Osteoarthritis

AB0958

KNEE PAIN IN OSTEOARTHRITIS: CORRELATION WITH SONOGRAPHIC FINDINGS

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Background: Osteoarthritis (OA) is a common joint disorder, with the knee being one of the most frequently involved sites. Knee OA causes pain and stiffness and can lead to considerable disability and consequently to a reduced quality of life (Wideman et al. 2014). The level of radiographic knee OA is, at most, moderately associated with the level of pain. Therefore, it is unlikely that pain is predominantly caused by only bone and cartilage pathology. Mechanical, structural, inflammatory, bone-related, neurological and psychological factors play a role in the process that results in painful knee OA (Wenger et al. 2013).

As OA is a disease of the entire joint that is characterised by cartilage breakdown, subchondral bone alterations and formation of osteophytes, as well as soft tissue abnormalities including meniscal degeneration, bursitis, tendonitis, Baker's cyst and synovial inflammation; information about these soft tissue structures might provide more insight into their potential role in the complex process of pain in knee OA (Cook 2016).

Musculoskeletal ultrasonography (US) is a relatively new imaging tool that is non-invasive, safe and relatively inexpensive and is able to create static as well as dynamic images. In addition, it has been shown to be more sensitive than clinical examination in picking up peri- and intra-articular soft tissue lesions (Beyers et al. 2014).

Objectives: To investigate the cause of pain in Knee OA by comparing sonographic and clinical findings in painful and non-painful osteoarthritic knee.

Methods: A cross-sectional case-control study carried out on fifty patients attending to Sohag University Hospitals rheumatology and rehabilitation outpatient clinic with Knee OA fulfilling ACR clinical criteria. They were divided into two groups. Group A (53) patients with knee pain (VAS 33 mm) during physical activity once at least in the previous 3 days prior to inclusion. Another (42) patients without knee pain for at least 1 month prior to inclusion (VAS 0 mm). All of the participants were subjected to the following:

- Full history (demographic data and personal history, detailed history of general health condition and chronic or current diseases).
- Knee clinical examination (including varus deformity angle assessment)
- Sonographic evaluation: of Effusion, Synovial hypertrophy, Baker's cyst, Enthesitis, Power Doppler by SOLAR score, menisci protrusion, bursitis, sonographic signs of Gout or CPPD and scoring of the osteophytes and cartilage

Results: Our study showed that the painful OA group are more obese, more varus deformities, effusion, synovial hypertrophy, cartilage changes, and higher grading of osteophytes than the control group. On the other hand, Baker cyst and meniscal protrusion echogenic foci, double contour, erosions, meniscal and cartilage calcification showed a non-significant difference between the two groups. We included all of the demographic, clinical and sonographic factors in a univariate regression analysis, and this analysis showed that synovial hypertrophy, effusion, the degree of cartilage changes, the degree of osteophytes, bursitis, and weight may be possible risk factors for pain among OA patients.

Abstract AB0958 – Table 1. Multivariate logistic regression analysis of the possible independent risk factors for pain among painful OA group compared to the non painful OA group.

Item	Odd's ratio	CI of Odd's	P value	Rank as a possible risk for pain
Weight	1.078	0.726-1.602	0.710	6
Effusion	4.312	2.172-24.422	0.013	3
Synovial hypertrophy	7.230	0.741-70.526	0.089	4
Degree of cartilage changes	9.523	2.354-38.532	0.002	1
Grade of osteophytes	12.268	2.112-71.283	0.005	2
Bursitis	5.151	0.239-0.296	0.296	5

Abstract AB0958 – Figure 1

Conclusions: Cartilage degeneration, osteophytes, effusion, synovial hypertrophy, bursitis, and overweight respectively, are the leading causes of pain in knee OA.

Disclosure of Interest: None declared

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AB0959

CONSUMPTION OF DAIRY PRODUCTS IN RELATION TO PRESENCE OF CLINICAL KNEE OSTEOARTHRITIS: THE MAASTRICHT STUDY

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Background: Observational studies showed inverse associations between milk consumption and knee osteoarthritis (knee OA).^{1,2} There is lack of information on the role of specific other dairy product categories.

Objectives: To explore the association between dairy consumption and presence of clinical knee OA in individuals aged 40–75 year participating in the Maastricht Study.

Methods: Presence of clinical knee OA was defined according to a slightly modified version of the American College of Rheumatology (ACR) clinical classification criteria.³ Data on dairy consumption was appraised by a 253-item Food Frequency Questionnaire covering 47 dairy products with categorization on fat content, fermentation or dairy type. Multivariable logistic regression analyses were performed to estimate odd ratios (ORs) and 95% confidence intervals (95% CI), while correcting for relevant factors.

Results: Of the 3010 participants included in this study, 427 individuals (14%) were classified as having clinical knee OA. Significant inverse associations were observed between presence of clinical knee OA and intake of full-fat dairy and Dutch, primarily semi-hard, cheese, with OR for the highest compared to the lowest tertile of intake of 0.68 (95%CI 0.50–0.92) for full-fat dairy, and 0.75 (95%CI 0.56–0.99) for Dutch cheese. No significant associations were found for other dairy product categories.

Conclusions: In this Dutch population, higher intake of full-fat dairy and Dutch cheese, but not milk, was cross-sectionally associated with lower presence of clinical knee OA. Prospective studies need to assess the relationship between dairy consumption, and in particular semi-hard cheeses, with incident knee OA.

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AB0960

POLYORBIDITY AND COGNITION IN AMBULATORY POSTMENOPAUSAL HIP AND KNEE OSTEOARTHRITIS PATIENTS

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Background: Osteoarthritis (OA) has been reported to be a risk factor of morbidity, disability and premature cardiovascular mortality.

Objectives: to assess the impact of polymorbidity on cognitive function in postmenopausal women with primary OA.

Methods: cross-sectional study included ambulatory 682 postmenopausal women aged 48 to 62 (median 56; 25%–75%: 52.0 / 60.0). Inclusion criteria were: confirmed postmenopausal status and Kellgren stage 2 or 3 OA of the knee and/or hip joints fulfilling ARA criteria. Cognitive impairment (CI) was verified by MMSE scale (Mini Mental State Examination). For all patients expected individual risk of premature death and Charlson index were calculated.

Results: Median Charlson comorbidity index in women with OA was 4 (3 / 4). None of the patient had a comorbidity index of 0. The most frequent comorbidities were chronic heart failure (364 women (53.4%) and type 2 diabetes mellitus (180 women, 26.4%).

Charlson index increase was associated with decline of cognitive function (see table 1) with incline of quantity and severity of CI cases.

Abstract AB0960 – Table 1

Charlson Index	n	Age (Me, 25%–75%)	MMSE value	
			(Me, 25%–75%)	Lower limit
1	11	48 (45–49)	28 (28–29)	28
2	102	59 (47–55)	28 (27–29)	24
3	202	54 (51–57)	27 (26–29)	22
4	200	57 (53–60)	26 (25–28)	20
5	119	60 (57–65)	26 (24–27)	21

Conclusions:

- Hip and knee joints OA in postmenopausal women is associated with polymorbidity.
- Polymorbidity in OA patients is associated with cognitive impairment.

Disclosure of Interest: None declared

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AB0961

CARDIORESPIRATORY RESPONSE ACCORDING TO BODY WEIGHT SUPPORT AND GAIT VELOCITY VIA ANTI-GRAVITY TREADMILL AFTER BILATERAL TOTAL KNEE ARTHROPLASTY

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Background: Patients undergoing total knee arthroplasty (TKA) may benefit from early focused postoperative rehabilitation, and progressive weight-bearing activities, such as walking, are routinely recommended during rehabilitation to facilitate return to normal gait function. Not all patients are capable of full weight-bearing activity in the early postoperative period and assistive devices such as walkers, crutches, and canes, are routinely employed. The anti-gravity treadmill, consisting of a treadmill enclosed within an airtight chamber, applies air pressure to a patient's lower body to alter body weight support and can reduce the forces at the knee during weight bearing exercise. The anti-gravity treadmill could be a useful device for early postoperative rehabilitation of TKA, especially for those patients with reduced physical strength and cardiovascular fitness. However, so far, there have been no reported investigations of the physiologic cardiorespiratory responses via anti-gravity treadmill in patients following TKA.

Objectives: This study was conducted to investigate cardiorespiratory response according to body weight support and gait velocity elicited using an anti-gravity treadmill during walking and to find specific gait velocity and body weight support combinations early after bilateral TKA.

Methods: Twenty five patients who underwent a primary TKA were enrolled in this study. Subjects walked with 2.5 km/h and 3.5 km/h on an anti-gravity treadmill at 3 levels (50%, 75%, 100%) of body weight (BW). Each trial was performed for 2 min with at least 1 min rest between trials. For cardiorespiratory responses, oxygen consumption (VO_2), Heart rate, systolic (SBP) and diastolic blood pressure (DBP), respiratory exchange ratio (RER) and rate pulse product (RPP) were measured continuously with average values. The VO_2 , heart rate and RER were measured by using the K4b2 (Cosmed, Rome, Italy), which is a wireless cardiopulmonary diagnostic device, and the values of these exercise variables were defined as the averages of values recorded during the last 30 s of exercise. The RPP was calculated ((heart rate x SBP)/100). In addition, Borg's rating of perceived exertion scale (RPE) and visual analogue scale (VAS) of knee pain were recorded immediately after each condition.

Results: There were 20 females and 32 men, with the average age being 71.3 $\pm$ 5.4 years. In the two-way repeated measures ANOVA, VO_2 levels ($p < 0.01$), HR ($p < 0.01$), RPP ($p < 0.01$), RPE ($p < 0.01$), RER ($p < 0.01$) and VAS ($p < 0.01$) were significantly increased in proportion to 3 levels (50%, 75%, 100%) of BW. In the post-hoc analysis, all other conditions except comparison of RER values between 50% level of BW and 75% level of BW under a speed of 2.5 km/h and a speed of 3.5 km/h were statistically significant. Meanwhile, SBP ($p = 0.65$) and DBP ($p = 0.39$) were not influenced by difference of BW levels.

While walking with a speed of 3.5 km/h at same fraction of BW level, VO_2 ($p = 0.03$), RPE ($p < 0.01$) and RER ($p = 0.01$) values were statistically greater than 2.5 km/h. In the post-hoc analysis, all other conditions except comparison of RER values between a speed of 2.5 km/h and a speed of 3.5 km/h under 100% level of BW was statistically significant.

In addition, multiple linear regression analysis was performed to defining VO_2 as functions of gait speed and fraction of BW under each condition. Based on BW and gait velocity settings of the LBPP treadmill, the equations were $\text{VO}_2 = 1.46 v + 0.08 \text{ BW} + 3.13$ (adjusted $R^2 = 0.34$)

Conclusions: This study demonstrated that cardiorespiratory responses were variably computed by combination of weight support and gait velocity during anti-gravity treadmill walking, and these cardiorespiratory responses and knee pain were more significantly influenced by body weight support than gait velocity. These findings suggest that body weight support and gait speed should be considered for gait training program for cardiovascular fitness early after bilateral total knee arthroplasty.

Disclosure of Interest: None declared

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AB0962

IRISIN LEVELS ARE ASSOCIATED WITH EXERCISE, PAIN AND FUNCTION IN PATIENTS WITH KNEE OSTEOARTHRITIS

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Background: Muscle strengthening and aerobic exercise have been shown to improve joint pain and function in patients with knee osteoarthritis (OA). Irisin is a hormone-like myokine synthesized by skeletal muscle and its secretion appears to be related to physical activity in healthy people.

Objectives: To determine the levels of irisin synovial fluid and plasma and evaluate their association with exercise level and pain and function in patients with symptomatic knee OA.

Methods: Cross-sectional study with systematic inclusion of 108 symptomatic primary knee osteoarthritis patients (VAS > 4) with ultrasound-confirmed joint effusion. Age, physical exercise, knee osteoarthritis symptoms duration and different anthropometric measurements were collected. Radiographic severity was evaluated according to Kellgren-Lawrence scale. Physical exercise was categorised as never, occasional (less than 150 min per week) or regular (more than 150 min per week). Pain and disability were assessed by the Lequesne algo-functional questionnaire. Irisin was measured by ELISA in synovial fluid and plasma. Summary of clinical data and laboratory parameters and their association with Lequesne scale were performed using non-parametric methods. Medians and Spearman correlation (r) were used for continuous measures, and Mann-Whitney test was applied to categorical variables. This study was approved by the local ethics committee.

Results: Plasma and synovial irisin levels were strongly related ($r = 0.7$). Plasma and joint irisin levels showed an inversely significant association with the level of exercise in patients with symptomatic knee OA: no exercise 763.3 ng/mL, occasional exercise 631.8 ng/mL and regular exercise 523 ng/mL ($p < 0.01$). Patients with severe pain and disability (Lequesne algo-functional score > 11) had higher plasma (791.5 vs 680.4 ng/mL, $p < 0.05$) and synovial (711.4 vs 468.7 ng/mL, $p < 0.05$) irisin levels compared to patients with less disability and pain. No relationship was found between irisin concentration in plasma or synovial fluid and radiographic severity.

Conclusions: Irisin levels were associated with pain and function in patients with knee osteoarthritis. Irisin levels were negatively associated with exercise level in this population.

Disclosure of Interest: None declared

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AB0963

CALPROTECTIN AS A USEFUL MARKER OF INFLAMMATION IN KNEE OSTEOARTHRITIS

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Background: Low-grade synovial inflammation is known to be present in many patients with knee osteoarthritis and appears to have clinical and prognostic implications. Calprotectin seems to be more sensitive than CRP to detect minimal inflammatory activity in many inflammatory rheumatic diseases and could be a biomarker in osteoarthritis with inflammatory features.

Objectives: To determine the levels of synovial calprotectin in patients with knee osteoarthritis showing inflammatory traits and their relationship with clinical and ultrasonographic features and other proinflammatory markers.

Methods: Cross-sectional study with systematic inclusion of 108 symptomatic primary knee osteoarthritis patients (VAS > 4) with ultrasound-confirmed joint

effusion. Age, physical exercise, knee osteoarthritis symptoms duration and different anthropometric measurements were collected. Radiographic severity was evaluated according to Kellgren-Lawrence scale. Pain and disability were assessed by WOMAC-pain and WOMAC-function. Calprotectin, TNF- α , IL-6 and high-sensitivity C-reactive protein (hs-CRP) were measured by ELISA in synovial fluid. Summary of clinical data and laboratory parameters and their association with WOMAC scales were performed using non-parametric methods. Medians and Spearman correlation (r) were used for continuous measures, and Mann-Whitney test was applied to categorical variables. This study was approved by the local ethics committee.

Results: Median higher synovial calprotectin levels were associated with worse WOMAC pain (671.5 vs 431.8 ng/mL, $p<0.05$.) and function (713.4 vs 400.1 ng/mL, $p<0.05$.) scores than patients with inferior levels. Patients with moderate to severe synovial effusion (>8 mm on midline suprapatellar line) had higher calprotectin levels compared with those with mild effusion (626.1 vs 417.5 ng/mL, $p<0.05$). Synovial calprotectin levels showed moderate correlations with intraarticular TNF- α levels ($r=0.26$), hs-CRP ($r=0.27$) and a high correlation with synovial IL-6 levels ($r=0.53$).

Conclusions: Calprotectin showed association with inflammatory features as measured by ultrasound and inflammatory markers such as hs-CRP, TNF- α and IL-6, and was related to pain and function in patients with knee osteoarthritis with inflammatory features. Calprotectin appears to be a useful marker of inflammation and could be a useful marker for assessing response to treatments targeting inflammation.

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AB0964 THE ROLE OF MTOR GENE EXPRESSION, APOPTOSIS AND INFLAMMATION IN OBESE PATIENTS WITH KNEE OSTEOARTHRITIS

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Background: Metabolic osteoarthritis (OA) has been identified in rheumatology as a specific phenotype due to the growing rates of obesity and other comorbidities, with meta-inflammation as the key factor in its pathogenesis. On the other hand, OA progression is associated with altered regulation of chondrocytes' metabolism, namely, with up-regulated expression of genes encoding m-TOR, apoptosis, cartilage degeneration and inflammation.

Objectives: To measure the expression levels of genes encoding mTOR, apoptosis (caspase-3), cartilage destruction (cathepsin K), and inflammation (TNF- α) in patients with knee OA (KOA) and obesity.

Methods: 50 female patients (45–65 y.o.) with Kellgren-Lawrence stage II-III KOA and obesity (BMI >30 kg/m²;) were randomised into 2 groups. Pts in Group 1 ($n=25$) were administered orlistat as a specific therapy for obesity for the period of 6 months, and life-style modifications including low caloric diet and physical exercises for 12 months, pts in Group 2 were recommended to observe the diet and physical exercises during 12 months. Peripheral blood samples were obtained at Mo12 for PCR evaluation of gene expression.

Abstract AB0964 – Figure 1. Body mass dynamics. **Abstract AB0964 – Figure 2.** Gene expression in obese pts with knee OA

Results: Following orlistat therapy pts from Group 1 managed to reduce their body weight by 10.07% at Mo 6 ($p<0.05$), while pts from Group 2 lost only 0.88% ($p=0.8$) of their body weight versus the baseline values. During the following 6 months pts from Group 2 on life-modifying regimen continued to lose their body weight, achieving 3.5% ($p>0.05$) weight reduction versus baseline values, while pts from Group 1 gained weight by 5.6% as compared to the values at Mo 6 during the study (figure 1). Expression of genes encoding inflammation, apoptosis and cell proliferation was assessed at Mo12 to evaluate possible correlation with the dynamics of body weight. Up-regulated expression ($p<0.05$) of genes encoding inflammation (TNF- α), cartilage destruction (cathepsin K), apoptosis (caspase-3) and cell proliferation (m-TOR) was documented in KOA obese pts from Group 1, gaining body weight during the second stage of the study, as compared to the expression values in pts from Group 2 (figure 1). The analysis demonstrated direct positive correlation ($p<0.05$) between expression of genes encoding inflammation, cartilage destruction and apoptosis and pain intensity in knee joints assessed by VAS and WOMAC scales.

Conclusions: Therefore up-regulation of m-TOR, caspase-3, TNF- α and cathepsin K gene expression is observed in obese pts with KOA following weight gain and worsening of clinical parameters, which is suggestive of aggravated apoptosis, inflammation and cartilage destruction, providing further KOA progression.

Disclosure of Interest: None declared

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AB0965 MEDICAMENTAL AND NON-MEDICAMENTAL THERAPY PREGNANT WOMEN WITH HIP OSTEOARTHRITIS

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Objectives: The management of patients with severe pain caused by primary or secondary osteoarthritis (OA) of the hip joint (TBS) has not been developed. The aim of the present work was to evaluate the impact of NSAIDs, glucocorticoids (GCS), analgesics and non-drug treatment methods on pregnancy outcomes in patients with primary and secondary OA TBS

Methods: The study included 99 pregnant women aged 35 to 49 with an intensive pain (≥ 4.0 points for VAS) due to primary or secondary OA TBS. Depending on the form of OA, the severity of the pain and the patient's opinion, the therapy was prescribed – ibuprofen up to 800 mg per day orally ($n=31$) or paracetamol up to 1000 mg per day orally ($n=20$) or methylprednisolone up to 12 mg per day orally ($n=27$) or non-pharmacological methods ($n=21$). The efficacy of the treatment was evaluated within a month from the start of the therapy, pregnancy outcomes for the mother and fetus and pathology of the child after 12 months after the birth. The factors, associated with low efficacy of treatment, were evaluated.

Results: In 50 (51%) women was established primary OA TBS, in 49 (49%) – secondary OA TBS. A decrease of pain in TBS in patients of all treatment groups ($p<0.05$ for comparison with baseline) was registered. Patients with secondary OA, who received Methylprednisolone, showed a statistically significant ($p<0.05$) improvement in pain compared to patients in other clinical groups. A correlation was found between the intensity of pain syndrome (VAS) and BMI.

85 (85%) patients had urgent deliveries, 14 (14%) had premature, natural delivery in 82 (82%) women, and a caesarean section was performed in 29 (29%) cases. The cases of ante- and perinatal fetal death were not recorded.

Pathological conditions were absent in 28 (84.85%) of newborns, whose mothers refused medical treatment, in 28 (90.32%) newborns, who received ibuprofen, in 15 (75%) – paracetamol, and in 23 (85.19%), who were on methylprednisolone therapy (differences between groups are unreliable, $p\geq 0.05$). In 12 months after bearth in the group of newborns receiving antenatal ibuprofen, pathological conditions were observed in 3 children, paracetamol – in 5, metiprednisolone – in 4 children who were "without therapy" – in 5 children.

Conclusions:

- The use of non-medicamental and medicamental (non-selective NSAIDs or GCS in small doses or analgesics) treatment in pregnant woman with hip osteoarthritis has equal efficiency and safety for the health of the mother and fetus.
- Children, born to mothers with primary or secondary hip osteoarthritis, treated with NSAIDs or analgesics or GCS by medical treatment in age of 12th month do not differ from children, born to mothers with osteoarthritis of hip joints, receiving non-medicamental therapy.
- An increase of the body mass index of a pregnant woman with osteoarthritis of the hip joints is a predictor of refractoriness to any form of drug and non-drug therapy.

Disclosure of Interest: None declared

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AB0966

CROSS-CULTURAL ADAPTATION AND VALIDATION OF THE KOREAN VERSION OF THE FUNCTIONAL INDEX FOR HAND OSTEOARTHRITIS (FIHOA)

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Background: Osteoarthritis (OA) is one of the most common type of arthritis and it most frequently involves joints of the hands. Measuring functional ability of hand OA patients is important in terms of assessment of treatment response, patient management and improvement of quality of life. The functional index for hand osteoarthritis (FIHOA) is one of the most frequently utilised questionnaire to assess the physical function of hand OA patients. The FIHOA has been translated into 17 languages, however, no Korean version of FIHOA is yet available.

Objectives: To translate the FIHOA into Korean, and establish the reliability and validity of the cross-culturally adapted Korean version of FIHOA (K-FIHOA) in patients with hand OA.

Methods: The FIHOA was translated into Korean following cross-cultural adaptation guidelines. The K-FIHOA was pretested in 40 hand OA patients (defined by ACR classification criteria). The adapted K-FIHOA was then administered to 100 consecutive hand OA patients together with the modified Health Assessment Questionnaire (mHAQ) and visual analogue scale (VAS) for hand pain. The test-retest reliability of each item and total scores were assessed using Spearman's correlation coefficient and intraclass correlation coefficient (ICC). The internal consistency reliability was evaluated as the Cronbach's alpha. The external construct validity was assessed using correlation between K-FIHOA and mHAQ and hand pain VAS.

Results:

Abstract AB0966 – Table 1

K-FIHOA items	Test-retest reliability				Internal consistency		
	Test	Retest	Spearman's correlation coefficient	ICC	Adjusted item-total Correlation	Item-item correlation	Cronbach's alpha if item is deleted
Item 1	0.19 ±0.54	0.20 ±0.55	0.63	0.58	0.37	0.20–0.36	0.88
Item 2	0.25 ±0.59	0.25 ±0.59	0.58	0.54	0.51	0.26–0.48	0.88
Item 3	0.22 ±0.60	0.25 ±0.61	0.73	0.74	0.52	0.31–0.60	0.87
Item 4	0.35 ±0.66	0.30 ±0.59	0.62	0.58	0.59	0.33–0.52	0.87
Item 5	0.83 ±1.06	0.74 ±1.04	0.76	0.74	0.70	0.33–0.62	0.87
Item 6	0.40 ±0.85	0.40 ±0.88	0.66	0.75	0.63	0.22–0.73	0.86
Item 7	0.43 ±0.88	0.32 ±0.74	0.70	0.71	0.70	0.32–0.73	0.86
Item 8	0.19 ±0.53	0.13 ±0.37	0.62	0.56	0.47	0.25–0.60	0.87
Item 9	1.10 ±1.16	1.07 ±1.16	0.81	0.79	0.74	0.28–0.62	0.88
Item 10	0.43 ±0.79	0.39 ±0.69	0.85	0.80	0.44	0.20–0.52	0.88

Values are given as mean ± standard deviation.

Abbreviations: K-FIHOA, the Korean version of functional index of hand osteoarthritis; ICC, intra-class correlation coefficient.

The mean total score of the K-FIHOA was 4.39 [Standard deviation (SD)=5.56] in the first assessment and 4.04 (SD=5.22) in the second assessment. The test-retest reliability for the total score was strong ($r=0.87$ and $ICC=0.75$). Spearman's rho for single item correlation ranged from 0.58 to 0.85 and ICC between single items were good or excellent (0.54–0.80). Cronbach's alpha was high (0.88) suggesting a strong internal coherence in the items of the questionnaire. We identified significant correlations between K-FIHOA and hand pain VAS ($r=0.53$, $p<0.01$), mHAQ ($r=0.52$, $p<0.01$), and mHAQ hand function score ($r=0.57$, $p<0.01$).

Abstract AB0966 – Figure 1. External construct validity of K-FIHOA with hand pain VAS, mHAQ, mHAQ hand function.

Conclusions: The K-FIHOA is a reliable and valid instrument for evaluating functional disability in Korean hand OA patients.

Disclosure of Interest: None declared

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AB0967

IS THE ICOAP A VALID TOOL FOR MEASURING PAIN AND FUNCTION IN PATIENTS WITH KNEE OA AND RA IN CLINICAL PRACTICE?

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Background: Osteoarthritis (OA) is primarily managed in general practice however, care is provided on an ad hoc basis, and a structured approach to continuing care is not offered. Studies have demonstrated the high prevalence of secondary OA of the knee in patients with RA, however, about 52% of these cases are under-reported or under graded by general radiological reports. With its increasing prevalence, it is important to use valid and responsive instruments to evaluate the effectiveness of interventions and to understand the pathology's impact on functioning and general health status.

Objectives: We hypothesised that the ICOAP can accurately measure the severity of pain in patients with OA in the clinical setting and can equally detect secondary OA in patients with pre-existing RA.

Methods: Patients with longstanding knee OA or RA from outpatient rheumatology clinics alongside GP surgeries were recruited. The ICOAP's formatting was modified and brief abstract was added to the top of the questionnaire to aid patient comprehension. After its modification, it was tested for internal consistency, reliability and construct validity by correlating its yield with other disease activity parameters including the WOMAC and DAS. To examine the test-retest reliability patients were asked to fill out the ICOAP questionnaire again after two weeks.

Results: The study included 57 patients with OA and 45 with RA. Total ICOAP-C was 42 with patients with OA compared to 56 in patients with RA while ICOAP-I was 49 in patients with OA compared to 53 in patients with RA. Subgroup analysis of ICOAP-C and ICOAP-I identified that while intermittent pain had a greater impact on QOL in patients with OA, constant pain had a greater impact on OA patient QOL. Patients with RA for more than 10 years had more similar results to patients with OA.

Conclusions: The ICOAP questionnaire is easy to use clinically, with the majority of patients approached willing to participate. Respondents with both OA and RA also commented on the lack of complication and ease of understanding of questions. It was responsive to changes in management, proving to be a useful tool in general practice to follow disease progression. The findings demonstrate that the ICOAP has a potentially wider clinical utility in measuring pain in patients with both OA and RA. The similarities in responses of the majority of respondents with knee OA and long-standing RA also strongly suggest that ICOAP might be likely detecting under-reported secondary OA. Future research will examine the effects of variables like pain catastrophizing on pain perception and response.

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