history, demographic characteristics, and previous DMARDs treatments. Adverse events(AEs), reason for the discontinuation of the biologic treatment, or switch to another biological treatment were documented. The study was approved by the Institutional Review Board. Written informed consent was obtained from parents of the patients and the study was conducted in accordance with the Declaration of Helsinki.

Results: In this study 64, 18-year-old Caucasian JIA patients were evaluated from the day of entrance into the registry, who had JADAS 71 results at age 18, from the 347 patients treated with biologics at the submission.

Demographic data and disease related variables by descriptive statistics: Gender: Female: N(%): 49(77%).

Subtypes of JIA: Extended oligoarticular form: 11 patients, Polyarticular form: 53 patients (5 RF positive,48 negative)

Median age: 8 (range:4-17) years.

Mean disease duration: 3352 days.

Mean time on biological treatment:1030 days.

The first JADAS 71 summation at the entry into the registry: Median: 18,65 (range:14,4-55,4).

The age 18 JADAS71 summation: Median:3,75 (range: 2,1-38).

All patients were under biologic treatment (etanercept: 56, adalimumab: 29, tocilizumab: 12, abatacept: 4 patients).

Disease activity states and responses to treatments:

JIA extended oligoarticular subtype	Cutoffs for disease activity states JADAS10/71	Number of patients at the entry into the study	Number of patients at age 18
Inactive disease	≤1		1
Low disease activity	1.1 –2	1	
Moderate disease activity	2.1 –4.2		2
High disease activity	>4.2	10	8
JIA Polyarticular RF (negative+positive) subtype			
Inactive disease	≤1		10
Low disease activity	1.1 –3.8	3	20
Moderate disease activity	3.9 –10.5	3	9
High disease activity	>10.5	47	14

Conclusion: It appears from our study that at age 18, 72,3% JIA patients with extended oligoarticular subtype and 26,4% with polyarticular subtypes report a JADAS71 high disease activity sum, so, these young adults will need transitional care.

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AB1034 NO DIFFERENCES IN HEPATITIS B ANTIBODY POSITIVITY IN CHILDREN WITH JUVENILE IDIOPATHIC ARTHRITIS ON BIOLOGICAL THERAPY

CİCEK SUMEYRA OZDEMİR¹, Nihal Sahin¹, Aysenur Pac Kisaarslan¹, Meda Kondolot², Zubeyde Gunduz³, Muammer Hakan Poyrazoglu¹, Ruhan Düşünsel¹. ¹Erciyes University Faculty of Medicine, Pediatric Rheumatology, Kayseri, Turkey; ²Erciyes University Faculty of Medicine, Social Pediatrics, Kayseri, Turkey; ³Acibadem Hospital, Pediatric Rheumatology, Kayseri, Turkey

Background: Biologic disease-modifying antirheumatic drugs (DMARDs) are frequently used in the treatment of juvenile idiopathic arthritis (JIA) resistant to nonbiologic DMARDs recently. There is a concern for their reducing the effectiveness of vaccines due to immunosuppressive effects.

Objectives: To evaluate hepatitis B antibody (anti-HBs) positivity and antibody titers between JIA patients on biologic DMARDs therapy and healthy controls.

Methods: Anti-HBs antibody positivity and titers were compared between 88 patients with JIA on biologic DMARDs therapy followed in our clinic and 91 healthy controls aged 2-19 years. All participants were vaccinated according to the routine vaccination schedule in our country.

Results: Eighty-eight JIA patients included and fifty five (62,5%) patients were female. The median age of patients was 13,31 (4,07-18,08) years. The JIA subtypes were systemic JIA (10,2%), oligoarticular JIA (33%), polyarticular JIA (25%), entesitis related arthritis (26,1%), psoriatic JIA

(3,4%), and undifferentiated JIA (2,3%). The median duration of biologic DMARDs was 31,995 (1,33-115) months. 54 patients were treated only with one anti-TNF (34 etanercept, 17 adalimumab), 16 patients were treated more than one TNF-alfa inhibitor. 18 patients were treated with more than one different group biologic DMARDs, and 7 of them had more than two biologic DMARD due to disease activity. Anti-HBs positivity was 67% in the JIA group and 54,9% in the control group, and no significant difference detected between the two groups (p=0,097). The anti-HBs titer was 12,95 (min-max: 2-1000) in the controls and 22,44 (2-1000) in the biological DMARDs.

Conclusion: Patients with JIA on biologic DMARDs had not lower anti-HBs positivity than healthy controls in our study. Further studies are required to understand the effects of biologic DMARDs on protective anti-HBs antibody levels.

Disclosure of Interests: None declared

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AB1035 MAFB-VARIANTS IN MULTICENTRIC CARPOTARSAL OSTEOLYSIS WITH NEPHROPATHY DO NOT SEEM TO AFFECT SERUM C1Q CONCENTRATION

Riccardo Papa¹, Annalisa Madeo², Stefano Volpi¹, Roberta Caorsi¹, Giancarlo Barbano³, Marina Botto⁴, Belinda Campos-Xavier⁵, Andrea Superti-Furga⁵, Marco Gattomo¹, Maja Di Rocco², Paolo Picco¹. ¹IRCCS Istituto Giannina Gaslini, Clinica Pediatrica e Reumatologia, Genova, Italy; ²IRCCS Istituto Giannina Gaslini, Malattie Rare, Genova, Italy; ³IRCCS Istituto Giannina Gaslini, Nefrologia e Trapianto di Rene, Genova, Italy; ⁴Imperial College London, Faculty of Medicine, London, United Kingdom; ⁵Centre Hospitalier Universitaire Vaudois, Division of Genetic Medicine, Lausanne, Switzerland

Background: Multicentric carpotarsal osteolysis syndrome (MCTO)-associated progressive nephropathy is an orphan disease associated with well-known structural kidney damage that usually requires kidney transplantation in adulthood. Although ACE-inhibitors could potentially slow down the progression of kidney dysfunction, other treatments would be welcome. Furthermore, a slight proteinuria reduction in a patient with MCTO treated with cyclosporine has been reported. MafB-deficient mice develop systemic lupus erythematosus-like autoimmune disease by inhibited C1q production and efferocytosis. In the human, monoallelic mutations in MafB result in MCTO.

Objectives: To investigate whether C1q levels in patients with MCTO are reduced and might contribute to the development of renal disease.

Methods: In three individuals with clinical and radiographic signs of MCTO, the MAFB gene was sequenced. The serum C1q concentration was determined with a commercial laboratory kit.

Results: Three patients with MCTO were enrolled (table 1). Patient A presented recurrent urinary tract infections since 18 months of life for a third-degree vesicoureteral reflux. Despite correction surgery, he displayed proteinuria after one year, and kidney biopsy did not reveal significant lesions. After two years, he displayed bilateral tarsal malformations requiring orthopedic surgery. At the age of 6, a pathological fracture of the right wrist occurred, and local X-ray revealed osteolysis of carpal bones. - Because of a suspected juvenile idiopathic arthritis of the right wrist, patient B was treated with intra-articular steroid injection and subcutaneous methotrexate for one year without benefit. After one year, he developed proteinuria and kidney biopsy revealed focal segmental glomerular lesions with tubular fibrosis and renal vasa sub-intimal delamination. C3 and C4 positive mesangial deposits were also present. - Patient C was referred to us for suspected juvenile idiopathic arthritis of the right wrist. No inflammatory signs were present at the ultrasound examination. Sequencing of the MAFB gene revealed in all the patients a novel heterozygous mutation. Although specific variants have not been reported before, the nature and position of the variants associated with the clinical features of the patients strongly argued in favor of their pathogenic role. The serum C1q concentration was normal in all the patients.

Abstract AB1035 Table 1. Main features of three patients with MCTO.

Patient	A	B	C
Age (years); gender; country	14; M; Croatia	16; M; Italy	11; F; Russia
MAFB mutation	c.184A>G, p.Thr62Ala	c.172A>G, p. Thr58Ala	c.208T>C, p. Ser70Pro
Bone lesions onset (age; years)	5	8	8
Presentation Site	Bilateral Tarsus	Monolateral Carpus	Monolateral Carpus
Current state (except carpotarsal joints)	Elbows and knees contractures	Knees contractures	None

Nephropathy onset (age; years)	3	9	None
Current state	Proteinuria (720mg/24h)	Proteinuria (1.3g/24h)	Normal kidney function
Serum C1q concentration	174 mg/l	312 mg/l	176 mg/l

Conclusion: C1q plasma levels in our patients were normal, suggesting that MCTO-associated genetic variants do not play a role in MafB-dependent regulation of complement component C1q production in humans. Further studies are necessary to exclude a role of complement system in the progressive nephropathy of patients with MCTO.

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AB1036 AN UNSOLVED CASE: IS THIS A CANDLE-LIKE SYNDROME?

Alessia Pin¹, Alessandra Tesser², Flavio Faletta², Alberto Tommasini², Serena Pastore², Andrea Taddio^{1,2}. ¹University of Trieste, Trieste, Italy; ²Institute for Maternal and Child Health IRCCS Burlo Garofolo, Trieste, Italy

Background: Chronic Atypical Neutrophilic Dermatositis with Lipodystrophy and Elevated Temperature (CANDLE) syndrome is a complex autoinflammatory disorders arising from inborn defects in immunoproteasome. Several genes can be involved and cases with digenic inheritance have been described. However, many cases remain without the identification of a specific genetic defect. A positive interferon signature is typically found in patients and may serve as a diagnostic clue.

Objectives: To describe clinical and genetic features in a girl with CANDLE and in her relatives with a variety of different rheumatologic complaints.

Methods: We performed Whole Exome Sequencing (WES) on 10 family members. Moreover, we assessed RNA-seq on three sample from the proband, collected during acute phases of disease (samples positive to class I interferon signature (IS)) (1), and her parents. Results of RNA sequencing (RNA-seq) were compared with specimens from healthy controls.

Differentially expressed genes (DEGs) were filtered by fold change > 2 and padj < 0.05. DEGs enrichment were performed using different R packages, such as pathfindR.

Results: We describe the case of a 20 years old girl with clinical and biological data supportive of CANDLE syndrome. At the age of 3 years, she started presenting a clinical picture reminiscent of amyopathic dermatomyositis, with skin rash, lipodystrophy, subcutaneous panniculitis nodules, and more recently with chilblains, skin ulcerations, polyarticular arthritis and alopecia.

Her pedigree includes several relatives with rheumatic disorders, but none has a clinical picture as complex and severe as our patient. This girl was found to have a strongly positive class I IS in peripheral blood cells. After several unsuccessful therapeutic attempts with antirheumatic drugs and biologics, the girl showed a dramatic clinical response to the JAK inhibitors tofacitinib.

IS resulted positive also in 4 of her relatives, three of whom presented also rheumatologic symptoms. Conversely, one uncle of the girl was affected with rheumatologic symptoms but had negative IS. The pedigree may suggest a complex pattern of inheritance, likely with a major dominant disorder, whose expression can be modulated by multigenic and/or environmental factors.

WES failed to detect significant genetic variants in proteasome components. However, RNA-seq revealed a profile of differentially expressed IFN-regulated genes similar to that reported by Anja Brehm et al. in subjects with CANDLE/PRAAS (2).

Conclusion: Our results suggest that our family may present a multigenic form of CANDLE, with a complete clinical picture only in the proband, whilst other relatives may only present partial or incomplete forms of the disease.

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AB1037 SEROLOGICAL PHENOTYPES, UVEITIS AND DISEASE ACTIVITY INTO ADULTHOOD: LONG TERM OUTCOME IN A COHORT OF PATIENTS WITH JUVENILE IDIOPATHIC ARTHRITIS

Marta Priora¹, Tilde Manetta², Simone Parisi¹, Maria Chiara Ditto¹, Silvia Sanna¹, Richard Borrelli¹, Enrico Fusaro¹. ¹A.O.U. Città della Salute e della Scienza, Rheumatology, Turin, Italy; ²A.O.U. Città della Salute e della Scienza, Clinical Chemistry Laboratory, Turin, Italy

Background: Deepening the long-term study in adulthood of Juvenile Idiopathic Arthritis (JIA) is fundamental in order to expand knowledge of the pathogenesis, optimize the therapeutic choices, favour a more active communication between paediatric and adult care specialists.

Objectives: The present project deals with adult patients affected by JIA. The main objectives were those of: analyse the serological profile (rheumatoid factor –RF– IgM, ACPA IgG, ANA) of such patients to investigate possible seroconversions in adulthood compared to the diagnosis in paediatric age; investigate whether correlations between antibodies (Ab) and diagnostic subgroups subsist in adulthood; evaluate the association between Ab and disease activity; investigate the association between the presence of uveitis in the medical history and specific Ab, diagnostic subgroups and disease activity.

Methods: 68 patients were selected. Data were collected from medical records, a sample was taken to search for ANA, RF and ACPA; clinical data were collected on the evaluation of disease activity, using JADAS27 and SDAI as clinical scores (fig.1)

Results: The data obtained were significant for the negativization of ANA in adulthood: at the diagnosis 45.6% of patients had ANA positivity, while in adulthood 13.2%. The difference was statistically significant. The Ab picture of both RF and ACPA remains unchanged in adulthood, therefore there was neither a significant positivization nor negativization. The concomitant positivity for RF and ACPA was found to exist, demonstrating statistical significance for both the diagnosis and the adulthood (p 0.05). A higher incidence of uveitis was not correlated either with the presence of ANA in paediatric age, nor in adulthood, but is instead associated with the diagnosis of oligoarticular JIA (p = 0.002). Analyses of the positivity for RF and ACPA (in relation to disease activity calculated with clinimetric indices such as JADAS27, SDAI and CDAI) detected the negative prognostic role of the two Ab as they correlated with higher disease activity in the population of the patients in the study (fig.2)

Conclusion: In a rheumatological scenario enriched of great improvements in the diagnostic and therapeutic field during the last decades, a far from negligible portion of patients with JIA requires the continuation of rheumatological care in adulthood. The analyses of the present study report a significant negativization of ANA, thus suggesting the need to confirm the presence of these Ab in adulthood, and the difficulty in recognizing the classifying role of such Ab. The serological profile of RF and ACPA remains unchanged in adulthood, their correlation with the polyarticular subgroup is maintained even in the long term and both correlate with greater disease activity in adulthood.

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