SLICC-2012 were low sensitivity and low specificity, respectively. To avoid misclassifications, a new set of classification criteria have been developed by the collaboration of the European League Against Rheumatism (EULAR) and the American College of Rheumatology (ACR) and the draft was presented at the 2017 ACR/ARHP Annual Meeting in San Diego, California. After application on 500 SLE patients and 500 controls, the sensitivity and specificity were found as 98% and 97%, respectively.

Objectives: To compare the sensitivity of the new EULAR/ACR criteria with those of the 1997 American College of Rheumatology (ACR) criteria and 2012 Systemic Lupus International Collaborating Clinics criteria in juvenile-onset SLE patients.

Methods: Patients initially were evaluated by ACR-1997, SLICC-2012 and EULAR/ACR classification criteria at baseline, when the diagnosis for the first time had been established by an expert paediatric rheumatologist (OK). All data were obtained from patient records. The diagnostic sensitivity of the three sets of classification criteria were further tested within 1 year of diagnosis and at last patient visit, longitudinally.

Results: A total of 104 juvenile-onset SLE patients were enrolled for the sensitivity performance of classification criteria at diagnosis. Since the follow-up period was less than 1 year, 12 subjects excluded after baseline evaluation. Finally, 92 subjects were eligible for sensitivity evaluation within 1 year of diagnosis and at last visit. The median age at diagnosis of clinician was 13.0 years (range 3.1–17.9 years, interquartile range (IQR) 11.1–16.5 years) with a median disease duration of 5.0 years (IQR 3.0–8.0 years). The female-to-male ratio was 4.7:1. The newly developed EULAR/ACR classification criteria were more sensitive than SLICC-2012 and ACR-1997 at diagnosis (93.3% versus 91.3% and 85.6%, respectively), and at first year (95.7% versus 94.6% and 90.2%, respectively ($p>0.05$)). At last visit the sensitivity of the new set of criteria and SLICC-2012 were same (97.8%), but higher compared to ACR-1997 criteria (95.7%).

Conclusions: Juvenile-onset systemic lupus erythematosus was classified by the newly proposed EULAR/ACR criteria with higher sensitivity compared with SLICC-2012 and ACR-1997 at disease onset and within one year of diagnosis. However, last visit assessment demonstrated equal sensitivity between new EULAR/ACR criteria and SLICC-2012. Although the difference was not significant, the new set of criteria seem to be capable of recruiting more children with juvenile SLE to clinical trials.

REFERENCE:

- [1] Johnson S. European League Against Rheumatism and American College of Rheumatology present new SLE classification criteria at the 2017 ACR/ARHP annual meeting. Presentation at: ACR/ARHP 2017 Annual Meeting; San Diego, CA 2017 November 3–8.

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THU0560 CHRONIC RECURRENT MULTIFOCAL OSTEOMYELITIS: FOUR TERTIARY SPANISH HOSPITALS EXPERIENCE. A MULTICENTRIC STUDY

A. García Fernández¹, J. Arroyo Palomo¹, D. Clemente Garrulo², B. Serrano Benavente³, J. Novoa Medina⁴, J.C. Nieto González³, S. Machín García⁴, A. M. Brandy García⁵, J.C. López Robledillo², I. Monteagudo Sáez³, A.L. Boteanu¹.
¹Paediatric Rheumatology, Ramón y Cajal University Hospital; ²Paediatric Rheumatology, Niño Jesús University Child Hospital; ³Paediatric Rheumatology, Gregorio Marañón General University Hospital, Madrid; ⁴Paediatric Rheumatology, Insular Maternity Child University Hospital of Gran Canaria, Las Palmas de Gran Canaria; ⁵Rheumatology, Central University Clinic Hospital of Asturias, Oviedo, Spain

Background: Chronic recurrent multifocal osteomyelitis (CRMO) is a rare autoimmune-inflammatory polygenic bone disease characterised by aseptic bone inflammation in paediatric population. Its management, clinical, radiological findings and treatment have not yet been standardised.

Objectives: Retrospective, descriptive multicentric study of patients diagnosed of CRMO in four tertiary level hospitals' paediatric rheumatology section. There were 16 patients included. The clinical, radiological characteristics were analysed as well as response to treatment options.

Results: The median age at diagnosis was 10.5 years, female: male ratio 62.5:37.5%. The delay in the diagnosis had a median of 4.5 months, being less than one year in 11 patients. Bone pain was the first symptom in 100% of the patients accompanied by fever in 25% of them. A single patient presented perilesional arthritis. A slight-moderate increase on acute phase reactants was observed at the debut of the disease: median ESR 47.5 mm/h.

The median number of locations at debut was 2.5 (range 1–14), with multifocal involvement in 75%. The most frequent location was tibia (56%), followed by pelvis (44%) and vertebrae (31.25%). Other locations less frequent were: carpus (12.5%), femur (12.5%) mandible (6%) and sternum (6%).

Biopsy was performed in 14/16 patients and bone scintigraphy with Tc99 in 12/16 patients, with pathological uptake observed in 91.6% of cases. MRI was the radiological test of suspected diagnosis in 15/16 patients.

NSAIDs were the initial treatment. 5 patients received different antibiotic therapy regimens, without clinical or radiological improvement. 56.25% of patients required other treatments. Systemic corticosteroids were used in 12.5% of patients and bisphosphonates in 43.75% (100% of patients with axial involvement). After 6 months of treatment with bisphosphonates, 57.14% had complete remission, 28.57% partial remission and 14.28% worsening. 12.5% of the patients had a torpid evolution, receiving sequential therapies with multiple synthetic or biological DMARDs (Anakinra, Canakinumab, Etanercept), and another 12.5% required surgery.

Conclusions: The diagnosis of CRMO is a challenge in the absence of pathognomonic features which leads to delay in diagnosis and the initiation of treatment. In our centres the bisphosphonates were the treatment strategy used in patients with spinal involvement with 85.67% response at 6 months.

Disclosure of Interest: None declared

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THU0561 ANAKINRA FIRST- OR SECOND-LINE IN SYSTEMIC JUVENILE IDIOPATHIC ARTHRITIS PATIENTS

A. Klein^{1,2}, A. Hospach³, I. Foeldvari⁴, G. Horneff^{1,2}, ¹ASKLEPIOS, Sankt Augustin; ²University Cologne, Cologne; ³Olga Hospital, Stuttgart; ⁴Hamburg Centre Paediatric Rheumatology, Hamburg, Germany

Background: Treatment of systemic juvenile idiopathic arthritis (sJIA) still remains a challenge.

Objectives: Patients newly starting treatment with Anakinra (ANA) as first-line biologic were compared to ANA second-line users regarding efficacy and safety.

Methods: ANA treatment courses are documented by the German Biologics registry (BiKeR). Demographics, clinical characteristics, disease activity parameters as well as efficacy and safety parameters were compared in pts using ANA as first biologic with those previously treated with other biologics. For efficacy analyses ACR inactive disease, JADAS minimal disease activity (MDA), JADAS remission (REM) and active joint count as well as functional ability assessment (CHAQ) were used. "Intention to treat" (ITT) and "as observed" (AO) analyses were performed. Safety assessments were based on adverse events (AE) reports.

Results: 47 pts started treatment with ANA, 33 pts were pretreated with other biologics (Etanercept n=29, Tocilizumab n=4, Infliximab and Canakinumab n=1). ANA first line pts had significantly shorter disease duration and had received DMARDs and i.a. steroids significantly less frequent than second line users. At baseline, ANA first-line users had higher disease systemic activity indicators (fever, rash, ESR), functional disability (CHAQ) and impaired parent/patient global assessment of overall well-being significantly more often, while there were no significant differences in Physician global assessment of disease activity, active joint count and JADAS 10. At last follow-up 43%>66% of pts in both groups reached ACR inactive disease, 43%>63% JADAS MDA, 29%–50% JADAS REM and 43%>69% reached status of no functional disability. Rates did not differ between the 2 cohorts (table 1). 13 pts experienced adverse events (AE) with a rate of 53/100PY, 5 pts experienced serious AE (9/100PY) and in 11pts infections were reported (33/100PY). Macrophage activation syndrome was reported once in each group. One case of AML was reported in a patient one year after last exposure to ANA. No deaths were reported.

Conclusions: Anakinra is a feasible first-line biologic for treatment of sJIA. In the BiKeR cohort ANA treated pts showed a marked treatment response, as first or consecutive biologic. Rates of AE, SAE and infectious AE seem acceptable.

Disclosure of Interest: None declared

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THU0562 EVOLUTION OF SERUM CALPROTECTIN IN PATIENTS WITH JUVENILE IDIOPATHIC ARTHRITIS IN CLINICAL PRACTICE

B. Magallares López¹, L. Martínez-Martínez², M.C. Hernandez-Lafuente², E. Moltó², Y. Alvaro², H. Park¹, I. Castellví¹, M. Millán¹, C. Díaz-Torné¹, P. Moya¹, A. Laiz¹, H. Corominas¹, J. Casademont³, E. Carreras⁴, C. Juárez².
¹Rheumatology; ²Immunology; ³Internal Medicine; ⁴Pediatrics, Santa Creu i Sant Pau Hospital, Barcelona, Spain

Background: Serum Calprotectin (MPR8/MPR14) is a promising biomarker in the management of juvenile idiopathic arthritis (JIA), mainly as a predictor of flare, especially in treatment de-escalation

Objectives: To describe the evolution of serum Calprotectin in patients with JIA, their clinical evolution and its impact on therapeutic decisions

Abstract THU0562 – Table 1 ND=Not Done

Subtype	Sex	Age (years)	Calpro1 (µg/mL)	RCP(mg/dl)	ESR (mmHg)	Disease Activity	Decision	Outcome	Calpro2 (µg/mL)	Decision	Outcome
Oligo JIA	Fem	3	2.25	0.7	9	No	Same treatment	Flare	3.6	Escalate	Remission
	Fem	11	2.2	0.7	20	Yes	Start MTX	Gets better	5.28	Escalate	Remission
	Mas	11	5.01	1.5	3	Yes	Start MTX	Remission	2.01	Same treat.	Equal (remission)
	Fem	7	2.17	ND	34	No	Same treatment	Equal (remission)	1.37	Same treat.	Equal (remission)
	Mas	6	1.56	0.8	15	No	De-escalate	Equal (remission)	3.14	No de-escalate	Equal (remission)
	Fem	18	2.27	0.7	12	No	De-escalate	Equal (remission)	2.09	Same treat.	Equal (remission)
	Fem	22	1.16	0.9	6	No	Same treatment	Equal (remission)	ND		
Sis JIA	Fem	12	1.73	0.7	3	No	De-escalate	Equal (remission)	2.74	No de-escalate	Equal (remission)
Poli JIA	Fem	8	3.78	ND	8	No	No De-escalate	Equal (remission)	4.47	No de-escalate	Equal (remission)
	Fem	9	2.75	0.7	6	Yes	Same treatment	Flare	ND		
ERA JIA	Mas	15	3.61	5.7	8	Yes	Escalate	Gets better	3.02	Escalate	Gets better
	Mas	13	3.39	9.2	51	Yes	Start MTX	Gets better	3.08	Same treat.	Remission
	Mas	11	0.78	4.6	8	No	Same treatment	Equal (remission)	ND		
	Fem	12	3.3	1.9	8	No	Same treatment	Equal (remission)	1.81	Same treat.	Equal (remission)
Psor JIA	Fem	11	1.95	2.2	6	No	Same treatment	Equal (remission)	ND		

Methods: Demographic, clinical and inflammatory activity data (RCP and ESR) were retrospectively collected in patients with JIA of any subtype in whom serum Calprotectin had been determined at least once

Results: We present the data of 15 children, 7 with Oligoarticular subtype JIA, 1 Systemic, 3 Polyarticular, 1 Psoriatic and 3 Enthesitis Related Arthritis (ERA) The average age was 11 years, 66% female. The characteristics of each patient can be seen in table 1, together with the first determination of serum Calprotectin, CRP and ESR. It also shows the physician's decision, and the outcome, obtained from the assessment in the next visit

Considering the cutoff point of serum Calprotectin in our sample of: 2.2 µg/mL (80% sensitivity and 69% specificity), 9 of 15 patients presented high values, 2 of them presented a flare (1 Oligo and 1 Poly), both had maintained the same treatment, because they were considered inactive. There were no flares in patients with negative Calprotectin

The evolution of serum Calprotectin, together with the clinical decisions (based on clinical and analytical assessment) are described in table 1

In most of stable patients in whom serum calprotectin was high, it was decided not to lower treatment, and only in one case it was de-escalated. There were no flares in any of them

Conclusions: Serum Calprotectin is a useful biomarker in routine clinical practice, together with other markers such as CRP and ESR, and our clinical judgment, it helps us to make therapeutic decisions

Disclosure of Interest: None declared

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THU0563 ULTRASOUND CHANGES IN JOINTS INDUCED BY INTRA-ARTICULAR CORTICOSTEROID INJECTION IN JUVENILE IDIOPATHIC ARTHRITIS

B. Sozeri, L.G. Bolac, M. Kariminikoo. *Pediatric Rheumatology, University of Health Sciences, Istanbul, Umraniye Training and Research Hospital, Istanbul, Turkey*

Background: Ultrasonography (US) studies carried out on joints of juvenile idiopathic arthritis (JIA) patients in clinical remission demonstrate the presence of subclinical synovitis. The significance of subclinical synovitis and the positive power Doppler (PD) signal on US in JIA.

Objectives: The objectives of this study were to assess whether the changes detected by US induced by intra-articular corticosteroid injection in JIA patients.

Methods: We evaluated 49 joints (47 knees, 1 tibiotalar and 1 elbow) of 32 patients who diagnosed JIA. We used grey-scale US by high frequency transducer (7.5–10) MHz at study entry and after a therapeutic intervention. Each joint was scored for grey-scale (GS) and power Doppler (PD) abnormalities according to a 4-point semiquantitative scale. Pre- and post-treatment US scores were compared and the sensitivity to change of GSUS and PDUS was estimated. US assessment was performed separately, immediately after the clinical evaluation, by an experienced paediatric rheumatologist (BS) with certificated by EULAR. Medical records were reviewed for JIA subtype and state of disease. Clinical examination, including routine joint examination was carried. Clinical response was assessed using the ACR paediatric (pedi ACR) response criteria

Results: Five patients had polyarthritis, 5 had enthesitis-related arthritis, 22 had oligoarthritis. Nine patients (28%) underwent intra-articular corticosteroid injection (IACI) only, 23 (71.9%) were given IACI and systemic medications. The medication used were methotrexate (22 patients), Sulfasalazine (2 patients), and methotrexate and biologic (5 patient). Synovial hyperplasia, joint effusion, PD signal and tenosynovitis in at least one joint were detected in 77.4%, 100%, 33.3% and 15% of patients, respectively. Both GSUS and PDUS scores improved significantly ($p<0.0001$) from baseline to follow-up. At the follow-up visit, 18/49 (36.7%) joints complete resolution among these patients 2 had minimal synovial hyperplasia. Although, 31/49 (63.3%) joints residual US abnormalities were judged in remission on clinical grounds.

Conclusions: US is a sensitive tool to assess therapeutic response in patients with JIA. Subclinical disease on US is common in joints with clinically-defined

	1 st Biologic n=14 (29.8%)	2nd Biologic n=33 (70.2%)	p
Age baseline, mean (SD), years	7.1 (4.7)	9.4 (4.8)	n.s.
Disease duration, mean (SD), years	1.2 (2.5)	4.9 (3.8)	0.002
Pretreatment	12 (85.7)	31 (93.9)	n.s.
- · Systemic Steroids, n (%)			
- · MTX, n (%)	4 (33.3)	32 (94.7)	<0.0001
Disease activity parameters at baseline	1.2 (2.0)	3.2 (4.7)	n.s.
- · Active joints mean (SD)			
- · Phys VAS mean (SD)	58.7 (35.0)	40.8 (33.5)	n.s.
- · Pat VAS mean (SD)	66.0 (39.0)	28.0 (25.7)	0.0003
- · CHAQ mean (SD)	1.75 (1.1)	0.66 (0.89)	0.0008
- · ESR, mm/h mean (SD)	53.7 (26.1)	30.7 (24.5)	0.006
- · JADAS10 mean (SD)	13.8 (9.8)	11.0 (9.3)	n.s.
- · Fever, n (%)	9 (64.3)	4 (12.1)	0.0006
- · Rash, n (%)	7 (50)	1 (3.0)	0.001
Efficacy parameters at last follow-up	n=10	n=22	n.s.
- · ACR inactive disease, n (%ITT;%AO)	6 (43; 60)	15 (45;68)	
- · No active joint, n (%ITT;%AO)	10 (71;100)	17 (52;77)	n.s.
- · CHAQ=0, n (%ITT;%AO)	6 (43; 60)	16 (48;73)	n.s.
- · JADAS MDA, n (%ITT;%AO)	6 (43;60)	14 (42;64)	n.s.
- · JADAS remission, n (%ITT;%AO)	4 (29;40)	12 (36;55)	n.s.