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Background: It has been suggested that a capillary scleroderma pattern in patients with systemic lupus erythematosus (SLE)-patients predisposes for clinical signs of systemic sclerosis (SSc) or overlap disease (1). However, this was previously shown not to be the case in a cross-sectional study in childhood-onset SLE (cSLE) (2).

Objectives: To assess if nailfold capillary patterns in cSLE change over time and if a capillary scleroderma pattern is associated with prospective development of clinical SSc-features, higher SLE disease activity or -damage.

Methods: Prospective clinical and capillaroscopy data were used from a longitudinal cohort of cSLE patients. Patients with a disease onset before the age of 18 years and diagnosis according to SLICC 2012 criteria were included. Disease activity was defined by SLEDAI score and disease damage by the SLICC damage index. Nailfold images from eight fingers (excluding thumbs) were obtained by videocapillaroscopy. A scleroderma pattern was defined according to the 'fast track algorithm' (3). An abnormal capillary pattern that did not match the criteria for a scleroderma pattern was defined as 'microangiopathy'.

Results: Our longitudinal study cohort consisted of n=53 cSLE patients with a median disease onset of 14 years (IQR 12.5-15.5 years) and a median SLEDAI score at diagnosis of 11 (IQR 8-15.5). Clinical follow-up data were available from 0.5-16 years after disease onset. Median disease duration at first capillaroscopy was 17 months (IQR 5.5-51.5 months) and 17/53 (32.1%) of patients had Raynaud's phenomenon. In total, n=9 (17%) showed a scleroderma pattern (at some point in time), n=37 (70%) had microangiopathy and n=7 (13%) showed a normal capillary pattern. N=27 patients had follow up with capillaroscopy (1-7 times over 1-5 years). In most patients (23/27) we did not observe any change in capillary pattern during follow-up. Two patients showed changes from microangiopathy to a scleroderma pattern, one patient from a scleroderma pattern to microangiopathy and one patient from microangiopathy to a normal pattern. Raynaud's phenomenon was equally distributed among patients with different capillaroscopy patterns (p=0.487), as was median SLEDAI score at diagnosis (p=0.285). Follow-up patients with a capillary scleroderma pattern did not show any clinical features for SSc over time (follow-up over 1-5 years, Table 1 below. Patients with a capillary scleroderma pattern showed significantly more disease damage (Chi-square, p=0.008), also indicated by a survival analysis for disease damage (Figure 1, p=0.042).

Conclusion: Our study indicates that a capillary scleroderma pattern in cSLE correlates with disease damage but not with clinical SSc features during follow-up period.

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Table 1. Clinical characteristics of cSLE-patients (n=9/53) with a nailfold capillary scleroderma pattern

	Butterfly rash	Photosensitive rash	Lupus nephritis	Autoimmune cytopenia	Positive Coombs	Low C3/C4	Serositis	Damage	Type of auto-antibodies	Follow-up in years
1	+	+	-	+	+	+	-	+	ANA, Anti-ds-DNA, anti-Sm, anti-RNP, anti-Ro52, anti-SS-A	5
2	+	+	-	+	+	+	-	+	ANA, Anti-ds-DNA, anti-Sm, anti-RNP, anti-SS-A	5
3	-	+	+	+	+	+	+	+	ANA, Anti-ds-DNA, anti-Sm, anti-RNP, anti-SS-A	10
4	-	+	+	-	+	+	+	+	ANA, Anti-ds-DNA, anti-Sm, anti-RNP, anti-Ro52, anti-SS-A	9
5	-	+	-	-	+	-	+	-	ANA	1 (lost)
6	-	+	+	+	+	+	+	-	ANA, Anti-ds-DNA, anti-c1q	3
7	-	-	-	+	-	-	-	-	ANA, Anti-ds-DNA, anti-Sm, anti-RNP	1
8	+	+	-	+	-	-	-	-	ANA	9
9	-	+	+	+	+	+	+	+	ANA, Anti-ds-DNA, anti-RNP, anti-SS-A	8

Figure 1. Occurrence of disease damage (with survival as 'no damage') in cSLE patients with microangiopathy (blue) and a capillary scleroderma pattern (red)

Disclosure of Interests: None declared

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POS1312

DRUG SURVIVAL FOR IL-6 INHIBITOR TOCILIZUMAB: DATA FROM A SINGLE-CENTER OBSERVATION

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Background: The efficacy of tocilizumab for treatment patients with systemic juvenile idiopathic arthritis (sJIA) was demonstrated before. We want to describe tocilizumab drug survival based on data from a single-center observation.

Objectives: To analyze the drug survival of tocilizumab in patients with sJIA treated at the National Medical Research Center of Children's health, Moscow, Russia.

Methods: Medical records from sJIA patients treated with tocilizumab (TOC) were analyzed retrospectively from the National Medical Research Center of Children's health, Moscow, Russia.

Results: One hundred ninety-two patients presenting with sJIA were included in this observation, with a median age at treatment initiation of 7,2 (interquartile range, IQR 3,9-10,8) years and a median disease duration of 1,9 (IQR 0,4-5,9) years. All patients had been bio-naïve. TOC therapy was highly effective in patients with sJIA. At 6 month of follow-up 148/172 (86%) patients achieved inactive disease according the criteria C. Wallace, disease activity persisted in 24/172 (14%) patients. At 1 year of medication 139/150 (92%) patients had inactive disease. We analyzed the reason of TOC withdrawal retrospectively. A total of 82/192 drug withdrawals were performed. TOC was discontinued due to primary ineffectiveness in 4 patients, due to secondary ineffectiveness in 39 patients. 33 patients achieved drug-free remission.

Six patients developed side effects that required discontinuation of TOC therapy (4 patients had allergic reactions, 1 patient developed tuberculosis, 1 patient had severe neutropenia). 47/82 patients were switched on other biologic drug: on canakinumab (31), on TNF-inhibitors (11), on rituximab (5). In summary, TOC was canceled in 49/192 (25%) patients due to ineffectiveness or AEs in our cohort.

Conclusion: These results demonstrated that TOC is highly effective as the first biologic drug in patients with sJIA. Our observations have shown a good tolerability and survival of the IL-6 inhibitor TOC in patients with sJIA treated in a real-world clinical setting.

Disclosure of Interests: None declared

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POS1313

PSYCHIATRIC DISORDERS IN JUVENILE IDIOPATHIC ARTHRITIS - A POPULATION-BASED COHORT STUDY

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Background: Juvenile idiopathic arthritis (JIA) may have substantial consequences for quality of life, for instance due to chronic pain, restriction of activities, concern about physical appearance, and treatment protocols that may limit interactions with peers. However, it remains unclear whether children and adolescents with JIA show a higher incidence of psychiatric disorders compared with the general population.

Objectives: To examine the incidence of psychiatric disorders during childhood in JIA patients in Sweden relative to general population controls.

Methods: We performed a register- and population-based cohort study including new-onset JIA patients aged 0 to 17 years 1st January 2012 through 31st December 2017. Incident JIA patients were followed-up from the date of their 2nd JIA diagnosis. At this date, five sex-age-region matched individuals were sampled from the general population. Nine psychiatric disorders were defined with ICD-10 codes and associated drugs (ATC codes): psychotic disorders (ICD-10: F20-29; ATC: N05A), mood and anxiety disorders (F30-F43; N05B, N06A, R06AD01, R06AD02, N03AX16), sleeping disorders (F51; N05C, N03AE01), eating and personality disorders (F50, F60-61, F69), neuropsychiatric disorders (F70-F79, F84, F90; N06BA, C02AC02), substance misuse (F10-F19; N07B), suicide attempts (X60-X84, Y10-34) and death by suicide or substance abuse, and all these combined. The follow-up stopped at date of first outcome, migration, death, 18th birthday or end of the study period, whichever occurred first. Incidence rates were calculated and compared by Cox regression analyses, adjusted for age, sex, calendar year, patient's and family's history of psychiatric disorder, country of birth, parents' education level, and comorbidities (IBD, obesity and celiac disease). In sensitivity analyses, we (1.) excluded children with a history of a psychiatric diagnosis at start of follow-up, and (2.) defined the psychiatric disorders based on ICD-10 codes only.

Results: We identified 2224 JIA patients (64% girls, mean age: 9.8 years) and 10,264 matched controls. In the JIA cohort, 309 patients developed a psychiatric disorder (all outcomes combined) during 4998 person-years (pyrs), which corresponded to a crude incidence rate (IR) of 6.2 per 100 pyrs (95% confidence interval (CI): 5.5-6.9). The corresponding crude IR for the general population matched controls was 3.6 (3.4-3.9). Comparing these incidence rates resulted in a sex-age adjusted hazard ratio (HR) of 1.66 (95% CI: 1.46-1.89) and a fully adjusted HR of 1.68 (1.47-1.91). Considering specific outcomes, the IRs per 100 pyrs in the JIA population ranged from 0.1 (suicide attempt) to 3.7 (mood and anxiety disorders) (Table 1). No death from suicide was recorded. There was an overlap across the seven outcomes: among all individuals diagnosed with at least one of the psychiatric outcomes during follow-up, 58% were diagnosed with one outcome only, 25% with two and 19% with three or more outcome conditions. The Cox analyses of the 7 outcome groups demonstrated four statistically significant increased risks for psychotic, mood and anxiety, sleeping and neuropsychiatric disorders (Figure 1). The three latter outcomes were correlated to each other (with Cramer's V coefficient between 0.3 and 0.5). The sensitivity analyses did not substantially modify these findings.

Conclusion: The burden of psychiatric illness in individuals with JIA is increased compared to the general population.

Table 1. Risk of psychiatric disorders in JIA patients and general population controls.

Disorders	N events JIA	N events controls	IR JIA (95% CI)	IR controls (95% CI)
All combined	309	918	6.2 (5.5-6.9)	3.6 (3.4-3.9)
Psychotic	25	44	0.5 (0.3-0.7)	0.2 (0.1-0.2)
Mood	194	534	3.7 (3.2-4.3)	2.0 (1.9-2.2)
Sleeping	148	348	2.8 (2.4-3.3)	1.3 (1.2-1.5)
Neuropsychiatric	126	442	2.4 (2.0-2.8)	1.7 (1.5-1.9)
Eating	13	55	0.2 (0.1-0.4)	0.2 (0.2-0.3)
Substance misuse	14	49	0.3 (0.2-0.4)	0.2 (0.1-0.2)
Suicide attempt	7	55	0.1 (0.1-0.3)	0.2 (0.2-0.3)

IR: crude incidence rate per 100 person-years; CI: confidence interval¹ adjustment: see text.

Figure: Comparisons of risks for several psychiatric disorders in juvenile idiopathic arthritis patients versus general population: Hazards ratio and 95% confidence intervals (with general population as reference)

Figure 1.

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POS1314

JUVENILE IDIOPATHIC ARTHRITIS IN THE CONTEXT OF THE CORONAVIRUS DISEASE 19 PANDEMIC: IMPACT ON THE DECREASE IN TREATMENT AND THE RETURN TO SCHOOL

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Background: The SARS-CoV-2 pandemic has induced an exceptional sanitary crisis, potentially having an impact on treatment continuation, for juvenile idiopathic arthritis (JIA) patients receiving immunosuppressive therapies. In France, after the first lockdown from March to May 2020, many parents and children were then also concerned about whether reopening plans for school could ensure the safety of students, despite data concerning children with COVID-19 seem reassuring, and very few of them develop severe forms of the disease (1, 2, 3).

Objectives: Our objectives were to evaluate the impact of the COVID-19 pandemic on the therapeutic management of JIA, the frequency of returning to school after the first lockdown period and the prevalence of SARS-CoV-2 infection at the time of the survey.

Methods: JIA patients under 18 years of age, usually treated with disease-modifying anti-rheumatic drugs (DMARDs) were prospectively included during their outpatient visit and completed a standardized questionnaire. Data regarding the general characteristics of the participants, medical history, SARS-CoV-2 infection, characteristics of JIA subtypes and treatment modifications were collected.

Results: A total of 173 patients from 8 different expert centers were included between May and August 2020. Their mean age was 11.6 years ($\pm$ 4.1 years), and most of them 31.2% (54/173) had a rheumatoid factor-negative polyarticular JIA. Fifty percent (86/172) were treated with methotrexate, and 72.5% (124/171) were treated with bDMARDs. DMARD treatment modification in relation to the pandemic was observed in 4.0% (7/173) of participants, our results reflect good adherence of the patient/parents to their immunosuppressive treatments. 49.1% (81/165) of the patients did not return to school due to a personal/parental decision in 69.9% (55/81) of cases, due to anxiety of the patient/parents regarding COVID-19. Two patients were diagnosed positive for SARS-CoV-2 infection.