included. Patients with amyloidosis and pregnancy were excluded. In order to evaluate the disease status, acute phase reactants and patient-reported disease severity visual analog scale (VAS) scores were analyzed. Acute phase reactants were evaluated during attack-free periods. The VAS score was reported on a scale of 0-10, 10 meaning the disease at its most severe form, and 0 meaning the least.

Results: Fifty-two patients (21 male, 31 female) with the mean age of 35.88 ± 12.4 years, were included in this study. The presenting signs and symptoms of the patients are shown in Figure 1. The mean age of initial symptoms and diagnosis were 12.84 ± 10.06 and 20.39 ± 12.35 years in respective order. The treatment information of the patients before and during Canakinumab injections was shown in Table 1. The mean Erythrocyte Sedimentation Rate (ESR) decreased from 25.31 ± 20.64 to 11.52 ± 9.78 mm/hour. The mean C-reactive Protein (CRP) decreased from 28.18 ± 47.04 to 2.02 ± 2.31 mg/L (both $p < 0.0001$). The mean VAS score decreased from 8.04 ± 1.9 to 1.4 ± 1.73 ($p < 0.0001$). Canakinumab treatment was terminated in 33 patients, 22 of which was due to successful remission. The termination of the treatment was because of pregnancy or will of pregnancy in 4 patients, inadequate treatment response 3 patients, treatment noncompliance in 2 patients, chronic hepatitis C related cirrhosis in 1 patient, and change to a different biologic agent in 1 patient. The only side effect experienced was hallucinations in one patient who was already under remission.

Figure 1. The Presenting Signs and Symptoms of the Patients

Table 1. The Treatment Information of the Patients

Initial Mean Daily Colchicine Dose, mg (mean± standard deviation)	1.68±0.46
Mean Daily Colchicine Dose before Canakinumab Treatment, mg	1.63±0.6
The Mean Injection Number, n	17.5±17.8
Canakinumab Treatment Indication, n (%)	
Inadequate Response to Previous Treatment	38 (73.08)
Side Effect to Previous Treatment	8 (15.38)
Poly Arteritis Nodosa	2 (3.85)
Recurrent Pericarditis	1 (1.92)
CNS Vasculitis	2 (3.85)
Poor Anakinra Treatment Adherence	1 (1.92)
FMF Encephalopathy	1 (1.92)

Conclusion: Canakinumab seems effective in controlling the subclinical inflammation and raising the quality of life of the patient. It has a favorable side effect profile. According to our single-center, real-life data, Canakinumab can be used as an alternative treatment method in colchicine resistant patients.

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2020-eular.5329

SAT0519 DRUG RETENTION RATES OF BIOLOGICAL AGENTS IN ADULT ONSET STILL'S DISEASE IN THE PRE-CANAKINUMAB ERA

N. Farina¹, A. Tomelleri¹, C. Campochiaro¹, G. De Luca¹, G. Cavalli¹, E. Baldissera¹, L. Dagna¹. ¹IRCCS San Raffaele Hospital, Unit of Immunology, Rheumatology, Allergy and Rare Diseases, Milan, Italy

Background: Adult onset Still's disease (AOSD) is a rare systemic inflammatory disease. Glucocorticoids represents first-line therapy and conventional synthetic disease-modifying anti-rheumatic drugs (csDMARDs) play a central role as steroid-sparing agents. Patients refractory to csDMARD may require the introduction of a biological DMARD (bDMARD). There is paucity of data about the efficacy and drug retention rate (DRR) of bDMARDs used in the treatment of AOSD.

Objectives: To retrospectively evaluate DRR and reasons for discontinuation of five different bDMARDs in a monocentric cohort of AOSD patients in a real-world setting.

Methods: AOSD patients followed at our Center who received at least one bDMARD were selected. Data about disease duration, number of bDMARDs, reasons for bDMARDs discontinuation, concomitant csDMARDs were collected. Survival curves were determined by the Kaplan-Meier method and compared using a stratified log-rank test. 24-month DRRs were then calculated. Hazard ratio (HR) for previous bDMARDs was also evaluated.

Results: We identified 42 patients and 79 bDMARD-courses (Table 1). Anakinra (ANK, n = 41) was the most used bDMARD, followed by tocilizumab (TCZ, n=21) and Tumor Necrosis Factor inhibitors (TNFi, n = 17). At bDMARDs initiation, all patients were being given prednisone (mean dose, 23 ± 18 mg/day) and 76% were on concomitant csDMARD therapy. 36 (46%) treatment courses were stopped by 24 months; discontinuation causes are shown in Table 2. 14 treatment courses were started in the previous 24 months (ANK = 9, TCZ = 5), without being stopped before the study time but not reaching 2-year treatment duration. Overall retention rates at 24 months were the following: TCZ, 62.5%; ANK, 53.1%; TNFi, 11.8% ($p = 0.021$). Survival curves are shown in Figure 1. DRRs of ANK and TCZ were statistically comparable ($p = 0.576$), and they were both significantly higher than the DRR of TNFi ($p = 0.015$). Previous bDMARDs therapy showed no effect on DRR (HR 0.73, 95% CI = 0.40 - 1.31, $p = 0.288$).

Table 1. Clinical characteristics at initiation of biologic agents in adult onset Still's Disease. TNFi = Tumor Necrosis Factor inhibitors

	Anakinra (n=41)	Tocilizumab (n=21)	TNFi (n=17)	p - value
Age (years)	38 ± 16	43 ± 19	38 ± 13	0.601
Female sex (%)	61%	48%	35%	0.443
Mean disease duration (months)	49 ± 60	72 ± 75	61 ± 64	0.445
Systemic disease (%)	61%	38%	29%	0.213
C-reactive protein (mg/l)	99 ± 84	111 ± 100	66 ± 52	0.445
Erythrocyte sedimentation rate (mm/h)	71 ± 32	65 ± 27	77 ± 41	0.617
White blood cells (cells/ul)	14640 ± 4540	14116 ± 3724	16870 ± 5504	0.361
Ferritin (ng/ml)	10114 ± 18657	6327 ± 8061	6295 ± 9573	0.591
Previous therapy (%)	100%	100%	100%	1.000
csDMARD (%)	88%	90%	94%	0.973
bDMARD (%)	22%	81%	59%	0.003
Mean prednisone dose (mg die)	20.3 ± 18.1	15.8 ± 14.4	27.3 ± 14.4	0.252
Concomitant csDMARD therapy (%)	71%	71%	59%	0.865

Table 2. Causes of treatment discontinuation of biologic agents in adult onset Still's Disease. TNFi = Tumor Necrosis Factor inhibitors

	Anakinra (n=41)	Tocilizumab (n=21)	TNFi (n=17)	Total (n=79)
Inefficacy	24%	14%	65%	30%
Adverse events	10%	10%	24%	13%
Other reasons	2%	5%	0%	3%
Total	37%	29%	88%	46%

Figure 1. Kaplan-Meier curves comparing anakinra (ANK), tocilizumab (TCZ) and Tumor Necrosis Factor inhibitors (TNFi) at 24 months in adult onset Still's disease.

Conclusion: In our AOSD cohort, DRRs at 24 months of TCZ and ANK were not statistically different, and they were both significantly higher than the DRR of TNFi. Previous use of biologic agents was found to have no effect on bDMARDs retention probability.

References:

- [1] Efficacy and safety of biological agents in adult-onset Still's disease; Cavalli et al; *Scand J Rheumatol.* 2015;44(4):309-14.

Disclosure of Interests: Nicola Farina: None declared, Alessandro Tomelleri: None declared, Corrado Campochiaro Speakers bureau: Novartis, Pfizer, Roche, GSK, SOBI, Giacomo De Luca Speakers bureau: SOBI, Novartis, Celgene, Pfizer, MSD, Giulio Cavalli Speakers bureau: SOBI, Novartis, Pfizer, Elena Baldissera Speakers bureau: Novartis, Pfizer, Roche, Alpha Sigma, Sanofi, Lorenzo Dagna Grant/research support from: Abbvie, BMS, Celgene, Janssen, MSD, Mundipharma Pharmaceuticals, Novartis, Pfizer, Roche, SG, SOBI, Consultant of: Abbvie, Amgen, Biogen, BMS, Celltrion, Novartis, Pfizer, Roche, SG, and SOBI

DOI: 10.1136/annrheumdis-2020-eular.3129

SAT0520

CONTROVERSY ON DIAGNOSIS AND TREATMENT OF ADULT PATIENTS WITH SAPHO SYNDROME: MULTI-DISCIPLINARY INTERNATIONAL SURVEY

V. Furer^{1,2}, M. Kishimoto³, S. Tsuji⁴, Y. Taniguchi⁵, Y. Ishihara⁶, T. Tomita⁷, O. Elkayam^{1,2}. ¹Tel Aviv Sourasky Medical Center, Tel Aviv-Yafo, Israel; ²Tel Aviv University, Sackler Faculty of Medicine, Tel Aviv-Yafo, Israel; ³Kyoto University School of Medicine, Department of Nephrology and Rheumatology, Mitaka, Japan; ⁴Osaka Minami Medical Center, Department of Rheumatology and Orthopaedic Surgery, Osaka, Japan; ⁵Kochi Medical School Hospital, Department of Endocrinology, Metabolism, Nephrology and Rheumatology, Nankoku, Japan; ⁶Japan Medical Research Foundation, Tokyo, Japan; ⁷Graduate School of Medicine and Faculty of Medicine, Osaka University, 6Department of Orthopaedic Biomaterial Science, Suita, Japan

Background: Synovitis, acne, pustulosis, hyperostosis, osteitis (SAPHO) is a rare disease involving skin and skeleton, with a potentially complicated and severe course, optimal management of which seems to require a collaborative rheumatology and dermatology care. Diagnostic criteria for SAPHO remain preliminary and lack validation. There are no evidence-based treatment algorithms in SAPHO due to lack of clinical trials in this rare medical condition.

Objectives: This study aimed to investigate the current practice in the diagnosis and treatment of SAPHO syndrome among the international rheumatology and dermatology communities.

Methods: We conducted a survey among the members of the Group for Research and Assessment of Psoriasis and Psoriatic Arthritis (GRAPPA) combining international rheumatologists and dermatologists as well as members of the Japanese and Israeli Societies of Rheumatology.

Results: A total of 78 physicians participated in the survey: rheumatologists (83%, n=65), dermatologists (11.5%, n=9), and orthopedics (3.8%, n=3). SAPHO was considered a subtype of spondylarthritis by 48.7% (n=38), a subtype of psoriatic arthritis by 19.2% (n=15), a separate entity by 25.6% (n=20), and a subtype of reactive arthritis by 6.4% (n=5). Palmoplantar pustulosis was the most prevalent cutaneous manifestation (n=44, 56.4%) and anterior chest pain - the most prevalent osteoarticular manifestation (n=66, 84.6%). The majority (84.6%, n=66) voted for the update of the present diagnostic criteria by Khan 1994. Magnetic resonance imaging was considered the preferred imaging modality for the diagnosis of SAPHO by 41% (n=32). Conduction of bone biopsy for diagnosis of non-infectious osteitis was supported only by 10.3% (n=8). Patient-reported outcomes were considered the most appropriate measure for the assessment of disease activity by 47.4% (n=37). The treatment approach was overall similar among the rheumatology and dermatology communities, including non-steroidal anti-inflammatory drugs, bisphosphonates, conventional disease-modifying anti-inflammatory drugs, and biologics (Table 1).

Table 1. Preferences in the treatment choice of SAPHO

Treatment	% of responders
NSAIDs	76.6%
Glucocorticoids	32.5%
Conventional DMARDs	57.1%
Bisphosphonates	48.1%
Anti-TNF biologic therapy	75.3%
Other biologic therapy	20.8%
Antibiotic	14.3%
Tonsillectomy	5.1%
Isotretinoin	5.2%
Topical therapy	10.4%
Intra-articular steroid injection	7.8%

Legend: NSAIDs – non-steroidal anti-inflammatory drugs; DMARDs – disease modifying anti-rheumatic drugs

Conclusion: Our study underlines the controversy on diagnosis and treatment of SAPHO syndrome among specialists in rheumatology and dermatology and emphasizes an unmet need for update and validation of diagnostic criteria and treatment approach.

Acknowledgments: GRAPPA, Japanese Society of Rheumatology, Israeli Society of Rheumatology

Disclosure of Interests: Victoria Furer: None declared, Mitsumasa Kishimoto: None declared, Shigeyoshi Tsuji Grant/research support from: Eli Lilly, Speakers bureau: AbbVie, Asahi Kasei, Chugai, Daiichi Sankyo, Eli Lilly, Eisai, Mitsubishi Tanabe, Celgene, and Novartis Pharma K.K., Yoshinori Taniguchi: None declared, Yoko Ishihara: None declared, Tetsuya Tomita Consultant of: Eli Lilly and Company, Ori Elkayam Speakers bureau: AbbVie, BMS, Pfizer, Roche, Sanofi-Aventis, Novartis, Jansen

DOI: 10.1136/annrheumdis-2020-eular.6390

SAT0521

EVALUATION OF LIPID PROFILE IN PATIENTS WITH AVASCULAR NECROSIS

K. Gudkevich¹, N. Martusevich², E. Dashkevich³. ¹Minsk City Clinical Hospital No. 6, Rheumatology, Minsk, Belarus; ²Belarusian State Medical University, Minsk, Belarus; ³Minsk City Clinical Hospital No. 10, Minsk, Belarus

Background: Avascular necrosis (AN) is a disabling disease affecting predominantly young men. It steadily progresses to secondary osteoarthritis. The rate of disability is high, because hip joint is most commonly affected by AN; moreover, the rate of bilateral hip joint involvement is also high. The key event in the pathogenesis of AN is circulation disorder which results in ischemia and, furthermore, death of bone tissue.

Nowadays the data about lipid metabolism in patients with AN. Besides, there is contradictory data about the role of homocysteine in the risk of cardiovascular events. Based on these, it is topical to investigate lipid metabolism and endothelial function in patients with AN.

Objectives: The aim of the present study was to investigate lipid metabolism and endothelial function in patients with different stages of AN in order to find risk factors for incidence and progression of this disease.

Methods: We recruited 41 patients with AN of the femoral head or femoral condyles aged 51 (35-64) years, 56,1% (n=23) were male. The inclusion criteria was diagnosis of AN confirmed by X-Ray, CT or MRI. The exclusion criteria were: traumatic AN, Legg-Calve-Perthes disease, connective tissue systemic diseases. Also we divided patients into subgroups with early (39% (n=16)) and late (61,0% (n=25)) stages of AN.

Patients of the control group (n=32) were comparable by age and gender. The data was proceeded using non-parametric and descriptive statistics. We evaluated the following parameters: homocysteine, total cholesterol, high-density lipoprotein cholesterol, low-density lipoprotein cholesterol, high-density lipoprotein cholesterol, very low-density lipoprotein cholesterol, cholesterol ratio, apolipoprotein A1, apolipoprotein B.

Results: In patients with AN we observed higher level of homocysteine (12,119 (7,771-14,38) vs. 7,911 (6,612-10,54) $\mu\text{mol/l}$, $p=0,05$). The results are consistent with the data that higher homocysteine level is associated with higher risk for cardiovascular events (1). There is literature data about elevated homocysteine level in patients with AN, which was associated with lower levels of vitamin B12 and folic acid. Thus, interpretation of homocysteine significance is more reliable in association with vitamin B12 and folic acid levels.

Figure 1. Homocysteine levels in patients of control group and in patients with avascular necrosis