tendons (6.9% vs. 0.7%, $p<0.001$). The right hand was affected more often by tendon damage than the left hand (2.5% vs. 1.1%, $p<0.05$), but not by tenosynovitis (3.5% vs. 4%, $p=0.7$). Among all tendons, tenosynovitis affected most often the sixth extensor compartment (in 28.1%), while tendon damage most frequently involved Flexor digitorum II and II (each 4.8%) detected by US (fig. 1). Clinically, any tendon involvement was observed in 57 (78.1%) patients. There was no agreement between the US and the clinical examination on the level of individual tendons ($\kappa=0.0007$) and only slight agreement on the level of individual patients (any affected tendon yes/no) ($\kappa=0.16$). We also found no association between osteophytes (radiographic or US) and tendon involvement regardless of assessment. Neither total MSACRAH nor the MPUIT correlated with the number of affected tendons detected by US. However, there was a slightly significant correlation between the number of clinically affected tendons and the MSA-CRAH subtest for hand function and stiffness.

Fig.1 Distribution of tenosynovitis and tendon damage in the sonographic examination

Abstract THU0431 – Figure 1.

Conclusion: This study revealed a high frequency of tendon involvement in HOA. The prevalence of tenosynovitis was similar as reported for RA and other inflammatory arthritides. The fact that we could demonstrate marked differences in the distribution of tenosynovitis and tendon damage between and among flexor and extensor tendons as assessed on US, coupled with the overall homogeneous clinical involvement, suggests that clinical examination may be less specific for tendon involvement as compared to US. Tendon involvement on US does not seem to have an impact on hand function in HOA.

Disclosure of Interests: Irina Gessl Grant/research support from: Travel Grant, Anna Vinatzer: None declared, Gabriela Supp: None declared, Michael Zauner: None declared, Michaela Loiskandl: None declared, Martina Durechova: None declared, Valentin Ritschl: None declared, Josef S. Smolen Grant/research support from: AbbVie, Eli Lilly, Janssen, MSD, Pfizer, Roche, Consultant for: AbbVie, Amgen, Astra-Zeneca, Astro, Celgene Corporation, Celtrion, Eli Lilly, Glaxo, ILTOO, Janssen, MedImmune, MSD, Novartis, Pfizer, Roche, Samsun, Sanofi, UDB, Speakers bureau: AbbVie, Amgen, Astra-Zeneca, Astro, Celgene Corporation, Celtrion, Eli Lilly, Glaxo, ILTOO, Janssen, MedImmune, MSD, Novartis, Pfizer, Roche, Samsun, Sanofi, UDB, Daniel Aletaha Grant/research support from: AbbVie, Bristol-Myers Squibb, and MSD, Consultant for: AbbVie, Bristol-Myers Squibb, Eli Lilly, Janssen, Medac, Merck, MSD, Pfizer Inc, Roche, and UCB, Speakers bureau: AbbVie, Bristol-Myers Squibb, Eli Lilly, Janssen, Medac, Merck, MSD, Pfizer Inc, Roche, and UCB, Peter Mandl: None declared

DOI: 10.1136/annrheumdis-2019-eular.7736

THU0432 LUMBAR FACET JOINT OSTEOARTHRITIS IS A RISK FACTOR OF SACROILIAC JOINTS DEGENERATION

Zhi-xiang Huang¹, Li Guo-Chao², Qi Mi², Shi-Yu Wang², Wei-Ming Deng¹, Li Tian-Wang¹. ¹Guangdong Second Provincial General Hospital, Department of Rheumatology and Immunology, Guangzhou, China; ²Ganzi Tibetan Autonomous Prefecture People's Hospital, Department of Rheumatology and Immunology, Ganzi Tibetan Autonomous Prefecture, China

Background: Degeneration of sacroiliac joints (SIJ) is common in the general population, which associates with age, gender and body mass index (BMI). This degenerative disease relates to various lumbar

disorders. Lumbar facet joint osteoarthritis (LFJOA) is highly prevalent, but relationship between this disease and SIJ degeneration remains poorly evaluated.

Objectives: This study aimed to investigate the relation between LFJOA and SIJ degeneration. We hypothesized that LFJOA patients might suffer more serious SIJ degeneration, thus multiple linear regression was employed to compare the effect of LFJOA and demographic characteristics on degeneration of SIJ.

Methods: We reviewed pelvic and lumbar computed tomography (CT) examinations of LFJOA patient with low back pain (LBP) through a picture archiving and communication system. The controls were age, gender and BMI-matched individuals who were free of LFJOA and LBP, and underwent pelvic and whole abdomen CT scans due to the non-musculoskeletal symptoms. Severity of SIJ degeneration was scored using a quantitative method which has been described by Bäcklund et al [1]. LFJOA was graded using a method which has been mentioned by Weishaupt et al [2]. Briefly, this method concerns facet joint space, osteophytes, hypertrophy of the articular processes, and subarticular bone erosions, which ranges from 0 to 3 for a joint. If there is a discrepancy between 2 joints in the same level, the greater one was used. LFJOA was defined at least one level ≥ 2 from L1-2 to L5-S1. Scores of SIJ degeneration were compared between LFJOA patients and the controls. Correlation analysis between SIJ degeneration score and number of LFJOA levels, number of LFJOA joints, sum of LFJOA grades were performed. Stepwise multiple linear regression model was used to find the most important contributor of SIJ degeneration among LFJOA, gender, age and BMI.

Results: (1) CT examinations of 992 LFJOA patients and 399 controls were reviewed. (2) Score of SIJ degeneration in LFJOA patients were higher than that of the controls (8.85 ± 2.94 vs. 4.31 ± 2.52 , $P<0.05$). (3) SIJ degeneration score positively correlated with number of LFJOA levels ($r=0.11$, $P<0.05$), number of LFJOA joints ($r=0.09$, $P<0.05$) and sum of grades ($r=0.10$, $P<0.05$). (4) Results of multiple linear regression were shown in Table 1. LFJOA had the greatest standardized coefficient in the regression model.

Conclusion: LFJOA patients suffers more significant SIJ degeneration, and more severe LFJOA leads to more serious SIJ degeneration. Influence of LFJOA on SIJ degeneration is stronger than demographic characteristics.

REFERENCES:

- [1] Bäcklund J, Clewett Dahl E, Skorpil M. Is CT indicated in diagnosing sacroiliac joint degeneration? Clin Radiol 2017;72(8):693.e9-693.e13.
- [2] Weishaupt D, Zanetti M, Boos N, et al. MR imaging and CT in osteoarthritis of the lumbar facet joints. Skeletal Radiol 1999; 28: 215-219.

Abstract THU0432 – Table 1. Stepwise multiple linear regression model for sacroiliac joints degeneration score

Independent variables	Unstandardized coefficient		Standardized coefficient	P value	95% confidence interval for B		Variance inflation factor
	B	SE			Lower bound	Upper bound	
LFJOA	-4.49	0.12	-0.58	<0.001	-4.73	-4.25	1.00
Age	0.124	0.00	0.55	<0.001	0.12	0.13	1.01
BMI	0.05	0.01	0.06	<0.001	0.02	0.07	1.00
Gender	0.30	0.11	0.04	0.009	0.08	0.53	1.01

SE standard error, LFJOA lumbar facet joint osteoarthritis, BMI body mass index $R^2=0.65$, adjusted $R^2=0.65$

Acknowledgement: None.

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2019-eular.2831

THU0433 THE BURDEN OF OSTEOARTHRITIS PAIN FROM THE PATIENT'S PERSPECTIVE IN EUROPE

James Jackson¹, Wenhui Wen², Pavlina Hubanova¹, Nathan Williams¹, Jennifer Mellor¹, Ravi Iyer³. ¹Adelphi Real World, Cheshire, United Kingdom; ²Regeneron Pharmaceuticals, Inc., Tarrytown, United States of America; ³Teva Pharmaceutical Industries, Frazer, United States of America

Background: Pain, the primary symptom of osteoarthritis (OA), affects multiple aspects of a patient's life.

Objectives: To evaluate the burden of OA pain from the patient's perspective in 5 European countries (France, Germany, Italy, Spain, the United Kingdom; EU5).

Methods: This real-world cross-sectional study used data from the 2017 EU5 Adelphi OA Disease Specific Programme, a survey of physicians and their OA patients. Physicians completed a Patient Record Form on need for treatment, opioid use, and comorbidities. The patient-completed questionnaire included assessment of pain and physical function (Western Ontario and McMaster Universities Osteoarthritis Index [WOMAC]), health-related quality of life (HRQoL; EuroQoL 5-dimension 5-level [EQ-5D-5L]), activity/productivity impairment (OA-specific Work Productivity and Activity Impairment questionnaire), and other functional limitations (e.g., need for walking aid, suffered a fall). Patients with hip/knee OA diagnosed by physicians were stratified by their current OA pain intensity (no/mild pain [WOMAC score 0–3] or moderate/severe pain [WOMAC score ≥ 4]) and opioid use. Multivariate testing was used to compare outcomes for patients with no/mild pain & no opioid use vs those with no/mild pain & opioid use; moderate/severe pain & no opioid use; and moderate/severe pain & opioid use.

Results: The study included 1,547 patients with hip/knee OA (55.0% knee only, 26.8% hip only, 18.2% both hip and knee; mean [SD] age 66.8 [11.1] years; 57.0% female). Among this sample, 34.4% of patients (n=532) had no/mild pain & no opioid use; 11.2% (n=173) had no/mild pain & opioid use; 32.8% (n=508) had moderate/severe pain & no opioid use; and 21.6% (n=334) had moderate/severe pain & opioid use. Patients with moderate/severe pain with or without opioid use had higher comorbidity burden compared with patients with no/mild pain & no opioid use (Charlson Comorbidity Index: 0.7 and 0.4, respectively, vs 0.3, $P<.05$) and were more likely to report physical mobility impacted by OA (87.2% and 77.0%, respectively, vs 51.2%; $P<.0001$), need for a walking aid (68.6% and 46.6%, respectively, vs 36.4%; $P<.05$), ever suffering a fall due to OA (45.8% and 30.8%, respectively, vs 24.1%; $P<.05$), dissatisfaction with current OA treatment (39.1% and 25.7%, respectively, vs 6.6%; $P<.0001$), poorer HRQoL (EQ-5D-5L utility score 0.5 and 0.6, respectively, vs 0.8; $P<.0001$), higher overall activity impairment (66.8% and 59.7%, respectively, vs 31.1%, $P<.0001$) and work impairment due to OA (employed patients only: 60.9% and 45.3%, respectively, vs 29.1%, $P<.0001$). Patients with no/mild pain & opioid use had poorer outcomes ($P<.05$) vs no/mild pain & no opioid use except for falls, treatment dissatisfaction, and work impairment due to OA.

Conclusion: In this EU cohort, patients with moderate/severe OA pain reported significant burdens that comprised greater treatment needs; more comorbidities; and reductions in physical functioning, HRQoL, and work productivity and daily activities. Patients with moderate/severe OA pain and opioid use experienced the highest burdens. These results demonstrate the multidimensional impact of OA pain on a patient's life and underscore an unmet need for more effective treatment options for OA pain.

References: N/A

Disclosure of Interests: James Jackson Consultant for: Regeneron Pharmaceuticals, Inc., and Teva Pharmaceutical Industries, Wenhui Wen Employee of: Regeneron Pharmaceuticals, Inc., Pavlina Hubanova Consultant for: Regeneron Pharmaceuticals, Inc., and Teva Pharmaceutical Industries, Nathan Williams Consultant for: Regeneron Pharmaceuticals, Inc., and Teva Pharmaceutical Industries, Jennifer Mellor Consultant for: Regeneron Pharmaceuticals, Inc., and Teva Pharmaceutical Industries, Ravi Iyer Employee of: Teva Pharmaceutical Industries Ltd.

DOI: 10.1136/annrheumdis-2019-eular.5142

THU0434 KNEE JOINT DISTRACTION AS STANDARD OF CARE TREATMENT FOR KNEE OSTEOARTHRITIS: A COMPARISON WITH CLINICAL TRIAL PATIENTS

Mylène Jansen¹, Simon Mastbergen², Michelle Van Empelen², Esmee Kester², Floris Lafaber¹, Roel Custers². ¹University Medical Center Utrecht, Rheumatology and Clinical Immunology, Utrecht, Netherlands; ²University Medical Center Utrecht, Orthopedic Surgery, Utrecht, Netherlands

Background: Knee joint distraction (KJD) has been evaluated as joint-preserving treatment for patients with knee osteoarthritis (OA) in 3 clinical trials since 2004. KJD aims to delay a total knee arthroplasty (TKA) in young knee OA patients, to decrease the risk for revision surgery. KJD

temporarily separates the tibia and femur, unloading the knee joint. In an open prospective study (OPS) and 2 randomized controlled trials (RCTs), KJD showed cartilage regeneration and clinical improvement^{1,2}. Since 2014, KJD is a standard of care treatment option in several Dutch hospitals for younger (≤ 65 yrs) knee OA patients.

Objectives: Compare baseline characteristics and clinical outcome at 1 year post-treatment between KJD patients treated in regular care vs study conditions.

Methods: In the OPS, patients (n=20; age <60 years) with end-stage OA indicated for TKA were treated with KJD for 8 weeks between 2004 and 2006. In an RCT comparing KJD with TKA, end-stage knee OA patients considered for TKA were treated with KJD (n=19; age <65 years) and completed 1-year follow-up. In an RCT comparing KJD with HTO, medial knee OA patients considered for HTO were treated with KJD (n=22; age <65 years). In both RCTs, patients were treated with KJD for 6 weeks between 2011 and 2014. From 2014-2017, 84 patients were treated with 6-week KJD in regular care and available for 1-year follow-up.

All distraction surgery was performed using two external fixators with built-in springs. The knee was distracted 5 mm and weight-bearing was supported. WOMAC questionnaires were assessed at baseline (0) and 12 months. Only regular care patients who completed both questionnaires were included in analyses.

Abstract THU0434 –Table 1.

Table 1: Baseline characteristics of patients treated with knee joint distraction.

	Study patients (n = 61)	Regular care patients (n = 41)	P-value
Age, years (mean $\pm$ SD)	51,7 (6,8)	54,0 (6,9)	0,102
Male gender, n (%)	35 (57)	23 (56)	0,898
BMI, kg/m ² (mean $\pm$ SD)	28,1 (3,7)	27,8 (3,9)	0,744
Left index knee, n (%)	26 (43)	19 (46)	0,711
Range of motion, degrees (mean $\pm$ SD)	122,7 (14,9)	125,4 (14,1)	0,362
Leg axis, degrees (mean $\pm$ SD)	4,8 (4,4)	4,6 (4,7)	0,876
Kellgren&Lawrence grade, n (%)			0,084
- Grade 0	0 (0)	0 (0)	
- Grade 1	9 (15)	0 (0)	
- Grade 2	9 (15)	7 (17)	
- Grade 3	30 (49)	24 (59)	
- Grade 4	13 (21)	10 (24)	
Distraction duration, days (mean $\pm$ SD)	48,2 (8,2)	45,5 (4,2)	0,032
- without OPS	42,8 (2,3)	45,5 (4,2)	0,001
WOMAC Baseline, points (mean $\pm$ SD)			
- Total	49,8 (15,7)	47,5 (14,9)	0,464
- Pain	49,8 (15,7)	46,3 (16,9)	0,293
- Stiffness	45,4 (18,3)	39,3 (23,1)	0,141
- Function	51,0 (16,2)	48,9 (15,2)	0,498

Baseline patient characteristics were compared between 'study' (OPS/RCT) and 'regular care' patients. For each group, the total WOMAC scores and subscales at follow-up were compared to baseline. The influence of different characteristics on the 1-year change in WOMAC scores was analyzed. Characteristics predicting being a responder to KJD treatment were analyzed according to the OMERACT-OARSI responder criteria, defined as an increase of $\geq 50\%$ and ≥ 20 points in WOMAC pain or function scales, or a $\geq 20\%$ and ≥ 10 -point improvement in both scales.

Results: In regular care, 41 patients completed both questionnaires. Baseline characteristics for both groups are shown in table 1, showing a significant, but small difference in distraction duration, which was longer for study patients, but shorter when excluding the OPS patients who received distraction 2 weeks longer. The total WOMAC score and subscales for both groups increased significantly at 1 year compared to baseline (figure 1). The increase in total WOMAC and all subscales was over 15 points and thus clinically significant for both groups. The increase in the WOMAC function subscale was statistically, but not clinically, significantly higher for study patients (6.7 points) than regular care patients, while the total WOMAC, pain and stiffness were not different between groups (figure 1). After 1 year, 69% of patients were responders (60% regular care, 75% study patients, $p=0.120$). None of the baseline characteristics could significantly predict being a responder or had a significant influence on the increase in total WOMAC.