Methods: there were examined 22 children at the age of 7 to 17 years old diagnosed with CAPS-9, TRAPS-8, FMF-5. Among them there were 12 boys and 10 girls. The diagnosis in all the patients was confirmed through detection of pathogenic mutations in the NLRP3, TNFRSF1A and MEFV genes. The following methods were used: a clinical conversation; memory diagnostics (learning by heart of 10 words, a pictogram using cues taking into account the patients' age); attention diagnostics (Schulte tables); thinking diagnostics (establishing a sequence of events, "four is a crowd", simple analogies, interpretation of proverbs); emotional and communicative fields (the Eight-Color Luscher Test; CMAS (adaptation by A. Prikhodzhan); STAI test, a drawing called "an animal that does not exist" and "a house-a tree-a man").

Results: The memory study revealed in all patients with TRAPS and FMF high and medium values of short-term and long-term memory, in patients with CAPS - a low level of short-term auditory-speech memory, information storage and indirect memorization in 1/3 of patients. In 100% of the examined patients with TRAPS, a significant decrease in all processes of attention and distribution of attention. In 1/3 of patients with CAPS, an increased exhaustion of attention was registered and in 11% - a decrease in its stability. In patients with FMF, attention disorders were not detected. In 44% of patients with CAPS, a decrease in the level of generalization and difficulties in establishing causal relationships were registered. In 25% of patients with TRAPS a decrease in the level of generalization, in 12.5% - difficulties in establishing cause-effect relationships, inertia of thinking in 37.5%. In 60% of patients with FMF: a decrease in the level of generalization, in 80%: difficulties in establishing cause-effect relationships, inertia of thinking in 20%. In the emotional sphere, patients with CAPS, TRAPS, and FMF demonstrated signs of aggression (11.1%, 20% and 20% of patients, respectively), communicative disorders (77.8% - 80% - 80%), and reduced social adaptation (55.5% - 80% - 80%), a tendency to form neurotic fears (22% - 40% - 40%). A high level of personal anxiety was noted in 1/3 of patients with CAPS and 40% of patients with FMF.

Conclusion: various psychological disorders in the cognitive and emotional fields were noted in the majority of the examined patients with monogenic auto-inflammatory diseases. In patients with TRAPS, attention processes are most significantly affected; in patients with CAPS, memory is more often affected. In patients with FMF, disorders in thinking processes are revealed more often. In the emotional sphere, most patients with all the three forms of AID note communicative disorders and social adaptation.

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2020-eular.4182

FRI0633-HPR PHYSICAL AND SOCIAL ACTIVITY OF PATIENTS SUFFERING FROM JUVENILE IDIOPATHIC ARTHRITIS

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Background: Juvenile Idiopathic Arthritis (JIA) is a chronic, disabling disease of a childhood age that significantly limits the patient's capabilities and affects the life quality. Modern drug therapies can prevent most of the negative consequences of the disease and maintain satisfactory functional abilities of patients.

Objectives: to examine the nature of the daily physical and social activities of patients suffering from JIA.

Methods: the study included 236 patients aged from 4 to 17 years old undergoing in-patient treatment. Among them, 146 (62%) - polyarthritis and spreading oligoarthritis, including 13 (5.5%) - with damage to the eyes, persistent oligoarthritis - 60 (25%), including 26 (11%) with damage to the eyes, systemic JIA 22 (16%), enthesitis-associated 8 (3%). The patients were divided into the following age groups: pre-school age (4-6 years old) - 26 patients (11%), primary school age (7-10 years old) - 54 patients (23%); an average school age (11-12 years old) - 49 patients (21%), senior school age (13-15 years old) - 52 patients (22%), youth (16-17 years old) - 55 patients (23%). The assessment methods: collection of their pharmacological history, questioning (with an author's questionnaire) the parents of children aged from 4 to 10 years and older patients themselves, VAS pain evaluation, a CHAQ questionnaire.

Results: 10 (4%) patients received NSAID, 88 (38%) patients - synthetic basic anti-inflammatory drugs, biological therapy - 133 (56%), 5 patients (2%) did not receive any drug therapy. An average value of the VAS pain evaluation: 2.5 cm, the CHAQ functional insufficiency is low: 137 patients (58%), medium insufficiency in 88 patients (37%), a severe one in 11 patients (5%). Children's educational institutions were regularly visited by 199 (85%) patients, leisure activities were enjoyed by 90 (38%) patients; at that, the highest rate of leisure activities was recorded for the age group 11-12 years (67% of the entire group), daily walks were recorded in 172 (73%) patients, doing homework on a regular basis by 155 (66%) patients, regular doing exercises of therapeutic gymnastics recorded in 55 (24%) patients.

Conclusion: The social activity of patients suffering from JIA can be estimated as satisfactory, while their physical activity as inadequate. An adequate social and physical activation of patients with JIA being in the remission status is required.

This can be facilitated by educational programs for patients and their parents, a joint discussion of issues on the social and physical activity of patients and their parents with rheumatologists and rehabilitation therapy specialists.

Acknowledgments: I thank senior researcher, E. S. Fedorov MD for his help in completing the work and preparing abstracts

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2020-eular.4208

FRI0634-HPR LEVEL OF PHYSICAL ACTIVITY IN ANTIPHOSPHOLIPID SYNDROME AND ITS RELATIONSHIP TO ATHEROSCLEROSIS PROGRESSION - ANALYSIS OF THE SERBIAN COHORT

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Background: Systemic lupus erythematosus (SLE) and antiphospholipid syndrome (APS) are associated with an increased risk of developing cardiovascular diseases as a result of complex interaction between traditional risk factors, chronic inflammation and specific impact of antibodies on endothelium. There are very limited data regarding level of physical activity (PA) in APS patients.

Objectives: To analyze different domains of PA in Serbian APS patients and their possible relationship to clinical and laboratory criteria of the main disease.

Methods: From a large Serbian APS database comprehending 527 APS patients (371 Primary - PAPS, and 156 APS associated with other autoimmune diseases, predominantly systemic lupus erythematosus (SLE)) we interviewed 51 APS patients, age range of 15-69 years: 29 patients with primary APS (PAPS), 25 women, 4 men, age 44±11.50, and 22 APS/SLE, 18 women, 4 men, age 48.41±11.75, using a long form of The International Physical Activity Questionnaire (IPAQ), translated onto Serbian language. Data on last seven days of PA divided onto leisure time PA, domestic and gardening (yard) activities, work-related PA and transport-related PA were acquired, and proposed scoring method was used. Based on the level of PA, patients were categorized to low, moderate or high level of PA. For the purpose of insight into atherosclerotic progression, we performed color Doppler scan of carotid arteries in all patients and presence of atherosclerotic plaques has been notified.

Results: Average total PA score was 7706.18±1177.97 MET-minutes/week. The greatest average values for different PA domains were for work (2733.21±6158.66 MET-minutes/week) and domestic/garden/yard (2522.31±3847.24 MET-minutes/week) and the lowest scores achieved in leisure time (500.87±695.45 MET-minutes/week). Majority of Serbian APS patients had low or moderate level of PA (37.3%, 43.1%, respectively) whereas lowest percentage was in high category of PA (19.6%). All domains of PA were significantly negatively correlated to age and BMI. There were no significant difference regarding PA scores between PAPS and APS/SLE patients. Although higher percentage of PAPS patients had high level of PA (27.65 compared to 9.1% of SLE/APS), the overall difference was not significant. There was no significant difference regarding antiphospholipid antibody (aPL) type or thrombotic/obstetric events presence. Significant difference occurred regarding presence of carotid arteries plaques. APS patients with lower PA scores had significantly higher prevalence of carotid arteries plaque especially for PA in transportation (p=0.004), and total PA (p=0.025)

Conclusion: Serbian APS patients at younger age, tend to have low or moderate level of PA, with the lowest level of activity in leisure time. Low level of PA was undoubtedly related to progression of atherosclerosis in these patients, emphasizing a need for PA promotion in APS.

Disclosure of Interests: Aleksandra Djokovic Speakers bureau: KRKA, Astra Zeneca, Actavis, Ljudmila Stojanovich: None declared, Natasa Stanisavljevic: None declared, Gordana Bogdanovic: None declared, Sandra Djokic: None declared

DOI: 10.1136/annrheumdis-2020-eular.2548

FRI0635-HPR PATIENTS' MOTIVATION AND GOALS FOR THUMB CARPOMETACARPAL OSTEOARTHRITIS SURGERY

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Background: Osteoarthritis (OA) in the thumb carpometacarpal joint (CMCJ) is a prevalent disease which may lead to structural damage, severe pain and

functional limitations, but for which there is yet no cure. Evidence-based treatment recommendations state that all patients with hand OA should be offered patient education, hand exercises, and provision of assistive devices and orthoses. Pharmacological therapy is recommended as a symptom relieving supplement. The main indication for CMCJ surgery is pain and poor function, and such surgery should be considered only when other treatment has proven insufficient in relieving pain (1). Previous research has shown that high motivation is a significant predictor for deciding to undergo CMCJ surgery (2), but there is little knowledge regarding which factors that motivates patients for undergoing such surgery.

Objectives: The objective of this study was to explore patient goals and motivation for surgery, and factors characterizing patients highly motivated for surgery.

Methods: This cross-sectional study included 180 patients referred from their general practitioner for CMCJ surgical consultation. Goals for surgery were collected with an open-ended question and analysed by linking the content of each goal to domains in the International Classification of Functioning, Disability and Health coding system. Motivation for surgery was rated with a Numeric Rating Scale (NRS, 0-10, 0=no motivation). Activity limitations was self-reported using the Measure of Activity Performance of the Hand (MAP-Hand, score 1 to 4, 1=no activity problems) and the Disabilities of the Arm, Shoulder and Hand questionnaire (QuickDASH; score 0-100, 0=no disability). Factors that characterized patients highly motivated for surgery (NRS≥8) were explored with multivariate regression analyses.

Results: Mean age of participants was 63 years (SD 7.6) and 142 (79%) were women. The most common goals for surgery were to reduce pain and improve arm and hand use. Fifty-six (31%) of the patients were characterized as highly motivated for surgery. High motivation for surgery was strongly associated with more activity limitations (MAP-Hand; (OR 4.00, $p=0.008$)), living alone (OR 3.18, $p=0.007$) and a young age (OR 0.94, $p=0.002$).

Conclusion: Decisions on CMCJ OA surgery should be based on assessment and discussion of patients' life situation, hand pain, activity limitations and motivation and goals for surgery. According to the EULAR recommendations, previously received conservative and pharmacological treatment should also be evaluated.

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Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2020-eular.3968

FRI0636-HPR

COMPARING THE EFFECTS OF YOGA AND HOME EXERCISE PROGRAMS ON FUNCTIONAL STATUS IN CHILDREN WITH ENTHESITIS RELATED ARTHRITIS

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Background: Enthesitis-Related Arthritis (ERA), also referred as the juvenile ankylosing spondylitis, is a subtype of Juvenile Idiopathic Arthritis (JIA). However, ERA patients were reported as having higher pain levels, lower functional status and lower quality of life level compared to other JIA subtypes. Yoga is used as an exercise method in adult patients with rheumatic diseases and positive effects on physical and psychosocial symptoms were reported. However, no study was conducted related to yoga in pediatric population with rheumatic diseases.

Objectives: The aim of this study was to investigate effects of performing yoga or home exercises on functional status in children with ERA.

Methods: Twenty-one children with ERA were allocated into two groups as yoga group (n=11) and home exercise group (n=10). Yoga group performed yoga exercises supervised by a physiotherapist for twice a week, for eight weeks, while the home exercise group performed video-based home exercises for the same period. Pain in rest and activity (Numeric Rating Pain Scale), functional status (Six-Minute Walk Distance, Stair Climb Test), and quality of life (PedsQL Children and Parent Form) were evaluated at baseline and following eight weeks.

Results: The groups were similar regarding to physical characteristics, pain, functional status, and quality of life at baseline ($p>0.05$, Table 1). While, all the parameters (except PEDSQL Parent Form) in yoga group significantly improved at the end of the study ($p<0.05$, Table 2), only stair climb test results significantly improved in home exercise group ($p<0.05$, Table 2).

Table 1. Comparison of the groups at baseline

	Yoga Group (n:11) Median (IQR 25/75)	Home Exercise Group (n:10) Median (IQR 25/75)	p*
Physical parameters			
Age (year)	15.0 (13.0/15.5)	16.0 (14.0/17.0)	0.099
BMI (kg/m ²)	20.7 (18.3/23.1)	21.2 (19.9/22.0)	0.756
Pain			
Rest pain (score)	0 (0/5.0)	1.0 (0/3.0)	0.705
Activity pain (score)	4.0 (1.0/6.5)	2.0 (0/7.0)	0.387
Functional Status			
Six-minute walk distance (m)	600.0 (552.5/664.5)	626.0 (556.0/650.0)	1.000
Stair climb test (sec)	7.6 (6.8/8.3)	7.4 (7.0/8.0)	1.000
Quality of Life			
PedsQL Children (score)	13.0 (10.0/23.5)	12.5 (6.0/20.0)	0.654
PedsQL Parent (score)	21.0 (8.5/31.5)	26.0 (15.0/39.0)	0.387

*: Mann-Whitney U test; IQR 25/75: Interquartile Range 25/75, PedsQL: Pediatric Quality of Life Inventory, $p<0.05$

Table 2. Changes in the Groups

	Before Median (IQR 25/75)	After Median (IQR 25/75)	p*
Yoga Group			
Pain			
Rest pain (score)	0 (0/5.0)	0 (0/2.5)	0.039
Activity pain (score)	4.0 (1.0/6.5)	0 (0/1.5)	0.012
Functional Status			
Six-minute walk distance (m)	600.0 (552.5/664.5)	692.0 (595.0/705.5)	0.011
Stair climb test (sec)	7.6 (6.8/8.3)	6.2 (6.0/7.0)	0.008
Quality of Life			
PedsQL Children (score)	13.0 (10.0/23.5)	9.0 (4.0/17.0)	0.021
PedsQL Parent (score)	21.0 (8.5/31.5)	18.0 (8.0/22.0)	0.169
Home Exercise Group			
Pain			
Rest pain (score)	1.0 (0/3.0)	0 (0/3.0)	0.715
Activity pain (score)	2.0 (0/7.0)	2.0 (0/7.0)	0.892
Functional Status			
Six-minute walk distance (m)	626.0 (556.0/650.0)	601.5 (585.0/707.0)	0.093
Stair climb test (sec)	7.4 (7.0/8.0)	7.0 (6.5/7.8)	0.028
Quality of Life			
PedsQL Children (score)	12.5 (6.0/20.0)	8.5 (7.0/18.0)	0.475
PedsQL Parent (score)	26.0 (15.0/39.0)	22.5 (14.0/30.0)	0.192

*: Wilcoxon Signed Rank Test, IQR 25/75: Interquartile Range 25/75, PedsQL: Pediatric Quality of Life Inventory, $p<0.05$

Conclusion: Yoga seems promising for improving functional status in children with ERA compared to a home-based exercise program. Therefore, yoga can be implemented as an exercise intervention in rehabilitation programs in children with ERA.

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2020-eular.5397

FRI0637-HPR

INDIVIDUALISED EXERCISE INTERVENTION FOR HIP AND KNEE OSTEOARTHRITIS: A SYSTEMATIC REVIEW AND META-ANALYSIS OF RANDOMISED CONTROLLED TRIALS

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Background: Osteoarthritis (OA) is a leading cause of disability worldwide. Currently, exercise is recognised to be one of the core treatments for OA (NICE, 2014). Convincing evidence shows that exercise can have positive effects on pain and function in people with OA (Fransen et al., 2015). However, a standardised exercise regimen may not suit all patients and adherence to exercise is always an issue. Therefore, several international guidelines recommended individualisation of the exercise regimen according to individual patient characteristics (e.g. pain severity, personal goals and co-morbidities), as this may enhance take up and adherence, hence treatment effect of the intervention (Fernandes et al., 2013).