findings of enthesitis (1). Each parameter at every site was scored as 1 if present and 0 if absent. Grading of Power Doppler signals was done as per definition by Kiris et al (2); Grade 0-no signal, Grade 1- separate dot signals or short linear signals, Grade 2- vascularity involving less than half of the enthesitis, Grade 3-vascularity involving more than half of the enthesitis. US enthesitis score was calculated by adding 1 point for each positive finding and the grade of PD. PD score was calculated by adding the grade of PD. Presence of clinical and US detected enthesitis was correlated with parameters of disease activity by Spearman's correlation coefficient.

Results: The mean age of patients was 14.3 ± 3.2 years with mean duration of disease 34.6 ± 4.9 months. Male: Female ratio was 7.5:1. Clinical enthesitis was seen in 36 of the 51 patients (70.5%) while US detected enthesitis in all ($p < 0.0001$). The mean JADAS score, BASDAI and BASFI were 17.1 ± 10.2 , 4.1 ± 2.4 and 37.2 ± 27.2 respectively, indicating active disease. The US enthesitis score correlated positively with JADAS ($r = 0.3$, $P = 0.03$), BASDAI ($r = 0.39$, $P = 0.005$) and BASFI ($r = 0.38$, $P = 0.006$). PD score correlated positively with BASFI ($r = 0.33$, $P = 0.02$), but did not correlate with JADAS ($r = 0.22$, $P = 0.1$), BASDAI ($r = 0.24$, $P = 0.08$).

Conclusion: Ultrasound is more sensitive in detecting enthesitis in JIA-ERA than clinical assessment. The US enthesitis score correlated positively with disease activity which has implications for treatment.

REFERENCES:

- [1] Terslev L, Naredo E, Iagnocco A, Balint PV, Wakefield RJ, Aegerter P, et al. Defining enthesitis in spondyloarthritis by ultrasound: results of a Delphi process and of a reliability reading exercise. *Arthritis Care Res (Hoboken)*. May;66(5):741-8.
- [2] Kiris A, Kaya A, Ozgocmen S, Kocakoc E. Assessment of enthesitis in ankylosing spondylitis by power Doppler ultrasonography. *Skeletal Radiol*. 2006 Jul;35(7):522-8.

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2019-eular.2884

FRI0581 COMPARISON OF CLINICAL CHARACTERISTIC IN ADULTS AND CHILDREN WITH GOUT

Shaoling Zheng¹, Pui Y Lee², Shuyang Chen¹, Yukai Huang¹, Li Tian-Wang¹.

¹Guangdong Second Provincial General Hospital, Department of Rheumatology and Immunology, Guangzhou, China; ²Boston Children's Hospital, Division of Allergy, Immunology and Rheumatology, Boston, United States of America

Background: The incidence of gout in China is increasing in adults as well as children. The clinical manifestations of juvenile gout are not well described due to the limited number of cases in the past. Delineating the features of adult and juvenile gout may help pediatric providers recognize gout more effectively.

Objectives: We aim to describe and compare the clinical characteristic of adults and children with gout.

Methods: A total of 51 juvenile gout patients (age ≤ 18 years) and 337 adult gout patients in our hospital from Jan 2016 to Dec 2018 were enrolled in the study. Clinical parameters and laboratory data of the 2 groups were analyzed.

Results: The average age of onset in children with gout was 15.0 ± 1.9 years and the youngest patient was 8 years old. Compared to the adult group, juvenile gout patients displayed lower BMI (23.0 ± 3.8 vs. 25.6 ± 3.5 kg/m², $P < 0.001$) but higher serum uric acid levels (9.98 ± 2.65 vs. 8.09 ± 2.47 mg/dL, $P < 0.001$). Interestingly, systemic inflammation was less prominent in children compared to adult as illustrated by lower C-reactive protein levels (7.1 ± 13.5 vs. 23.7 ± 40.7 mg/L, $P = 0.004$) and lower erythrocyte sedimentation rate (12.7 ± 12.9 vs. 33.1 ± 34.2 mm/hr, $P < 0.001$). Renal function impairment was rare in children compared to adults (serum creatinine 98.73 ± 19.04 vs 120.38 ± 34.58 μ mol/L, $P < 0.001$). In terms joint manifestations, juvenile gout was associated with greater finger joint involvement (23.53% vs. 6.82% , $P < 0.001$) and less knee involvement (11.76% vs. 41.84% , $P < 0.001$) compared to adults. Ankle involvement was slightly more common in the pediatric group (49.02% vs. 30.56% in adults, $P = 0.009$) while MTP was similarly affected (50.98% vs. 32.94% , $P = 0.012$). In addition, tophi was found in four cases (7.8%) in the juvenile group compared to 113 cases in adults (33.5%), suggesting that although less common, advanced features of gout can also occur in children.

Conclusion: Juvenile gout is associated with higher serum uric acid levels and greater involvement of finger joints. Correlations with BMI and systemic inflammation were less prominent compared to gout in adults. These findings will help clinicians better recognize gout in children.

REFERENCES:

- [1] Chen, S.Y. and M.L. Shen, Juvenile gout in Taiwan associated with family history and overweight. *J Rheumatol*, 2007. 34(11): p. 2308-11.
- [2] Lu, C.C., et al., Clinical characteristics of and relationship between metabolic components and renal function among patients with early-onset juvenile tophaceous gout. *J Rheumatol*, 2014. 41(9): p. 1878-83.

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2019-eular.5463

Other orphan diseases

FRI0582

NON-INFECTIOUS UVEITIS AS A MANIFESTATION OF THE IMMUNE RECONSTITUTION INFLAMMATORY SYNDROME IN PATIENTS INFECTED BY HIV

Ester Carreño, Andrea Maria Alvear Torres, Nelida Muñoz, Francisco Javier de la Hera Fernandez, Sheila Recuero Diaz, Fredeswinda Romero, Olga Sanchez Pernaute. *Hospital Universitario Fundación Jiménez Díaz, Madrid, Spain*

Background: Immune reconstitution inflammatory syndrome (IRIS) is a paradoxical clinical worsening of an already known condition or the new onset of an inflammatory manifestation that is presumably related with the immune reconstitution after starting highly active anti-retroviral therapy (HAART) in patients infected by the human immunodeficiency virus (HIV). **Objectives:** The aim of this study is to describe the clinical characteristics, presentation and response to immunosuppressive treatment in patients with uveitis secondary to ocular IRIS in our cohort of patients infected by HIV.

Methods: Retrospective review of clinical charts of patients diagnosed with HIV and non-infectious uveitis. Data collected included: demographics, anatomic classification of the uveitis, phenotypic diagnosis of the uveitis, other systemic immune-mediated disorders (IMD), time from HIV diagnosis to uveitis, CD4 count, viral load, treatment and complications of treatment and time of follow-up.

Results: Nine-teen patients (17 males) were included in the study. The mean age at the time of HIV diagnosis was 35.4 ± 9.6 years. The time lag between HIV diagnosis and the onset of uveitis was 9 ± 8.9 years. Mean CD4 count was 649 ± 292 cells/ml, while the viral load was undetectable in 13 out of 17 cases. In 2 patients, there were a worsening of a previous IMD and in 6 patients another IMD was diagnosed prior to or concurring with the uveitis diagnosis (3 cases of reactive arthritis). The most common anatomic classification of the uveitis was anterior (13 cases). The use of immunosuppressive therapies to control either the ocular syndrome or the additional IMD was necessary in 6 patients (including biologics in 4 cases) during the follow-up. Only one patient had a complication of the immunosuppressive treatment. The mean follow-up was 43.8 months (range: 0.6 - 115.7).

Conclusion: Non-infectious uveitis could be the first manifestation of immune-mediated systemic disease in patients with well-controlled HIV infection. Immunosuppression appeared to be a safe therapeutic option in our cohort of patients.

REFERENCES:

- [1] Shelburne SA, 3rd, Hamill RJ, Rodriguez-Barradas MC, et al. Immune reconstitution inflammatory syndrome: emergence of a unique syndrome during highly active antiretroviral therapy. *Medicine (Baltimore)* 2002;81(3):213-27. [published Online First: 2002/05/09]
- [2] Murdoch DM, Venter WD, Van Rie A, et al. Immune reconstitution inflammatory syndrome (IRIS): review of common infectious manifestations and treatment options. *AIDS Res Ther* 2007;4:9. Doi: 10.1186/1742-6405-4-9 [published Online First: 2007/05/10]
- [3] Vega LE, Espinoza LR. HIV infection and its effects on the development of autoimmune disorders. *Pharmacol Res* 2018;129:1-9. Doi: 10.1016/j.phrs.2018.01.005 [published Online First: 2018/01/15]
- [4] Sokoya T, Steel HC, Nieuwoudt M, et al. HIV as a Cause of Immune Activation and Immunosuppression. *Mediators Inflamm* 2017;2017:6825493. Doi: 10.1155/2017/6825493 [published Online First: 2017/12/07]
- [5] Yeo TH, Yeo TK, Wong EP, et al. Immune recovery uveitis in HIV patients with cytomegalovirus retinitis in the era of HAART therapy-a 5-year study from Singapore. *J Ophthalmic Inflamm Infect* 2016;6(1):41. Doi: 10.1186/s12348-016-0110-3 [published Online First: 2016/11/09]

Disclosure of Interests: Ester Carreño Speakers bureau: Abbvie and Allergan, Andrea Maria Alvear Torres: None declared, Nelida Muñoz: None declared, Francisco Javier de la Hera Fernandez: None declared, SHEILA

RECUERO DIAZ: None declared, Fredeswinda Romero: None declared, Olga Sanchez Pernaute Grant/research support from: Merk Sharp Dome, Rubió, Paid instructor for: Glaxo Smith Kline, Actelion, Pfizer, Bristol Myers Squibb, Speakers bureau: Glaxo Smith Kline, Alexion, Novartis, Roche, Bristol Myers Squibb

DOI: 10.1136/annrheumdis-2019-eular.4265

FRI0583

NEUROMYELITIS OPTICA OVERLAPS FREQUENTLY WITH SYSTEMIC RHEUMATIC DISEASES IN AFRICAN-AMERICANS: EXPERIENCE AT A LARGE US ACADEMIC MEDICAL CENTER

Michael Belsky^{1,1}, Hassan Amer², Sunita Dia², Christopher Collins¹, Konstantinos Loupasakis¹. ¹MedStar Washington Hospital Center, Rheumatology, Washington, United States of America; ²MedStar Washington Hospital Center, Internal Medicine, Washington, United States of America

Background: Neuromyelitis optica (NMO) and neuromyelitis optica spectrum disorders (NMOSD) are immune-mediated demyelinating disorders of the central nervous system, primarily characterized by optic neuritis and longitudinal extensive transverse myelitis. Antibodies to aquaporin-4 (AQP4-IgG) are highly specific markers of NMOSD. The coexistence of NMOSD with systemic rheumatologic autoimmune disease has been well documented, especially systemic lupus erythematosus (SLE) and Sjogren syndrome (SS) [1]. Several recent studies have demonstrated that NMOSD may disproportionately affect black patients [2,3].

Objectives: Our objective was to characterize African-Americans diagnosed with NMO at our academic medical center, and identify any associated systemic rheumatologic autoimmune diseases.

Methods: We conducted a retrospective chart review of adult African-American patients diagnosed with NMO at a single academic medical center between 2011 and 2017. The charts reviewed were identified using ICD codes for NMO, transverse myelitis and optic neuritis. The diagnosis of NMO was then confirmed as per the 2015 International Consensus Diagnostic Criteria. The diagnosis of SLE and SS were also confirmed based on existing diagnostic criteria.

Results: Of the 60 charts reviewed, 25 patients (41.7%) met criteria for NMO, and of those, 21 patients (84%) were African-American. Of the 21 African-American NMO patients, 89.5% (n=19) were AQP4-IgG positive, 95.2% were women, and 38.1% had an associated systemic rheumatologic autoimmune disease (SLE 62.5% and primary SS 37.5%). In 60% of the NMO patients with SLE, the diagnosis of NMO preceded the SLE diagnosis. Conversely, in 100% of the NMO patients with SS, the diagnosis of NMO either followed, or was made simultaneous to, the SS diagnosis. Notably, 80% of the SLE patients had primarily hematologic manifestations. ANA was positive in 78.6% of the African-American patients in whom ANA testing was performed (n=14), with anti-SSA (64.3%, n=14) and anti-SSB (50%, n=11) the next most prevalent autoantibodies. Mean age of NMO onset was 46.7 years (SD 13.6). Transverse

myelitis was the most common presenting manifestation (71.4%), followed by optic neuritis (61.9%).

Conclusion: Our population had a higher mean age of onset (46.7 vs 33 years) compared with other cohorts of seropositive NMO African-Americans [2]. Additionally, African-Americans with NMO at our institution had a higher female:male distribution than has been documented[3]. Not surprisingly, SLE was the most common associated systemic rheumatic disease in our cohort, however the frequency of SLE and ANA positivity in our NMO cohort was higher than has been reported (23.8% and 78.6%, respectively) [4]. Additional larger studies are needed to further explore how NMOSD in African-Americans may differ from other populations.

REFERENCES:

- [1] Iyer A, Elson L, Appleton R, Jacob A. A review of the current literature and a guide to the early diagnosis of autoimmune disorders associated with neuromyelitis optica, Autoimmunity, 47:3, 154-161
- [2] Kim SH, Mealy MA, Levy P, et al. Racial differences in neuromyelitis optica spectrum disorder. Neurology Nov 2018, 91 (22) e2089-e2099.
- [3] Flanagan EP, Cabre P, Weinshenker BG, et al. Epidemiology of aquaporin-4 autoimmunity and neuromyelitis optica spectrum. Ann Neurol 2016;79:775-783.
- [4] Pereira WLCJ, Reiche EMV, Kallaur AP, et al. Frequency of autoimmune disorders and autoantibodies in patients with neuromyelitis optica. Acta Neuropsychiatrica. 2017;29(3):170-178.

Disclosure of Interests: Michael Belsky: None declared, Hassan Amer: None declared, Sunita Dia: None declared, Christopher Collins Grant/research support from: Exagen, Consultant for: Exagen, AbbVie, Speakers bureau: Exagen, AbbVie, Novartis, Konstantinos Loupasakis: None declared

DOI: 10.1136/annrheumdis-2019-eular.8185

FRI0584

EFFICACY AND SAFETY OF RITUXIMAB FOR INDUCTION OF REMISSION AND MAINTENANCE OF IGG4-RELATED DISEASE: EXPERIENCE FROM AN ITALIAN NATIONAL REFERRAL CENTRE

Corrado Campochiaro, Emanuel Della Torre, Marco Lanzillotta, Enrica Bozzolo, Elena Baldissera, Lorenzo Dagna. San Raffaele Scientific Institute, Unit of Immunology, Rheumatology, Allergy and Rare Diseases (UnIRAR), Milan, Italy

Background: IgG4-related disease(IgG4-RD) is a systemic fibro-inflammatory disease. Treatment is based on corticosteroids(CS) but up to 50% of patients may relapse. Rituximab(RTX) has emerged as an effective treatment option[1].

Objectives: To assess the free relapse rate(FRR) in patients receiving or not maintenance RTX therapy. Secondary outcomes: time to relapse, incidence of adverse events and differences in FRR between Group 2a and 2b patients.

Patient #	Age (years)	Sex	N° of Organs involved	IgG4-RD RI	PGA	ESR (mm/1h)	CRP (mg/L)	IgG4 (mg/L)	Concomitant DMARD therapies	Previous DMARD therapies	Outcomes after RTX induction	Relapses (time to relapse)	N° of RTX infusions	RTX Adverse Events	Follow-up (months)
Group 1															
1	29	F	3(Pm,Ns, Ph)	12	90	38	25	1001	No	CTX	PR	No	1	No	32
2	47	M	2(Ly,Sg)	6	50	8	1,2	4420	No	MTX	DR	No	1	No	30
3	70	F	1(Ao)	6	70	26	3,7	850	MTX	No	DR	Yes(7)	2	No	26
4	49	M	2(Bd,Pa)	6	60	39	1,9	3360	No	No	DR	Yes(7)	2	No	26
5	52	M	4(Pm,Si,Or, Pa)	15	90	7	21	1700	No	MTX	DR	Yes(12)	2	No	18
6	52	M	3(Ly,Sg,Lu)	12	70	8	1,9	7904	MTX	No	CR	Yes(11)	2	No	18
7	80	M	3(Pa,Ly,Bd)	9	60	22	6	3620	No	MTX	DR	Yes(9)	2	No	18
Group 2															
1	53	M	5(Ly,Si,Lg, Pa,Sg)	12	80	7	0,1	5713	No	AZA	CR	0	3	No	18
2	49	F	4(Ly,Lg,Or, Ph)	15	90	22	0,3	13800	No	No	CR	0	4	No	20
3	16	F	3(Si,Or,Ly)	9	60	6	0,2	630	No	No	DR	0	7	No	48
4	28	F	4(Hy,Pm, Or,Ns)	15	90	65	5,7	2990	No	CTX	CR	0	3	Yes (Asthma)	18
5	73	F	3(Or,Ly,Ma)	12	70	17	1,2	21800	MTX	AZA	CR	0	5	Yes(Rash)	30
6	51	F	3(Lg,Or,Lu)	12	70	16	6,9	2530	No	No	DR	0	4	No	18
7	76	M	1(Bd)	6	70	31	36	470	No	No	DR	0	3	No	21