Conclusion: In this study, we demonstrated that serum IL-1 theta levels were significantly elevated in patients with BD. The high levels of serum IL-1 theta, in active and inactive patients with BD suggest that IL-1 theta may play a significant role of in the pathogenesis of BD.

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FRI0491 IS THERE A RELATIONSHIP BETWEEN VOGT-KOYANAGI-HARADA AND INFLAMMATORY RHEUMATOLOGICAL DISEASES

S. B. Kocaer¹, M. Kaya², S. Guven³, Z. Ayhan², A. O. Saatci², F. Onen¹, İ. Sari¹.

¹Dokuz Eylul University Faculty of Medicine, Rheumatology, Izmir, Turkey;

²Dokuz Eylul University Faculty of Medicine, Ophthalmology, Izmir, Turkey; ³Ege University Faculty of Medicine, Ophthalmology, Izmir, Turkey

Background: Vogt-Koyanagi-Harada Disease (VKHD) is a systemic autoimmune disease characterized by bilateral granulomatous panuveitis associated with systemic symptoms, including neurological, dermatological and audiovestibular systems. Due to its systemic nature, it may accompany with other autoimmune conditions. However, there is a considerably limited number of reports on the association of VKHD and rheumatologic diseases.

Objectives: To investigate the relationship between VKHD and inflammatory rheumatological diseases.

Methods: Patients who had bilateral granulomatous uveitis and fulfilled the 2001 revised diagnostic criteria for VKHD were included in our study. All patients were systematically reviewed in terms of the presence of any rheumatological manifestations including connective tissue diseases, spondyloarthritis (SpA), vasculitis, Behçet's disease and sarcoidosis.

Results: Demographic findings: There were fifteen patients in the study (86,7%,female), the mean age at diagnosis was 31,2 ± 11,1 years.

Comorbidities: Six patients (4 hashimoto thyroiditis, 2 diabetes mellitus) had comorbid diseases.

Rheumatological findings: Mechanical back pain in 4 patients, 1 patient had morning stiffness without any other SpA related features; 2 patients had inflammatory arthralgias in small joints, 4 patients had sicca symptoms, 1 patient had arthritis in knee joint, 3 patients had oral aphthae and 1 patient had photosensitivity.

Laboratory tests and autoantibodies: The acute phase reactants were within normal ranges. The mean CRP value at the time of diagnosis was 2,7 ± 3,2mg/L and ESR was 14,4 ± 9,2mm/h. Two (15,3%) out of 13 patients had high serum ACE levels. RF, anti-CCP and anti-dsDNA were negative in all patients. ANA was positive (>1/160 titers) in 4 patients (28,6%) and 3 patients had a titer above 1/320. Anti-ENA profile was positive in 2 patients with anti-SS-B and anti-histone components. MPO-ANCA was positive in one patient.

HLA test: HLA-B27 was negative in all patients. HLA-B51 and B18 were positive in 2 patients.

Radiographic findings: One patient had heel enthesitis on X-ray, 4 patients had bilateral grade 1 and one patient had unilateral grade 2 sacroiliitis. None of them fulfilled the Modified New York criteria for radiographic sacroiliitis. Hand X-rays of all patients were normal. One patient had reticular density on chest X-ray.

Pathergy: The pathergy test was negative in all patients.

Capilleroscopy: Four patients had pathological capilleroscopy findings (3 patient tortuous loops, 1 patient tortuous loops and microhemorrhages).

Conclusion: This study suggests that; 1) inflammatory arthralgias and sicca symptoms were the most common rheumatological findings, 2) the frequency of SpA related features were not increased in VKHD, 3) increased autoantibody frequency, particularly in high titers of ANA could be seen in VKHD possibly reflecting the autoimmune nature of the disease, 4) even though there were signs of rheumatic diseases, none of the patients were grouped into any rheumatologic diagnostic classification.

Demographic findings and rheumatological manifestations in VKHD patients

	VKHD patients (n=15)
Females, n (%)	13 (86,7)
Age, yrs (mean ± std)	34,6 ± 12,6
Age of diagnosis, yrs (mean±std)	31,2 ± 11,1
CRP baseline (mean±std)	2,7 ± 3,2mg/L
ESR baseline (mean±std)	14,4 ± 9,2mm/H
High ACE levels, n(%)	2/13 (15,3)
RF positivity, n(%)	0/14 (0)
Anti-CCP positivity, n (%)	0/6 (0)
ANA positivity, n(%)	4/14 (28,6)
ANA pattern, n(%)	Homogeneous (2)
	Nuclear (1)
	Homogeneous speckled (1)
Anti-dsDNA positivity, n(%)	0/11 (0)
Anti-ENA profile positivity, n(%)	2/14 (14,2)
ANCA positivity, n(%)	1/12 (8,3)
Pelvis X-Ray abnormality, n(%)	5/12 (41,7)
Sacroiliitis (n)	Bilateral grade 1 (4)
	Unilateral grade 2 (1)
Capilleroscopy abnormality, n(%)	4/9 (44,5)
Pathergy, n (%)	0/12 (0)

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FRI0492 CLINICAL AND LABORATORY DATA AND ALGORITHM OF MANAGEMENT OF ADULT PATIENTS WITH OLIGO-ARTICULAR VARIANTS OF JIA

M. Dzhus¹, M. Kylyuk¹, O. Ivashkivsky², T. Karasevska¹, ¹O. Bohomolets National Medical University, Internal Medicine 2, Kyiv, Ukraine; ²Oleksandrivsky Clinical Hospital, Rheumatology 1, Kyiv, Ukraine

Background: The oligo-articular JIA is a disease that begins in childhood and can lead to joint damage and disability in adulthood with significant social losses.

Objectives: The aim of this study was to evaluate the clinical and laboratory status and to develop an algorithm of management adult patients with oligo articular variant of JIA, depending on the detection of RF or/and A-CCP, ANA, HLA-B27.

Methods: The study included 168 adult patients from different regions of Ukraine who were diagnosed with JIA in childhood between 1984 and 2014 without severe comorbidities. Inclusion criteria were: age 16 to 60 years; duration of the disease > 3 years. Among patients with JIA were identified 64 patients with oligo-articular variant: 44 (26,2%) - with persistent oligo-arthritis, and 20 (11,9%) with extended oligo-arthritis. The disease activity was evaluated by DAS28 and JADAS-10. The questionnaires SF-36, HAQ, TAS-20, PHQ-9 were analyzed and remote articular JADI-A and extra-articular JADI-E damages were evaluated. Statistical studies were performed using IBM SPSS Statistics version 25.0.0.0 software, the results were considered to be reliable at 5% critical level (P <0.05). The distribution of quantitative variables was tested by the Shapiro-Wilk test. Quantitative variables with a normal distribution were expressed as mean ± SD, quantitative variables that showed a non-normal distribution were expressed with a median (P25-P75), also performed correlative analysis of the variables

Results: It was found that patients with active JIA in 26.5% have depression according to the PHQ-9, while patients in remission have no signs of depression. Most adult patients with JIA (86.4%) have elevated and high levels of alexithymia. The predictors of JIA remission in adulthood are male sex (OR = 0.453; 95% CI 0.253-3.556); arthritis of more than 3 joints (OR = 0.459; 95% CI 0.347-0.770); wrist arthritis in childhood (OR = 0.082; 95% CI 0.009-0.739) and JADAS-10 in the disease onset (OR = 0.758; 95% CI 0.589-0.896) <6 points, treatment with IB in the history (OR = 0.767; 95% CI 0.054-0.811) and the duration of DMARDS treatment (OR = 0.741; 95% CI 0.636-0.863) > 1.5 years. The negative correlation of JADI-A and the patient's physical well-being PCS (r = -0.27, p <0.05) and physical functioning (r = -0.24, p <0.05), pain intensity (r = -0.24, p <0.05), general health (r = -0.24, p <0.05), vital activity (r = -0.19, p <0.05), social functioning (r = -0.27, p <0.05), mental health (r = -0.22, p <0.05) according to SF-36. The severity of extra-articular damages JADI-E correlated with PCS (r = -0.22, p <0.05) and physical functioning (r = -0.28, p <0.05), pain intensity (r = -0.20, p <0.05), general health (r = -0.23, p <0.05), and mental health (r = -0.23, p <0.05), but also had a positive correlation with HAM-A (r = 0.25, p <0.05), depression scale (r = 0.28, p <0.05) and PHQ-9 (r = 0.28, p <0.05). Significantly lower level of physical health was established in patients who requires prosthetics (p <0.001) compared to those who did not need prosthetics.

Conclusion: Based on the obtained results, algorithms of management of adult patients with JIA oligoarthritis were developed, depending on the detected

articular and extra-articular damages and the need for prosthetics and the psychological status.

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FRI0493

THE INTERLEUKIN-1B INHIBITOR CANAKINUMAB FOR REFRACTORY STILL'S DISEASE: LONG-TERM EXPERIENCE IN 50 CONSECUTIVE PATIENTS

K. Laskari¹, P. Athanassiou², A. Georgiadis³, C. Gerodimos⁴, G. Gkoni⁵, D. Daoussis⁶, T. Dimitroulas⁷, D. Dimopoulou⁷, C. Iliou⁸, I. Kallitsakis⁹, D. Karamitsos¹⁰, C. Katsiri¹¹, S. N. Liossis⁶, C. Mavragani¹, C. Papagoras¹², D. Pikazis¹³, I. Raftakis¹³, T. Sarikoudis¹⁴, L. Settas¹⁵, P. Sidiropoulos¹⁶, D. Soukera¹⁷, E. Theodorou¹⁸, P. Tsatsani¹⁹, E. Tsiakou²⁰, D. Vassilopoulos¹, P. Vlachoyiannopoulos¹, G. Vosvotekas²¹, P. V. Voulgari²², M. Zakalka¹⁵, M. Tektonidou¹, P. Sfikakis¹. ¹Joint Rheumatology Program, NKUA Medical School, Athens, Greece; ²Dept. of Rheumatology, St. Paul's Hospital, Thessaloniki, Greece; ³Private Rheumatologist, Ioannina, Greece; ⁴Private Rheumatologist, Volos, Greece; ⁵Rheumatologist, Metropolitan Hospital, Athens, Greece; ⁶Dept. of Rheumatology, University of Patras, Patras, Greece; ⁷4th Dept. of Internal Medicine, Aristotle University, Thessaloniki, Greece; ⁸Private rheumatologist, Kozani, Greece; ⁹Private rheumatologist, Chania, Greece; ¹⁰Rheumatology Clinic, Evangelismos Hospital, Athens, Greece; ¹¹Dept. of Rheumatology, Thessaly University, Larissa, Greece; ¹²Private rheumatologist, Alexandroupoli, Greece; ¹³Rheumatology Clinic, Asklepion Hospital, Athens, Greece; ¹⁴Private Rheumatologist, Kavala, Greece; ¹⁵First Dept. of Internal Medicine, Rheumatology Section, Aristotle University, Thessaloniki, Greece; ¹⁶Dept. of Rheumatology, Clinical Immunology and Allergy, University of Crete, Heraklion, Greece; ¹⁷Private Rheumatologist, Corinth, Greece; ¹⁸Dept. of Rheumatology, 251 Air Force General Hospital, Athens, Greece; ¹⁹Dept. of Rheumatology, KAT General Hospital, Athens, Greece; ²⁰Private Rheumatologist, Patras, Greece; ²¹Private Rheumatologist, Thessaloniki, Greece; ²²Rheumatology Clinic, University of Ioannina, Ioannina, Greece

Background: Interleukin-1 (IL-1) is a major mediator of the inflammatory cascade in Still's disease and an established therapeutic target.

Objectives: To assess the efficacy and safety of the IL-1b inhibitor canakinumab in adolescent and adult patients with refractory Still's disease.

Methods: We conducted a retrospective longitudinal outcome study of 50 consecutive patients aged 39 years (median, range 14-72), fulfilling the Yamaguchi disease classification criteria, with active disease despite treatment with corticosteroids (CS) (n=11) and/or methotrexate (n=9) and/or biologics (n=30) [tumor necrosis factor inhibitors (n=13), IL-6 blockade (n=7), abatacept (n=2), anakinra (n=24); ≥1 biologics (n=13)]. Canakinumab 150-300 mg was administered sc, starting every 4 (n=48) or 8 weeks (n=2), for a median of 24 months (range 3-84). Concomitant treatment included CS (n=41), methotrexate (n=12) and leflunomide (n=3).

Results: Complete remission was initially achieved in 78% of patients within a median time of 3 months, irrespective of age at disease onset. Partial clinical and laboratory response was evident in 20%. Canakinumab was discontinued in one patient with resistant disease (primary failure) and in 6 out of 10 initial responders, who relapsed during treatment (secondary failure). Of 39 patients in complete remission, increase in drug administration interval and/or drug dose reduction was attempted in 7, of which only 1 relapsed, whereas drug discontinuation was attempted in 19 patients for a median time of 8 months (range 3-68), of which 8 relapsed. Overall, in half of all disease flares, canakinumab re-introduction or intensification was successful. Canakinumab had a significant CS sparing effect permitting weaning in 21 of 41 cases. Infections (20%, severe 4%) and leucopenia (6%) led to treatment cessation in one patient.

Conclusion: In this largest so far real-life patient cohort with refractory Still's disease, high rates of sustained remission were induced by canakinumab both in adolescent and adult patients.

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FRI0494

RHEUMATIC IMMUNE RELATED ADVERSE EVENTS OF CHECKPOINT INHIBITORS: A RETROSPECTIVE REVIEW OF 70 PATIENTS

T. Lenfant¹, L. Calabrese¹, C. Calabrese¹. ¹Cleveland Clinic Foundation, Rheumatology and Immunology, Cleveland, United States of America

Background: Immune Checkpoint inhibitors (ICI) have revolutionized cancer therapy by achieving remarkable survival benefits however, at the cost of a myriad of immune-related adverse events (irAEs)[1]. Rheumatic irAE can develop in 5-10% of patients although the true incidence is unknown given the lack of prospective studies [2]. Symptoms are heterogeneous and probably underreported with few data available about their management and outcome [3].

Objectives: To describe the clinical, biological, and radiological features of the largest cohort of rheumatic irAEs from ICI along with their therapeutic management, outcome and follow-up in real-world practice.

Methods: A referral process for emergent rheumatic irAEs was initiated in February 2016 between the oncology and rheumatology departments at the Cleveland Clinic Foundation. All patients were evaluated by authors CC and/or LHC. Patients' characteristics were retrospectively collected from medical charts after IRB approval.

Results: 70 patients referred for one or more rheumatic irAEs between February 2016 and January 2020 were included. 66% were male, median age was 60.8 years. Among them, 24 (34%) had pre-existing rheumatic complaints. Melanoma was the most frequent malignancy (56%). ICI therapy included anti-CTLA4 (40%), anti-PD1/L1 (79%), and dual therapy ipilimumab/nivolumab (41%). Rheumatic irAE occurred in a median 4 months after ICI initiation, with phenotypes including inflammatory arthritis (32 patients), sicca-like symptoms (12), polymyalgia rheumatica-like (7), and myositis (2). Oral, intravenous or intraarticular glucocorticoids (GC) were administered to 54 patients (77%). Of these 54 patients, 22 (41%) required long term GC, 19 had bone density scan and 15 received pneumocystis (PJP) prophylaxis. One PJP case, 1 osteoporotic fracture and 2 avascular necrosis cases were reported. 16 patients received conventional DMARDs (23%) and 9 received biologics (13%). ICI therapy was held for rheumatic irAE in 31% of cases and for another systemic irAE in 29%. Median follow-up was 13.6 months, at end of follow-up 51 patients were still on treatment for rheumatic irAE and 41% of them were still symptomatic despite ongoing treatment.

Conclusion: Rheumatic irAEs are heterogeneous and often chronic requiring prolonged immunomodulatory therapy. Prospective studies are required to define optimal management of rheumatic irAEs that maintain long-term oncologic outcomes.

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