0743-HPR RISK FACTORS FOR FEAR OF FALLING IN PATIENTS WITH KNEE OSTEOARTHRITIS

O. Aydoğdu, Z. Sari, U.S. Yurdalan, G.M. Polat. *Physiotherapy and Rehabilitation, Marmara University, Health Sciences Faculty, Istanbul, Turkey*

Background: Severe knee osteoarthritis (OA) is characterized by stiffness, pain, and disability of the knee joint. Severe pain negatively affects muscle strength, coordination, postural stability, proprioception, mobility, and increases fall risk and possibly fear of falling. Individuals with severe knee OA experience loss of self-efficacy, activity avoidance, loss of self-confidence, and finally fear of falling without actually experiencing a fall (1). Despite the high prevalence of falls in patients with OA, few studies have investigated fear of falling in patients with knee OA (2).

Objectives: The present study was conducted to determine the risk factors affecting fear of falling and to investigate the relationship between fear of falling and age, gender, body mass index, pain level, range of motion, muscle strength, knee swelling, postural stability, and functional status in patients with knee OA. The purpose of our study was to evaluate the regression of fear of falling and identify its risk factors in patients with severe knee OA.

Methods: A total of 71 patients who were diagnosed with knee OA according to the American College of Rheumatology (ACR) and who were accepted as stage 2 and 3 based on the Kellgren-Lawrence criteria, were included in the study. Outcome measures included fear of falling, pain intensity, and range of motion, quadriceps and hamstring muscle strength, knee swelling, postural stability, and functional status.

Pearson correlation and multiple logistic regression test was used to determine the risk factors of fear of falling and relationships between fear of falling and age, body mass index, pain intensity, range of motion, muscle strength, knee swelling, postural stability, and functional status.

Results: Multiple logistic regression analysis showed that age (odds ratio=12.5, $p=0.011$), body mass index (odds ratio=14.5, $p=0.030$), pain intensity (odds ratio=3.5, $p=0.045$), range of motion (odds ratio=9.8, $p=0.012$), and knee swelling (odds ratio=8.4, $p=0.019$) were independent risk factors for fear of falling among patients with knee OA.

Conclusions: We conclude that age, body mass index, pain intensity, range of motion and knee swelling influence the fear of falling. They are viewed as an important predictor of fear of falling in knee OA. Our results could be used to help select knee OA patients who should be enrolled in fall prevention programmes.

References:

- [1] Tsonga T, Michalopolou M, Kapetanakis S, et al. Risk factors for fear of falling in elderly patients with severe knee osteoarthritis before and one year after total knee arthroplasty. *J Orthop Surg (Hong Kong)*. 2016 Dec;24(3):302–306.
- [2] Levinger P, Menz HB, Wee E, Feller JA, Bartlett JR, Bergman NR. Physiological risk factors for falls in people with knee osteoarthritis before and early after knee replacement surgery. *Knee Surg Sports Traumatol Arthrosc*. 2011 Jul;19(7):1082–9.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2017-eular.5714

SAT0744-HPR THE USE OF HEALTH ASSESSMENT QUESTIONNAIRE (HAQ) IN GIVING A PICTURE OF PATIENT EVERYDAY LIFE WITH RHEUMATOID ARTHRITIS

P. Toftegaard, I.M.J. Hansen. *Department of Rheumatology, Svendborg Hospital, Svendborg, Denmark*

Background: HAQ is used to monitor physical disability in patients with Rheumatoid arthritis (RA). At our department patients are planned to answer HAQ at every visit. The suitability for use in connection with ordinary clinical controls are questioned (1, 2) and furthermore we have the impression that the patients fill in the HAQ questionnaire because the staff wants it, and not because it make sense to the patients themselves.

Objectives: Evaluation of the HAQ from the patient perspective

Methods: A survey where all patients with RA who visited the outpatient clinic over a period of 3 weeks were invited to participate. Patients were asked to fill in a questionnaire to evaluate each question (20) in the HAQ on a scale from 1 – 10, 1 = no meaning and 10 = most meaningful. Values less or equal to five were evaluated as "no meaning". Furthermore a literature review was done, afterwards a Critical Appraisal Skills programme (CASP) was performed on publications found

Results: 100 patients were asked to participate, in total 67 questionnaires were returned, twelve patients were excluded because of incomplete answers, twenty-one did not return the questionnaires or did not want to participate. Depending on which of the 20 questions, different fractions of the patients did not find any meaning in the questions: 18.6% (are you able to shampoo and wash your hair?) up to 40.4% (are you able to use the bathtub?)

In the literature (3, 4) we found several themes of importance for everyday life with RA seen from the patients' perspective. Pain and impaired physical performance is of great significance for patients living with rheumatoid arthritis. It affects patients both physically, mentally and socially, as it may be necessary to cut back on social activities, to ask for help for ordinary everyday chores, changing or dropping work etc. This has implications for the role of the patient in the family. Powerlessness, frustration and uncertainty about the future affect the mood in form of anger and depressive thoughts.