for any interaction between arthritis, the treatment of arthritis and development and evolution of the echinococcosis.

Methods: We collected all the cases with the diagnosis of echinococcosis among the patients regularly followed and treated for inflammatory arthritis in three different tertiary rheumatology centers of Western Switzerland (1.7 million inhabitants, 5000 arthritis pts).

Results: Between 2012 and 2018, 8 cases of echinococcosis (1.3 case/year/5000pts) could be found. The estimated yearly incidence among this arthritis population appears therefore to be significantly higher ($p < 0.0001$) than the one reported in the general population in Switzerland (30/8000000 inhabitants). Figure summarized the relation between the parasitic and the inflammatory disease. Different types of inflammatory arthritis were implicated. Previous and ongoing arthritis treatments comprised also different types of biologics. In 6/8 cases, the parasitic disease was asymptomatic and limited to a single organ, a proportion much higher than what is usually found in the general population. In 2 of them, the discovery was very close in time to the diagnosis of arthritis and treatment initiation (< 6 months). 4 pts could be treated by surgery alone. 6 continued their treatments for arthritis. No evidence of relapses after surgery (4 pts) or progression under albendazole (4 pts, median follow-up: 44 months) was found.

Conclusion: The incidence of echinococcosis in autoimmune arthritis appears to be higher than in general population but remains very low. Outcome seems not to be affected by inflammatory arthritis and their treatments but the long-time effects of the combination between arthritis treatments and albendazole need to be further evaluated.

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Disclosure of Interests: Pascal Zufferey: None declared, Zambaz camille: None declared, Rudiger Muller: None declared, Boillat-Blanco Noémie: None declared, Thomas Huegle Grant/research support from: AbbVie, Lilly, Novartis and Pfizer, Speakers bureau: AbbVie, Lilly, Novartis and Pfizer, Hasler paul: None declared, Peter Villiger: None declared
DOI: 10.1136/annrheumdis-2019-eular.3097

Paediatric rheumatology

SAT0476 JUVENILE IDIOPATHIC ARTHRITIS IN SINGAPORE: A 10-YEAR CLINICAL EXPERIENCE

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Background: Juvenile Idiopathic Arthritis (JIA) is the commonest inflammatory arthritis of childhood worldwide.

Objectives: To describe the incidence, clinical characteristics and experience with JIA in Singapore over a 10-year period.

	Overall	Systemic	Oligo-articular	Polyarticular (RF -)	Polyarticular (RF +)	Psoriatic	ERA	Undifferentiated
N (%)	379 (100)	32 (8.4)	133 (35.1)	47 (12.4)	13 (3.4)	10 (2.6)	137 (36.1)	7 (1.8)
Onset age, yr*	10.4 (6.6-13.3)	6.6 (4.5-10.1)	8.5 (5.1-12.1)	7.9 (3.5-12.8)	9.9 (7.1-13.5)	13.3 (6.2-14.3)	12.2 (10.0-14.3)	9.7 (6.2-13.5)
Diagnosis age, yr*	10.9 (7.1-14.0)	6.4 (4.1-10.2)	9.0 (6.0-13.4)	8.6 (3.7-13.3)	10.2 (7.4-13.7)	13.8 (10.7-15.3)	12.6 (10.7-14.7)	11.2 (9.2-15.1)
Lag time, mth*	2.9 (1.0 – 7.4)	0.7 (0.3-1.2)	3.1 (1.1-7.6)	3.0 (1.6-9.8)	2.6 (2.1-4.6)	5.0 (1.2-12.4)	3.6 (1.2-8.1)	8.3 (1.6-36.5)
ANA (n = 253)	124 (32.9)	11 (34.4)	50 (40.3)	23 (48.9)	5 (38.5)	8 (80.0)	27 (20.0)	0 (0.0)
Positive RF (n = 374)	23 (6.1)	5 (17.2)	2 (1.5)	0 (0.0)	13 (100.0)	0 (0.0)	2 (1.5)	1 (14.3)
Positive HLA-B27 (n = 368)	112 (30.4)	0 (0.0)	4 (3.1)	2 (4.3)	0 (0.0)	0 (0.0)	104 (75.9)	2 (28.6)
Uveitis diagnosed	11 (2.9)	0 (0.0)	6 (4.5)	1 (2.1)	0 (0.0)	0 (0.0)	4 (2.9)	0 (0.0)
DMARD use	257 (67.8)	21 (65.6)	47 (35.3)	40 (85.1)	13 (100.0)	10 (100.0)	121 (88.3)	5 (71.4)
Biologic use	145 (38.3)	17 (53.1)	17 (12.8)	17 (36.2)	9 (69.2)	3 (30.0)	79 (57.7)	3 (42.9)

Methods: A prospective study was conducted in KK Women's & Children's Hospital and National University Hospital, Singapore from Jan 2009-Dec 2018. JIA was defined and classified according to ILAR criteria¹. Demographics and clinical information were collected for every patient diagnosed with JIA.

Results: 379 children were diagnosed with JIA (60.2% male, 71.2% Chinese). Average estimated incidence was 5.8 per 100000/yr. Clinical characteristics and treatment used are summarized in Table 1. Table 1. *Median (IQR). Rest expressed in n (%).

Disease modifying anti-rheumatic drugs (DMARD) were used in 67.8%, and younger age of diagnosis ($p=0.002$), longer lag time ($p=0.004$), males ($p=0.018$) and ERA ($p=0.043$) predicted their use. 38.3% required biologics, and males ($p=0.047$), longer lag time ($p=0.037$) and HLA-B27 positivity ($p=0.030$) were associated with their use. Uveitis incidence was 2.9%; 54.5% had oligoarthritis, 36.4% ERA, 9.1% polyarthritis (RF-). Younger age at JIA diagnosis was associated with uveitis ($p=0.030$).

Conclusion: ERA is the commonest subtype of JIA in our cohort, explaining the male predominance and higher HLA-B27 positivity as compared to the West². Longer lag time was associated with DMARD and biologic use, likely due to more severe disease at presentation. HLA-B27 association with biologic use may predict ineffectiveness of DMARD. Uveitis incidence was low as compared to Western literature that cites a prevalence of 11-30%^{3,4}. Young age at diagnosis is a risk factor for uveitis. Interestingly, ANA-positivity and female gender were not associated with uveitis cases.

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Disclosure of Interests: Poh Lin Pauline Chan Ng: None declared, Pei Ling Ooi: None declared, Elizabeth Ang: None declared, Lee Kean Lim: None declared, Sook Fun Hoh: None declared, Lena Das: None declared, Yun Xin Book: None declared, Thaschawee Arkachaisri Speakers bureau: Abbvie Pte, Ltd
DOI: 10.1136/annrheumdis-2019-eular.3593

SAT0477 QUALITY OF LIFE IN SUBJECTS WITH PRE-PUBERTAL ONSET SYSTEMIC LUPUS ERYTHEMATOSUS

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Background: Systemic Lupus Erythematosus (SLE) can be a severe disease, especially when diagnosed in childhood. Onset prior to puberty (Tanner stage II) is rare, and less is known about the impact SLE has on this pediatric subpopulation. We assessed clinical and quality of life (QOL) measures in a prepubertal SLE onset cohort to better globally understand the burden of this disease in this group.

Objectives: To assess quality of life measures in pre-pubertal subjects with SLE and examine the correlation with clinical manifestations.

Methods: In a prospective, multicenter (10 Childhood Arthritis and Rheumatology Research Alliance sites), observational study, subjects with pre-pubertal onset of SLE were enrolled. Subjects either were still in Tanner I or no later than Tanner stage II at enrollment. QOL measures were collected in addition to comprehensive medical history, physical examination findings, laboratory assessments, SLEDAI-2K scores, and SLICC/ACR Damage Index. QOL measures were obtained by PedsQL™ 4.0 Core and PedsQL™ 3.0 Rheumatology Module surveys completed by the child at the enrollment visit. QOL means were compared with disease manifestations by t tests.

Results: QOL data was available for 42 subjects (31 females, 11 males). At enrollment, the mean age of diagnosis was 9.9 years, with a mean disease duration of 1.2 years. Males were older at diagnosis than females (10.9 vs 9.5 years, $p=0.023$) with no difference in enrollment disease duration. The mean SLEDAI-2K score was 7 (range 0-18). Disease activity and individual SLE manifestations did not vary by gender. Laboratory markers of activity were present more frequently on the SLEDAI-2K than clinical exam findings, of which rash (24%), alopecia (12%) and arthritis (12%) were the most common. Seven subjects had disease damage reported on the SLICC/ACR DI.

PedsQL™ Measure	% Affected	Mean Score
PedsQL™ 4.0 Core	86%	83.8
Physical Health	67%	85.4
Emotional Functioning	69%	85.0
Social Functioning	52%	88.3
School Functioning	79%	76.4
PedsQL™ 3.0 Rheumatology Module	81%	86.2
Pain and Hurt	55%	82.6
Daily Activities	24%	95.7
Treatment	60%	86.5
Worry	40%	84.1
Communications	45%	82.1

School functioning domain had the worst QOL measure with the greatest number of children impacted (Table). Active arthritis was associated with lower mean scores in Physical Health ($p=0.007$), PedsQL Core total ($p=0.048$), Pain and Hurt ($p=0.002$), Daily Activities ($p=0.003$), Treatment ($p=0.002$), Worry ($p=0.036$), and PedsQL Rheumatology total ($p=0.001$). There was no association with QOL measures for rash, alopecia, or laboratory markers. Disease damage on SLICC/ACR DI was associated with greater impact on the Worry domain (mean 64.3 vs 88.1, $p=0.23$).

Conclusion: Children with pre-pubertal SLE onset report significant impacts on QOL regarding school. The disease manifestation affecting the most QOL domains was arthritis, whereas skin manifestations, while common, did not demonstrate an impact on QOL. This is the first study to specifically address quality of life for children who develop SLE prior to pubertal development.

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Support: NIAMS R03AR52453, Michael Jon Barlin Foundation, NIAID R56, The University of Indiana Department of Pediatrics and the CARRA-AF 2018 Large Research Grant

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2019-eular.4409

SAT0478

AFTER 24 MONTHS OBSERVATION PERIOD THE PATIENTS RELATED OUTCOMES IMPROVE SIGNIFICANTLY IN THE JUVENILE SCLERODERMA INCEPTIONS COHORT. WWW.JUVENILE-SCLERODERMA.COM

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Background: Juvenile systemic sclerosis (JSSc) is an orphan disease with a prevalence of 3 in a 1 000 000 children(1). Currently there is nearly

no data published about the course of JSSc patients with standardized assessment. We report our data from Juvenile Scleroderma Inception cohort (JSSIC) with a follow up of 24 months.

Objectives: to evaluate the organ involvement and patient reported outcomes (PRO) during the first 24 months in the JSIC

Methods: The JSSIC is a prospective multicenter registry of patients with JSSc, who fulfill the adult classification criteria(2), and presented the first non-Raynaud symptom before 16 years of age and were younger than 18 years at the time of inclusion in the JSSIC. Patients who were followed at least 24 months in the JSSIC, were evaluated.

Results: 52 patients were followed at least 24 months in the registry. 77% were female and 77% had diffuse subtype. 19% had overlap features. Mean disease duration at time of inclusion was 3.2 years. Mean age of at Raynaud's onset was 8.8 years and the first non-Raynaud's symptom 9.4 years. 85% received DMARDs at the time of inclusion and 96% after 24 months. 88% of the patients were ANA positive, 35% anti-Scl70 positive and 3% anticentromere positive. The mean modified skin score decreased from 14.3 to 12.6. The frequency of Raynaud's stayed around 87%. The frequency of the nail-fold capillary changes increased from 56% to 63%, but the frequency of active ulcerations stayed stable around 21%. The number of patients with FVC <80% decreased from 39% to 34% ($p=0.734$). The number of patients with pulmonary hypertension assessed by ultrasound increased from 4% to 8% ($p=0.652$). No patient developed systemic hypertension or renal crisis. Urinary sedimentary changes decreased from 8% to 4%. Gastrointestinal involvement decreased from 33% to 29% ($p=0.829$). Number of joints with decreased range increased from 46% to 63% ($p=0.076$). Total muscle weakness decreased from 8% to 3% ($p=0.237$) and elevated CK from 22% to 9% ($p=0.033$) too.

Several PROs improved significantly. Patient global disease activity (VAS 0-100) changed from 46 to 29 ($p=0.002$), patient global disease damage (VAS 0-100) from 46 to 28 ($p=0.02$) and patient Raynaud activity VAS 0-100) from 27 to 14 ($p=0.009$) as physician global disease activity (VAS 0-100) from 43 to 29 ($p=0.021$) and physician global disease damage from 46 to 28 ($P=0.01$).

Conclusion: Over the 24 months observation period patient and physician related outcomes improved significantly. Regarding organ involvement there was an increase in patients of pulmonary hypertension and joint contractures.

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Disclosure of Interests: Ivan Foeldvari Consultant for: Chugai, Novartis, Jens Klotsche: None declared, Ozgur Kasapcopur: None declared, Amra Adrovic: None declared, Maria T. Tererri: None declared, Jordi Anton Grant/research support from: Grant/research support, consultant or speakers bureau from AbbVie, Alexion, Bristol-Myers Squibb, ChemoCentryx, Gebro, GlaxoSmithKline, Novartis, Novimmune, Pfizer, Roche, Sanofi and Sobi, Consultant for: Grant/research support, consultant or speakers bureau from AbbVie, Alexion, Bristol-Myers Squibb, ChemoCentryx, Gebro, GlaxoSmithKline, Novartis, Novimmune, Pfizer, Roche, Sanofi and Sobi, Speakers bureau: Grant/research support, consultant or speakers bureau from AbbVie, Alexion, Bristol-Myers Squibb, ChemoCentryx, Gebro, GlaxoSmithKline, Novartis, Novimmune, Pfizer, Roche, Sanofi and Sobi, Tadej Avcin: None declared, Rolando Cimaz: None declared, Mikhail Kostik: None declared, Maria Katsikas: None declared, Dana Nemcova: None declared, Maria Jose Santos: None declared, Cristina Battagliotti: None declared, Lillemor Berntson: None declared, Juergen Brunner: None declared, Liora Harel: None declared, Tilmann Kallinich Grant/research support from: Novartis, Speakers bureau: Sobi, Roche, Novartis, CLB, Kirsten Minden Consultant for: AbbVie, Monika Moll: None declared, Anjali Patwardhan: None declared, Kathryn Torok: None declared, Nicola Helmus: None declared

DOI: 10.1136/annrheumdis-2019-eular.3004