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.

REFERENCES

- [1] Tran MTN, et al. MafB is a critical regulator of complement component C1q. *Nat Commun.* 2017;8:1700.

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

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Background: Chronic Atypical Neutrophilic Dermatitis 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.

REFERENCES

- [1] Rice GI, et al. Assessment of Type I Interferon Signaling in Pediatric Inflammatory Disease. *J Clin Immunol.* 2017 Feb;37(2):123- 132. doi: 10.1007/s10875-016-0359-1. Epub 2016 Dec 9.
- [2] Brehm A, et al. Additive loss-of-function proteasome subunit mutations in patients with CANDLE/PRAAS promote type I IFN production. *J Clin Invest.* 2016 Feb;126(2):795. doi: 10.1172/JCI86020. Epub 2016 Feb 1.

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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

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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.

REFERENCES

- [1] Oliveira-Ramos F, Eusébio M, et al. Juvenile idiopathic arthritis in adulthood: fulfilment of classification criteria for adult rheumatic diseases, long-term outcomes and predictors of inactive disease, functional status and damage. *RMD Open.* 2016; (2)
- [2] Coulson EJ, Hanson HJM, et al. What does an adult rheumatologist need to know about juvenile idiopathic arthritis? *Rheumatology.* 2014;53(12).
- [3] Selvaag AM, Aulie HA, et al. Disease progression into adulthood and predictors of long-term active disease in juvenile idiopathic arthritis. *Ann Rheum Dis.* 2016;75(1)