(IA) has improved and become more efficient. However, many patients still continue to experience serious negative impact on both their physical and psychosocial health and wellbeing. Therefore, it is essential to identify patients' needs for support for managing IA in everyday life.
Objectives: To explore preferences for self-management and support services in patients with inflammatory arthritis.
Methods: Adult patients with IA (rheumatoid arthritis (RA), psoriatic arthritis (PsA) and axial spondyloarthritis (axSpA)) were invited through The Danish Rheumatism Organization, arthritis networks, and hospitals' rheumatology departments across the country to participate in a cross-sectional study using online survey methodology. The questionnaire included questions on patient's interest in participation (requiring an answer of yes or no) in a total of 30 different self-management and support services within eight overall categories (i.e. discussion groups, one-to-one sessions, question and answer sessions, organised talks, physical activity, education sessions, raising arthritis awareness events, and online services), and preferences regarding practical issues of taking part. Descriptive statistics were applied.
Results: In total, 664 patients (85% female) responded, of which 53% had RA, 27% had PsA and 20% had axSpA. Respondents' mean age was 50 years (SD=13), and median disease duration was 10 years (IQR=4–16). Of the 30 different self-management and support services, the most popular was *Online service: Website for information (about symptoms, treatment and self-management of arthritis)* with 91% of the respondents indicating interest. This was followed by *One-to-one session with a rheumatologist (about coping with arthritis)* (89%) and *Organised talks by researchers (about current rheumatology research)* (83%). Also, *One-to-one session with a nurse*, *One-to-one session with a physiotherapist*, and *Education session on managing symptoms* were all chosen by more than 80% of the respondents. The vast majority of respondents (81%) indicated to prefer a group with no fixed commitments and an advertised time table. Regarding timing of support, the majority (70%) indicated that self-management and support services should optimally be offered whenever needed. However, respondents also stated it would be helpful within the first six months of being diagnosed (49%) as well as during flares (30%).
Conclusions: Patients with IA show high overall interest in taking part in self-management and support services. Especially, websites for finding disease related information, one-to-one sessions with health professionals, organised talks about rheumatology research and education on symptom management are requested. The preference regarding practical issues seems to be for a flexible delivery according to the patients' fluctuating needs during their illness course.
Disclosure of Interest: None declared
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Basic and clinical science in paediatric rheumatology

OP0056 IL-23P19 IS UP-REGULATED IN MONOCYTE-DERIVED MACROPHAGES FROM HLA B27 POSITIVE PATIENTS WITH ENTHESITIS RELATED ARTHRITIS

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Background: Enthesitis related arthritis (ERA) is an HLAB27-associated subtype of JIA most similar to the adult spondyloarthropathies (SpA). The innate immune system, intracellular stress response (the unfolded protein response (UPR)) and IL23/IL17 pathway are strongly implicated in the pathogenesis of adult SpA. However, these systems remain relatively unexplored in ERA.
Objectives: To compare levels of the IL23 subunit, IL23p19, produced by monocyte-derived macrophages (MDMs) in the presence of lipopolysaccharide (LPS) and an inducer of the UPR (tunicamycin (TM)) from patients with ERA and healthy controls. Other pro-inflammatory cytokines and markers of the UPR were also studied.
Methods: Peripheral blood monocytes isolated from 30 patients with ERA (20 HLAB27 positive, 10 HLAB27 negative, median age 16yrs 4mths, median disease duration 3yrs 9mths, M:F 7:1) and 16 age and gender-matched healthy controls were differentiated in vitro with macrophage-colony stimulating factor. Cells were treated with IFNγ and then stimulated with LPS alone or LPS with TM for 24 hours. Pro-inflammatory cytokines and markers of the UPR were measured by expression of mRNA using qPCR and normalised against GAPDH.
Results: IL23p19 expression was higher in MDMs from HLAB27 positive patients with ERA compared to healthy controls treated with LPS [median relative expression 384.7 (IQR 179.2–1340) vs 90.5 (49.9–455.9), p=0.02]. With the addition of the UPR inducer, TM, enhanced IL23p19 mRNA expression was also seen in HLAB27 positive patients compared to those who were HLAB27 negative and healthy controls [median relative expression 608.9 (IQR 282–3286) vs 283.0 (IQR 20.1–928.2) vs 195.1 (IQR 9.8–853.7); p=0.02]. When the groups were divided in to males and females, significantly higher IL23p19 expression was seen in MDMs treated with LPS from male HLAB27 positive patients with ERA compared to male healthy controls [661.7 (IQR 169.7–1531) vs 78.3 (39.01–139.6), p=0.0095] (figure 1). This was also the case for MDMs treated with LPS and TM [537.5 (IQR 295.3–3054) vs 93.05 (IQR 2.7–1109); p=0.02]. To investigate the effect of UPR induction on IL23p19 mRNA expression, percentage increase was calculated for each patient between MDMs treated with LPS alone and MDMs treated with LPS and TM. Interestingly, median percentage increase for HLAB27 positive patients with ERA was 63% but a decrease was seen in IL23p19 mRNA expression for in HLAB27 negative patients (-3.8%) with the addition of TM. When HLAB27 positive patients not oh TNF inhibitors were compared to those on treatment, the median percentage increase between LPS and LPS + TM treated MDMs was significantly modulated [78.7% vs 10.1%, p-0.049]. mRNA expression for other pro-inflammatory cytokines including TNF, IL1 and IL6, in addition to markers of the UPR (XBP1, CHOP and BiP) demonstrated no significant differences between patients and healthy controls.
Conclusions: Expression of IL23p19 mRNA in MDMs is significantly enhanced in HLAB27 positive patients with ERA. In this group, the induction of the UPR appears to further enhance IL23p19 expression but this effect is modulated by treatment with TNF inhibitors. These results suggest a potential role for IL23 and the UPR in the pathogenesis of ERA, particularly in those who are HLAB27 positive and may have implications for treatment stratification, indicating a subgroup of patients who may respond to IL23 blockade.
Disclosure of Interest: None declared
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OP0057 FLUORESCENCE OPTICAL IMAGING IN JUVENILE IDIOPATHIC POLYARTICULAR DISEASE BEFORE AND DURING ANTIRHEUMATIC TREATMENT

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Background: Valid detection of inflamed joints is essential for correct classification, therapeutic decisions and assessment of treatment efficacy in juvenile idiopathic arthritis (JIA).
Objectives: Fluorescence optical imaging (FOI) enables visualization of inflammation in arthritis of finger and hand joints and might be used in JIA.
Methods: A 24-week observational study in polyarticular JIA patients newly starting treatment with either methotrexate or a biologic was performed. Patients were evaluated clinically, by ultrasound B–mode, power-Doppler and FOI at baseline, week 12 and 24.
Results: Of 37 patients enrolled, 24 patients started MTX and 13 a biologic for the first time (Etanercept n=11, Adalimumab and Tocilizumab one 1). Composite measures, mean JADAS 10 decreased significantly from 17.7 at baseline to 12.2 and 7.2 at week 12 and 24 respectively and JIA-ACR 30/50/70/100 response rates at week 24 were 85%/73%/50%/27%. In total 1110 joints were examined clinically, 990 by US/PD and 990 by FOI. At baseline/week12/week24 23.6%/16.4%/9.0% joints on hand and fingers were clinically active joints, by US 19.4%/16.1%/11.5% joints showed effusions, 18.8%/12.7% and 9.6% showed synovial thickening and by PD 6.9%/1.8%/5% joints showed hyperperfusion. Any sign of arthritis was detected by US/PD in 24.5%/19.2%and17%. By FOI at 38.7%/29.2%/27.6% showed a signal enhancement in at least one phase. Summarizing all 3 points

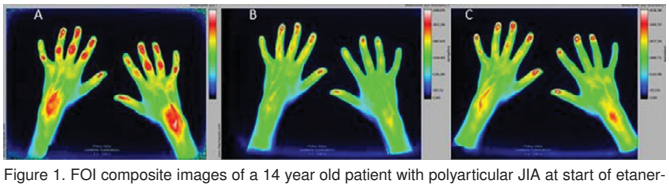

Figure 1. FOI composite images of a 14 year old patient with polyarticular JIA at start of etanercept treatment (left), after 3 (middle) and 6 months (right).

Abstract OP0057 – Table 1. Numbers of joints of a total of 2970 evaluated joints at 3 different points of time and comparison of number of joints with increased FOI signal and detection by US according to detection by clinical examination. Data on US examination were available for 2550 joints in total

	FOI					US/PD			
n (%)	Any signal 947	Composite image 530	Phase 1 396	Phase 2 783	Phase 3 180	Any signal 527	Effusion 430	Synovitis 375	Hyper-perfusion 120
Signal in clinically active joints (n=519)	320 (33.8%/61.7%)* r	205 (38.7%/39.5%)	161 (40.7%/31.0%)	277 (35.4%/ 53.4%)	81 (45.0%/15.6%)	239 (45.4%/46.0%)	211 par (49.1%/40.7%)	164 (43.7%/31.6%)	47 (39.2%/9.0%)
Signal in clinically inactive joints	627 (66.2%/25.6%)	325 (61.3%/13.3%)	235 (59.3%/9.6%9)	506 (64.6%/20.6%)	99 (55.0%/4.0%)	288 (54.6%/ 11.8%) (54.6%/11.8%)	219 (51.0%/8.9%)	211 (56.2%/8.6%)	73 (60.8%/3.0%)

*First percentage refers to columns, second to rows.

of time, the highest numbers of signals were detected by FOI with 32% of joints, especially in phase 2 while by US/PD 20.7% and by clinical examination 17.5% were active. A high number of joints (21.1%) had FOI signals but were clinically inactive. 20.1% of joints with signals in FOI did not show effusion, synovial thickening or hyperperfusion by US/PD. Due to the high number of negative results specificity of FOI compared to clinical examination/US/PD was high (84–95%), sensitivity was moderate only.
Conclusions: Improvement upon treatment with either methotrexate or a biologic can be visualized by FOI. FOI and US/PD could detect clinical but also subclinical inflammation. FOI detected subclinical inflammation in higher extent than US.
Disclosure of Interest: None declared
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OP0058 IMPROVEMENT IN PATIENT-REPORTED OUTCOMES IN PATIENTS WITH POLYARTICULAR-COURSE JUVENILE IDIOPATHIC ARTHRITIS AND INADEQUATE RESPONSE TO BIOLOGIC OR NON-BIOLOGIC DISEASE-MODIFYING ANTIRHEUMATIC DRUGS TREATED WITH SC ABATACEPT

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Background: In patients (pts) with polyarticular-course juvenile idiopathic arthritis (pJIA), SC abatacept (ABA) 125 mg weekly has a similar pharmacokinetic profile, therapeutically equivalent efficacy and comparable safety to IV ABA 10 mg/kg every 4 weeks.[1] Although some data on paediatric pt-reported outcomes (PRO) have been published for IV ABA,[2] PRO data following treatment with SC ABA have not.
Objectives: This analysis examined the effect of SC ABA treatment on PROs (activities of daily living [ADL] limitation questionnaire of parent/caregiver, childhood HAQ [CHAQ]-DI, and parent global assessment of overall pt well-being [PaGA]) in 6–17-year pts with active pJIA in a Phase III trial (NCT01844518).
Methods: Pts with pJIA aged 2–17 years with an inadequate response/intolerance to $\geq$1 DMARD were enrolled in this single-arm, open-label study and received SC ABA weekly for 4 months based on body weight tier (10–<25 kg [50 mg ABA], 25–50 kg [87.5 mg ABA] and >50 kg [125 mg ABA]). JIA-ACR 30 criteria (ACR Pediatric 30) responders at Month 4 could receive ABA for another 20 months. For the 6–17-year cohort reported here, ADL limitation questionnaire of parent/caregiver (mean [SD] number of days [D] of parental/caregiver missed activity, paid care and missed school [absolute values per month and percentage of D missed per month relative to an assumed average of 20 school D/month]); CHAQ-DI (0–3 scale across 8 domains of disability component); and PaGA (0–100 mm visual analogue scale) were evaluated.
Results: Baseline characteristics of the 173 pts with pJIA from the 6–17-year cohort were: median (min, max) age, 13.0 (6.0, 17.0) years; median (min, max) number of active joints, 10.0 (2.0, 42.0); 78.6% of pts used MTX (median dose: 11.6 mg/m^2/week); and 26.6% were with prior biologic failure. All ADL limitation components improved from baseline to D113 (Month 4); these improvements were largely maintained at D309 (Figure). Relative percentage D missed from school decreased from 15% (D1) to 5.5% (D309, Figure D). CHAQ-DI and PaGA improved from baseline to D309 (Table). Further 2-year data are pending.

Table 1. CHAQ-DI and PaGA scores over time in the 6–17-year cohort

	Day						
	1 (n=170)	29 (n=170)	57 (n=170)	85 (n=167)	113 (n=166)	197 (n=144)	309 (n=89)
CHAQ-DI	0.99 (0.69)	0.82 (0.71)	0.73 (0.65)	0.63 (0.65)	0.61 (0.64)	0.52 (0.57)	0.46 (0.56)
PaGA (mm)	45.6 (25.97)	32.2 (24.56)	28.7 (24.58)	23.8 (23.59)	23.6 (24.32)	20.0 (23.04)	21.7 (23.58)

Data are mean (SD). For CHAQ-DI (scale 0–3) and PaGA (0–100 mm visual analogue scale), higher scores indicate greater dysfunction and lower well-being, respectively.

Conclusions: In this analysis of patients with pJIA aged 6–17 years, SC abatacept demonstrated a beneficial effect on PROs including reductions in activity limitation and disability (CHAQ-DI) and improvement in well-being (PaGA) up to D309.
References:
[1] Lovell D, et al. Arthritis Rheumatol 2016;68(suppl 10): Abstract 948.
[2] Ruperto N, et al. Arthritis Care Res 2010;62:1542–51.
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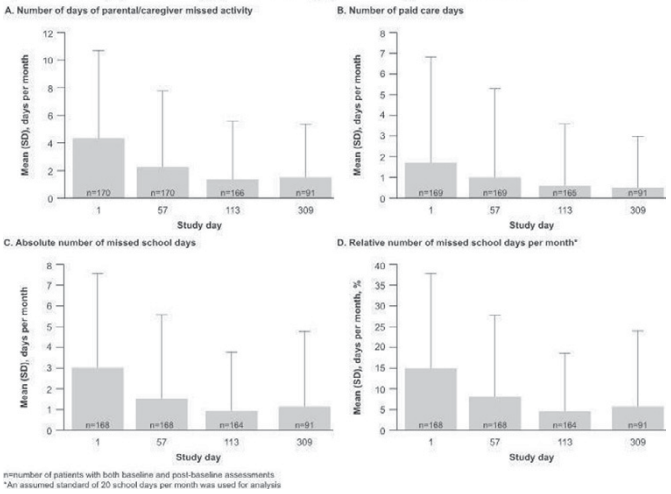
Figure. Change Over Time in Activities of Daily Living Limitation (A, Days of Parental/Caregiver Missed Activity; B, Paid Care Days; C, Missed School Days [Absolute Values]; D, Missed School Days [Relative Values]) in 6–17-Year Patients



n=number of patients with both baseline and post-baseline assessments
*An assumed standard of 20 school days per month was used for analysis

OP0059 GOLIMUMAB VERSUS TOCILIZUMAB FOR SEVERE AND REFRACTORY JUVENILE IDIOPATHIC ARTHRITIS-UVEITIS. MULTICENTER STUDY OF 33 PATIENTS

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Background: Uveitis is a severe manifestation of Juvenil Idiopathic Arthritis (JIA). Anti-TNFa are recommended in refractory cases, mainly infliximab (IFX) or adalimumab (ADA) (Levy-Clarke et al. Ophthalmology 2014; 121: 785–796). However, sometimes they are ineffective, contraindicated or not tolerated. The next therapeutic step is not defined.
Objectives: To compare the efficacy of Golimumab (GLM) and Tocilizumab (TCZ) in related AIJ uveitis refractory to conventional immunosuppressive drugs and anti-TNFα.
Methods: Multicenter study of 33 patients with uveitis associated-JIA. They were refractory to conventional treatment with high dose of corticosteroids and at least a) one conventional immunosuppressive drug and b) one anti-TNFa. For this reason it was decided to iniciate TCZ or GLM. TCZ was used in 25 patients: 8 mg/kg/4 w iv (n=21), 8 mg/kg/2 w (n=2); 8 mg/kg/8 w (n=1) and 2.9 mg/kg sc/w (n=1). GLM was used in 8 patients (50 mg/sc/month). We assessed visual acuity (VA), degree of intraocular inflammation, vitreous inflammation and macular thickening (with OCT). Quantitative variables were expressed with mean±SD or median [IQR], according to its distribution. They were compared with the Student t or the Mann-Whitney U test, respectively. Dichotomous variables were expressed as percentages and compared by the chi-square test.
Results: We studied 33 patients/61 affected eyes. There were no significant differences between TCZ and GLM at baseline in sex (♂/♀;4/21 vs 3/5; p=0.19), mean age (18.5±8.3 vs 19.9±8.7; p=0.55), positive ANA (95% vs 100%; p=0.7), uveitis duration before TCZ or GLM onset (116.4±93.6 vs 142.3±74.7