Methods: Fifty-one AS patients (102 hips) who admitted to our hospital from January 2015 to December 2017 were involved in this retrospective cohort study. Patients who had previously received disease modifying anti-rheumatic drugs or systemic glucocorticoid therapy were excluded. After being treated by Rhu-TNFR-Fc (YISAIPU) 50 mg/week for 12 weeks, subcutaneous injections were performed every other week for patients in the tapering group, while the control group maintained the same therapy till the 24th week. AS disease activity score-C reactive protein (ASDAS-CRP), Bath AS function index (BASFI) and Harris hip score were recorded at every follow-up. Pelvic X-ray and MRI examinations for hips were conducted before treatment and in the 24th week. Bath AS radiology index-hip (BASRI-h) was employed to assess the change in X-ray, and definition of hip MRI finding was described by Huang et al. Bone marrow oedema, enthesitis and synovitis was thought to be a marker for active inflammatory changes. Chronic inflammatory changes included bone erosion, fat accumulation and ankylosis.

Results: After markedly descending to the minimum at week 12 ($p<0.05$), ASDAS-CRP, BASFI and Harris hip score kept stable till the end in both groups (table 1). BASRI-h of these groups unchanged during 24 weeks ($p>0.05$, figure 1). Nevertheless, active inflammatory changes improved dramatically in the second MRI examination ($p<0.05$, table 2). No statistical significant was existed between groups ($p>0.05$).

Abstract SAT0301 – Table 1. Changes in the variables of patients with ankylosing spondylitis at follow-ups (Mean±SD)

Variables	Tapering group (n=31)			Control group (n=20)		
	Week 0	Week 12	Week 24	Week 0	Week 12	Week 24
ASDAS-CRP	3.9±0.8	1.0±0.6*	1.1±0.7*	4.0±0.6	1.0±0.6*	1.1±0.7*
BASFI	3.5±1.4	1.2±0.9*	1.5±1.2*	3.7±1.2	1.2±0.8*	1.2±1.1*
Harris hip score	51.7±12.5	75.9±11.1*	72.0±10.4*	51.9±11.0	76.0±9.6*	75.9±8.8*

* $P<0.05$ compared with week 0 in the same group. ASDAS-CRP, ankylosing spondylitis disease activity score-C reactive protein; BASFI, Bath ankylosing spondylitis function index

Abstract SAT0301 – Table 2. Changes in the MR features of hips in patients with ankylosing spondylitis at week 0 and week 24 (n,%)

Variables	Tapering group (n=62)		Control group (n=40)	
	Week 0	Week 24	Week 0	Week 24
Active inflammatory change	49 (79.0)	14 (22.6)*	32 (82.5)	5 (12.5)*
Chronic inflammatory change	17 (27.4)	17 (27.4)	10 (25.0)	10 (25.0)

* $P<0.05$ compared with week 0 in the same group

Abstract SAT0301 – Figure 1. Changes of Bath AS radiology index-hip

Conclusions: Rhu-TNFR-Fc tapering might maintain remission of hip arthritis in patients with AS, and it shares similar therapeutic effect of full-dose Rhu-TNFR-Fc. Therefore, dose reduction of TNFi tends to be an acceptable therapy for AS-related hip arthritis.

REFERENCE:

[1] Eur J Radiol. 2013;82(9):1487–93.

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SATURDAY, 16 JUNE 2018

Psoriatic arthritis

SAT0302

EVALUATION OF SUBCLINICAL GUT INFLAMMATION USING FAECAL CALPROTECTIN LEVEL AND COLONIC MUCOSAL BIOPSY IN PATIENTS WITH PSORIASIS AND PSORIATIC ARTHRITIS

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Background: The association between gut inflammation and ankylosing spondylitis is well established, while it is not so in psoriatic arthritis (PsA).

Objectives: To study the prevalence of subclinical gut inflammation in PsA and Psoriasis (PsO) patients using faecal calprotectin levels and colonic mucosal biopsies and its correlation with disease phenotypes and activity scores.

Methods: Fifty patients with active PsA and hundred with active PsO were recruited. Faecal calprotectin levels of more than 43.2 µg/gm by ELISA was considered positive. Sigmoidoscopy and multiple colonic mucosal biopsies were done in twenty PsA patients and eight PsO patients. Thirty consecutive patients with irritable bowel syndrome (IBS) according to ROME III criteria were disease control population. Mann Whitney u test and Kruskal Wallis H test were used.

Results: Baseline characteristics are given in table 1. Faecal calprotectin level was elevated in 29 (58%) PsA patients and 26 (26%) PsO patients ($p=0.000$). The mean value of faecal calprotectin was higher in PsA patients than PsO (86.6±81.5 µg/gm vs 32.9±48.1 µg/gm, $p=0.000$). The Odds for a positive faecal calprotectin level in PsA was 3.9 (95% CI 1.9–8.0) in comparison to PsO. Faecal calprotectin levels were significantly higher in PsA patients with high body surface area (BSA) and psoriasis area and severity index (PASI) scores. Those with axial phenotype had higher calprotectin levels and the levels correlated with BASDAI. Mean faecal calprotectin level was 22.0±18.5 µg/gm in IBS patients which was significantly lower than PsA patients (0.002) but was comparable with that of PsO patients ($p=0.8$). Sigmoidoscopy was normal in all PsO patients while two PsA patients had mucosal erythema. Fifteen PsA and all PsO patients showed increased lymphoplasmacytic infiltration of lamina propria. Evidence of active colitis with cryptitis was seen in two and collagenous colitis was seen in seven PsA patients (figure 1). No PsO patient had active or collagenous colitis.

Abstract SAT0302 – Table 1. Baseline characteristics (TJC Tender Joint Count, SJC Swollen Joint Count, BASDAI Bath Ankylosing Spondylitis Disease Activity Index, LEI Leeds enthesitis index, BSA Body Surface Area, PASI Psoriasis Area And Severity Index, DLQI Dermatology Life Quality Index, CPDAI Composite Psoriatic Disease Activity Index)

Variable	Psoriatic Arthritis (n=50)	Psoriasis (n=100)
Mean age (years)	44.4±12.0	41.5±14.6
Male: Female	26:24	70:30
Duration of skin involvement (yrs)	9.3±9.0	8.6±8.4
Mean duration of joint involvement (yrs)	3.5±4.8 (0.25–30)	
Mean TJC	4.8±4.0 (0–20)	
Mean SJC	4.5±4.0 (0–19)	
BASDAI	1.8±2.3 (0–7.4)	
LEI	0.3±0.7 (0–3)	
BSA	5.7±13.2 (0–90)	13.6±19.3 (1–90)
PASI	3.5±7.0 (0–48)	8.1±9.1 (0.3–44)
DLQI	4.9±5.3 (0–25)	8.8±6.1 (1–29)
CPDAI	3.8±2.0 (1–10)	1.7±0.8 (1–3)
Nail involvement	21 (42%)	45 (45%)

Figure 1. Photomicrograph of A showing mild to moderate increased intra-epithelial lymphocytes with thickened basement membrane B. shows the thickened basement membrane highlighted better in Masson's trichrome staining

Conclusions: Subclinical gut inflammation was significantly higher in PsA patients in comparison to PsO patients and is more prevalent among those with axial phenotype.

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SAT0303 **PAIN MECHANISMS AND ULTRASONIC INFLAMMATORY ACTIVITY AS PROGNOSTIC FACTORS IN PATIENTS WITH PSORIATIC ARTHRITIS: RESULTS OF A DANISH PROSPECTIVE, EXPLORATORY COHORT STUDY**

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Background: Pain is a major concern for patients with psoriatic arthritis (PsA) in spite of treatment with biologic/conventional disease modifying drugs (b/cDMARDs). Studies on the prognostic role of pain mechanisms in PsA, are scarce.

Objectives: To investigate the presence of widespread non-arthritic pain (WP) in patients with PsA, and determine its relation to patient-reported, clinical- and ultrasound (US) disease measures, as well as to achievement of 4 months response to b/cDMARD therapy. Secondly, to study if US Colour Doppler activity (CD) at baseline is associated to treatment response.

Methods: A prospective cohort study was performed following a protocol.¹ Patients initiating b/cDMARDs for PsA were recruited from rheumatology clinics in Copenhagen. Clinical- and US examinations and patient-reported outcomes (PROs) were performed at baseline and after 4 months. WP was defined as a Widespread Pain Index ≥ 4 , and pain in $\geq 4/5$ regions. CD activity in selected joints, entheses and tendons (73 projections) was summed. Response was assessed by American College of Rheumatology 20% (ACR20), Disease Activity in Psoriatic Arthritis 50% (DAPSA 50) and Minimal Disease Activity (MDA). Main response analyses were based on intention to treat with non-responder imputation, and consisted of logistic regressions adjusting for gender and age.

Results: Of 123 screened patients, 69 were included. Of these, 24 (35%) fulfilled the WP definition. At baseline (Table), WP was associated with worse PROs and composite scores, while CD activity and clinical measures were similar to those without WP. WP profile was significantly related to achievement of MDA at follow-up but not to other response criteria (table 1). Presence of CD activity at baseline was not significantly associated to 4 months response by any criteria, e.g. 19%/31% with CD=0/CD >0, reached ACR20, (p=0.262).

Abstract SAT0303 – Table 1. Baseline characteristics

Females, n (%)	15 (63)	24 (53)	0.634
PsA impact of Disease (PsAID)	6.2 (1.7)	4.2 (2.2)	<0.001
HAQ-DI (0–3)	1.2 [0.9 to 1.5]	0.6 [0.3 to 1.0]	<0.001
VAS Pain (0–100)	68.8 (19.2)	44.5 (27.6)	<0.001
DAPSA (0–164)	49.3 (18.1)	29.8 (18.5)	<0.001
SPARCC enthesitis (0–16)	7.5 (3.4)	4.2 (3.0)	<0.001
CD score (0–200)	1.0 [0.0 to 4.3]	1.0 [0.0 to 5.0]	0.686
Swollen Joints (0–66)	3.0 [1.0 to 6.3]	4.0 [2.0 to 8.0]	0.352
Tender Joints (0–68)	26.5 [24.5 to 37.0]	11.0 [6.0 to 20.0]	<0.001
4 months responses			
ACR20, n (%)	6 (25)	12 (28)	0.779
DAPSA 50, n (%)	7 (29)	15 (33)	0.724
MDA, n (%)	0 (0)	9 (20)	0.022

Data as mean(SD) or median[IQR] P-value from T test/Mann Whitney U-test/ χ^2 test,

Conclusions: WP was present in 1/3 of patients, and associated with worse PROs, composite measures, and failure to achieve MDA at follow-up. Neither WP nor CD at baseline was related to other response measures.

REFERENCE
Højgaard et al. BMJ Open 2006;6. doi:10.1136/bmjopen-2015-010650

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SAT0304 **PRECLINICAL PHASES OF PSORIATIC ARTHRITIS: A CROSS-SECTIONAL ULTRASONOGRAPHIC STUDY ON PSORIASIS AND PSORIATIC ARTHRALGIA PATIENTS**

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Background: Identify the preclinical phase of arthritis could be clinically relevant. In this scenario, musculoskeletal ultrasonography (US) may play an important role, since it may detect subclinical disease. Psoriatic Arthritis (PsA) is a perfect disease to identify risk factors, since the risk pool group [i.e. patients with only cutaneous Psoriasis (Pso)] is known.

Objectives: To evaluate in Pso patients, with and without clinical arthralgia (CA), defined by the presence of joint pain without other clinical evidence of musculoskeletal inflammation: I) the prevalence of subclinical US inflammation in joints, entheses, tendons and bursae; II) the prevalence of US structural damage; III) the relationship between US lesions and clinical data.

Methods: Cross-sectional prevalence study of US abnormalities in Pso patients with or without CA and healthy controls (HCs). Inclusion and exclusion criteria (e.g. osteoarthritis and fibromyalgia) are pre-defined. Forty-four joints (MCP, PIP and DIP joints, wrists, knees, MTP joints) and 12 entheses (achilles, quadriceps, proximal and distal patellar, plantar aponeurosis and common extensor tendon entheses) were scanned in each patient. US scans were performed using a ESAOTE MyLabClassC equipped with a high frequency linear probe. Active synovitis was defined by the presence of a grade ≥ 2 for grey scale (GS) and ≥ 1 for PD, while active enthesitis if there was hypoechogenicity in GS and an enthesal PD signal (≤ 2 mm from bone insertion).

Results: Sixty-four Pso patients and 21 HCs were included; globally 2816 joints and 768 entheses were scanned. Twenty-three out of 64 (35.9%) Pso patients displayed CA. Baseline characteristics are reported in table 1. Active synovitis was found, in at least one joint, in 20/64 (31.3%) Pso patients and 0/21 HCs (p=0.002), while active enthesitis in 14/64 (21.9%) Pso patients and 0/21 HCs (p=0.017). No significant differences were found for active synovitis or enthesitis between the two subgroups of Pso, with or without CA. In the Pso cohort, 5/23 (23.8%) patients with CA and 2/41 (5%) without CA displayed tenosynovitis or paratenonitis (p=0.042). Furthermore, active synovitis, as well as GS-synovitis ≥ 2 , was associated with higher NAPSI (9.7 $\pm$ 8.0 vs 4.6 $\pm$ 7.1, p=0.04 for GS ≥ 2),