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TUG AND FTSST IN KNEE OA PATIENTS SUBMITTED TO AN EDUCATIONAL PROGRAM (PARQVE – PROJECT ARTHRITIS RECOVERING QUALITY OF LIFE BY MEANS OF EDUCATION)
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Purpose: Evaluate the improvement of function and balance in patients with OA undergoing an educational program of a day with multidisciplinary.

Methods: Two hundred and two patients with knee OA were submitted to two tests: Timed and Go (TUG) and Five Times Sit to Stand Test (FTSST) at enrollment and one year after an educational program (PARQVE). Patients were divided in four groups and received take home written and audiovisual material on OA. Groups 1 to 3 had classes (1 with a focus on function and symptoms (IKDC, KOOS) activity level (Marx-score), quality of life (KOOS-QOL, SF36) and pain (VAS, KOOS-pain, Catastrophizing scale, CSQ).

Results: Only data from one cohort are available to date. Our practice performs ~ 400 ACL reconstructions annually. Pre-study data showed capture of 85.7% of all ACL injuries occurring in Fayette County: 66% of patients were seen within 30 days after ACL injury; 37% were seen by a Surgeon but 73% were seen by a Surgeon or PCP within 1 week of injury; 30% were seen within 4 days of injury. A total of 10 patients were eligible for enrollment in a 4 month time period. After this pre-study data changes were made to the study design including development of an “early warning system” through physician extenders in high schools and placement of additional physician extenders in the clinics to help with enrollment. These changes allowed for enrollment of 30 patients in a 7 month time period, a 220% increase in enrollment numbers from the pre-study period. 10–20% of all patients with ACL tears fulfill the inclusion criteria. Screen failures occur at a rate of 25–30% due to either accompanying injuries (n = 6) or patient refusal (n = 4). No patient withdrew from the study. One patient refused the second knee joint aspiration. No patient was lost to follow-up. No problems were encountered regarding the data collection, specimen storage or patient follow-up.

Conclusions: ACL patients can be recruited to a PTOA prevention trial within 4 (± 4) days after ACL injury if typical patient referral patterns are changed. Even for a highly productive ACL practice it is imperative to involve PCPs, Surgeons and outreach physician providers as stake holders into the study. Early knee joint aspirations are well tolerated and can be performed consecutively without patient withdrawals. Patients report subjectively less pain after the aspirations. Few patients refuse enrollment. Strict inclusion criteria result in a low number of eligible patients (10–20% only). A careful pre-study analysis of referral patterns, patient capture and environment is critical to perform randomized clinical trials in this patient population.

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<th>Ages (yrs)</th>
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<th>Prior Knee Surgery</th>
<th>Contra lateral Knee Status</th>
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<td>34-70</td>
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Ages (yrs) Mechanism of Injury Prior Knee Surgery Contra lateral Knee Status

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MOON-AAA GCP CLINICAL TRIAL: EARLY LESSONS FROM AN EARLY INTERVENTIONAL TRIAL IN PATIENTS WITHIN 1 WEEK AFTER ACL TEAR
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Posttraumatic Osteoarthritis (PTOA) often results from knee ligament injuries such as to the anterior cruciate ligament (ACL). Patients with ACL injuries are a unique population the initiation event for the development of PTOA is often known. Enrollment of these patients and the prospective collection of "early" information on this population is challenging as the majority in the US will not be seen by a specialist until several weeks after injury. We here describe the early lessons learned from the “Multicenter Orthopaedic Outcome Network Early-Anti-inflammatory Treatment in Patients with Acute ACL Tear and Painful Effusions” (MOON-AAA) clinical trial. This is the first US-based multicenter, randomized, good clinical practices (GCP) interventional clinical trial recording biomarker profiles, standardized X-rays as well as patient reported outcomes (PRO's) in isolated ACL tears seen within 4 days after ACL injury.

Methods: This is a GCP multicenter clinical trial enrolling patients with primary isolated ACL tears within 4 days after injury. Inclusion criteria follow the MOON-protocol (Table 1). All patients undergo aspiration of the post-injury effusion within 4 days and 10 days post-injury. Patients receive an injection with 40 mg Kenalog within 4 days, 10 days, both time points or not at all (saline injection control). Permuted block randomization into one of these four groups is done at the time point of the first aspiration. Blinding of patients and investigators is maintained throughout the study. Serum, synovial fluid and urine collection is performed at the first and second aspiration as well as at the time of ACL reconstruction. Synaflexor standardized flexion weightbearing X-rays are obtained on patients pre-operatively. Patient reported outcomes are being collected at 6 time points up to 6 months post-ACL reconstruction with a focus on function and symptoms (IKDC, KOOS) activity level (Marx-score), quality of life (KOOS-QOL, SF36) and pain (VAS, KOOS-pain, Catastrophizing scale, CSQ).

Results: Only data from one cohort are available to date. Our practice performs ~ 400 ACL reconstructions annually. Pre-study data showed capture of 85.7% of all ACL injuries occurring in Fayette County: 66% of patients were seen within 30 days after ACL injury; 37% were seen by a Surgeon but 73% were seen by a Surgeon or PCP within 1 week of injury; 30% were seen within 4 days of injury. A total of 10 patients were eligible for enrollment in a 4 month time period. After this pre-study data changes were made to the study design including development of an “early warning system” through physician extenders in high schools and placement of additional physician extenders in the clinics to help with enrollment. These changes allowed for enrollment of 30 patients in a 7 month time period, a 220% increase in enrollment numbers from the pre-study period. 10–20% of all patients with ACL tears fulfill the inclusion criteria. Screen failures occur at a rate of 25–30% due to either accompanying injuries (n = 6) or patient refusal (n = 4). No patient withdrew from the study. One patient refused the second knee joint aspiration. No patient was lost to follow-up. No problems were encountered regarding the data collection, specimen storage or patient follow-up.

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DISABILITY & HANDICAP

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JOINT-SPECIFIC FACTORS AND COPING STYLES ARE ASSOCIATED WITH DISABILITY IN PATIENTS WITH HAND OSTEOARTHRITIS

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Purpose: Hand osteoarthritis (OA) leads to considerable limitations in daily activities. It is unclear which factors contribute to these limitations. The objective of this study was to examine the role of joint-specific factors and coping styles on disability in patients with hand OA.

Methods: Cross-sectional data and 1 year follow-up data were used of the ongoing HOSTAS (Hand OSTeoArthritis in Secondary care) study, in which consecutive patients are included, who are diagnosed by the treating rheumatologist with primary hand OA. Participants underwent physical examination to assess the number of joints with bony joint enlargements (0–10), pain upon palpation (0–30), soft tissue swelling (0–30), deformities (0–22) and limitations in motion (0–22). Disability was assessed by the Functional Index for hand OA (FIHOA); this scale ranges from 0–30. A FIHOA score of ≥5 was considered as disability. Coping styles were assessed with the Coping with Rheumatic Stressors (CORS) and divided into tertiles. The lowest tertile represented the most beneficial scores and was used as reference category. Conventional radiographs were obtained of the hands and scored using the Kellgren-Lawrence (KL) grading scale. Odds Ratio (OR) with 95% confidence intervals (CI) were calculated using multivariate logistic regression as measures of relative risk for reporting disability in our cross-sectional data, adjusted for age, sex, BMI and joint-specific variables when appropriate. In addition, multivariate analyses were performed for reporting disability after 1 year, adjusting for age, sex, BMI, joint-specific variables and baseline FIHOA.

Results: 314 patients (88% women, mean age 61.4 yrs, median BMI 26.4 kg/m²) were included with median FIHOA score of 8 (range 0–24). Longitudinal data after 1 year were available in 173 patients, with a median FIHOA score of 9 (range 0–28) after 1 year. FIHOA scores after 1 year were significantly different than cross-sectional scores. The patients with follow-up data were not different from the total group. In the cross-sectional analysis 68% of the patients were considered as disabled, whereas after 1 year the proportion of patients with disability was 71%. In cross-sectional analyses the number of joints painful upon palpation, with deformity and limitations in motion were positively associated with disability (OR 1.11 (95%CI 1.05–1.18), 1.10 (1.02–1.19), 1.08 (1.04–1.11), respectively). KL score was also associated with disability (OR 1.03 (1.00–1.05)). In multivariate analyses including all joint-specific factors, only painful joints and joints with limitations in motion remained associated. Cross-sectional multivariate analyses investigating coping styles showed that the highest tertiles for the CORS coping with pain scales “comforting cognitions” (OR 2.14 (95%CI 1.08–4.22) and “decreasing activity” (OR 2.59 (95% CI 1.28–5.25)) were positively associated with disability. The highest tertile for the coping with limitations scale “pacing” was also associated with disability (OR 3.07 (95%CI 1.53–6.16). Disability after 1 year was only associated with the coping scales “decreasing activity” and “pacing” at baseline. These coping styles were associated with disability, independently of joint-specific factors. The joint-specific factors were also associated with disability, independently of coping styles.

Conclusions: In patients with hand OA, joint-specific factors and passive coping styles were both independently associated with disability. Our results suggest that these interventions should aim at joint-specific complaints as well as changing coping styles to improve functional outcome.

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NEGATIVE ILLNESS PERCEPTIONS ARE ASSOCIATED WITH SHORT-TERM DISABILITY IN PATIENTS WITH HAND OSTEOARTHRITIS

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Purpose: Hand osteoarthritis (OA) results in considerable limitations of activities in daily life. Which factors contribute to disability in hand OA is unclear. Previous studies have shown that both joint-specific and psychosocial factors contribute to the outcome. From generalized OA we know that in the long-term negative illness perceptions are associated with more disability. In the present study we aim to investigate the association of illness perceptions with disability, and to determine the predictive value of illness perceptions in disability after a short-term follow-up period of one year in patients with hand OA.

Methods: Data were used of the HOSTAS (Hand OSTeoArthritis in Secondary care) study, an ongoing observational cohort. Consecutive patients with primary hand OA diagnosed by the treating rheumatologist in the outpatient clinic of the LUMC have been included. HOSTAS aims to investigate determinants of outcome in patients with hand OA. Illness perceptions were measured at baseline, using the Illness Perception Questionnaire – Revised (IPQ-R). The IPQ-R measures both cognitive and emotional representations of illness in three sections. The first section is the identity component and is concerned with symptoms that patients associate with OA. The second section consists of seven subscales representing the individual’s perceptions about the impact of OA in physical, social and psychological functioning. The third section comprises of 18 possible causes that patients attribute OA to, grouped in four dimensions. At baseline and after one year follow-up disability was assessed by the Functional Index for Hand Osteo-Arthritis (FIHOA); the scale ranges from 0–30 (higher score means more disability). Physical examination of all DIP, PIP, IP, MCP and 1st CMC joints was performed by a research nurse on baseline for number of bony swellings (0–30), number of painful joints upon palpation (0–30), number of deformed joints (0–22, not MCP 2–5) and number of joints limited in range of motion (ROM) (0–22). Linear regression analysis was used to associate scores of each IPQ-R dimension to scores in disability, adjusted for age, sex, BMI, number of bony swellings, painful joints, joints with limited ROM and deformed joints. Additional adjustment was made for baseline FIHOA score in longitudinal analysis.

Results: The sample has 258 patients with a mean age of 61 years, 86.4% women, a mean BMI of 27.4 kg/m² and a median number of bony swellings of 11 (range 0–24); of joints painful upon palpation of 3 (0–30), of joints limited in motion of 6 (0–22) and of deformed joints of 5 (0–17). After one year, the FIHOA was completed by 198 patients. The mean FIHOA score at baseline was 8.9 (SD 5.9) and after one year 9.3 (6.3) and mean change in FIHOA was 0.81 (SD 3.7, range –10 to 12). At baseline, five dimensions of the IPQ-R were associated with disability. These five consisted of more symptoms attributed to OA on the identity section (β 0.62; 95%CI 0.33, 0.91), more perceived consequences (0.47; 0.32, 0.62), less illness coherence (–0.25; −0.42, −0.08), more negative emotions associated with OA (0.35; 0.22, 0.47) and beliefs about psychological factors as an attributed cause (0.22; 0.06, 0.38). Disability at one year follow-up was associated with other baseline IPQ-R dimensions. These were perceived illness chronicity (0.20; 0.04, 0.36), less perceived treatment control (−0.28; −0.47, −0.10) and immunity as causal factor (–0.25; −0.50, −0.01). On the other dimensions of the IPQ-R a trend was seen with more negative illness perceptions being associated with more disability, both at baseline and at follow-up.