

OP0269-HPR PATTERNS OF FATIGUE AND PREDICTORS OF SIGNIFICANT IMPROVEMENT IN THE 1ST YEAR OF RA: RESULTS FROM THE CANADIAN EARLY ARTHRITIS COHORT (CATCH)

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Background: Fatigue is common in early RA(ERA) and though some patients experience improvement in fatigue when disease is well controlled, others experience persistent fatigue associated with work disability, poor QOL, and depression.

Objectives: To compare patterns and predictors of improved vs. persistent fatigue in the first year of ERA.

Methods: Data were from ERA patients (symptoms <1 year) enrolled in the Canadian Early Arthritis Cohort (CATCH) from 01-2007 to 03-2017. All met ACR1987 or 2010 ACR/EULAR criteria, had active disease, were on DMARDs, and complete fatigue (0-10) data over ≥ 12 months. Patients were classified at baseline with **low** (<4) or **high** (≥ 4) fatigue; high fatigue patients were categorized at 12-months as **improved** ($\downarrow \geq 2$) or **persistent** ($\downarrow < 2$). Multivariable logistic regression was used to identify predictors of improved vs. persistent fatigue at 12 months in those with high baseline fatigue.

Results: The 1002 pts were mostly white (81%), female (71%), with a mean (SD) age of 54 (15); 32% were obese. 70% had high fatigue at baseline; these patients were more obese, had OA/backpain, poor sleep, depression, major stress, and higher disease activity (Table 1). Among those with initial high fatigue, 30% had persistent fatigue at 12 months and was associated with obesity, comorbidities, FM, longer symptom duration, and slightly lower baseline fatigue.

Mean (SD) or N (%)	FATIGUE			p-value	
	LOW (n=301)	IMPROVED (n=493)	PERSISTENT (n=208)	Low v. High	Imp v. Persist
Age	55 (15)	54 (15)	54 (15)	0.13	0.97
Female sex	202 (67%)	360 (73%)	152 (73%)	0.06	0.99
>High School	169 (56%)	267 (54%)	103 (50%)	0.33	0.26
Personal/health					
Work (full/part time)	161 (53%)	274 (56%)	115 (55%)	0.56	0.94
RD Comorbidity Index	1.1 (1.3)	1.1 (1.3)	1.4 (1.4)	0.42	0.001
OA or backpain	52 (17%)	114 (23%)	55 (26%)	0.02	0.35
Fibromyalgia	3 (1%)	10 (2%)	10 (5%)	0.07	0.04
Poor sleep	2.6 (2.7)	6.3 (2.9)	6.1 (2.7)	<0.001	0.38
Cognitive/Behavioral					
Obese (BMI ≥ 30)	78 (26%)	152 (31%)	86 (41%)	0.01	0.01
Smoking	48 (16%)	83 (17%)	33 (16%)	0.81	0.75
Depression (SF12 MCS<45.6)	62 (22%)	273 (59%)	113 (57%)	<0.001	0.59
Major stress past year	138 (46%)	268 (54%)	118 (57%)	0.01	0.58
RA					
Symptom duration (mth)	5.7 (2.9)	5.5 (3.0)	6.1 (3.2)	0.79	0.02
RF+/ACPA+	221 (85%)	349 (81%)	133 (76%)	0.07	0.21
DAS28 (MDA/HDA v. LDA/REM)	280 (93%)	481 (98%)	199 (96%)	<0.01	0.18
Pain (0-10)	3.8 (2.6)	6.7 (2.4)	6.4 (2.2)	<0.001	0.08
HAQ-DI	0.7 (0.6)	1.3 (0.7)	1.2 (0.7)	<0.001	0.15
Baseline fatigue (0-10)	1.6 (1.2)	7.2 (1.9)	6.6 (1.7)	<0.001	<0.001

Predictors of improved fatigue in multivariable models were BMI<30 (OR 0.6; 95% CI 0.4, 0.9), MTX ≥ 20 mg (OR 1.7; 95% CI 1.0, 2.7) and higher pain (OR 1.1; 95% CI 1.0, 1.2) after controlling for other variables.

Conclusion: Fatigue is common in ERA and associated with active disease, worse pain and disability, obesity, depression, major stressors, poor sleep and OA/backpain. In high fatigue pts, those who are not obese, have higher pain, and take ≥ 20 mg MTX are more likely to improve over the first year. Optimizing weight,

sleep, physical and emotional health and MTX use may improve persistent fatigue beyond control of RA inflammation.

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OP0270-HPR COMPARISON OF THE REASONS FOR NOT GOING TO SCHOOL BETWEEN CHILDREN WITH JUVENILE IDIOPATHIC ARTHRITIS AND THEIR FAMILIES:

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Background: Chronic physical illnesses may disrupt school attendance which possibly causes academic and social problems in children. Decreased school attendance and poor educational performance are shown to be related to poor self-esteem (1). In addition, family life is affected by the consequences of chronic diseases. Family reinforcement has an important effect on children's behaviors and function (2). In this psychosocial combination, daily routines like school attendance may be affected by family and children's behavior to disease symptoms.

Objectives: The aim of this study was to compare the reasons for not going to school between children with juvenile idiopathic arthritis and their families.

Methods: The study included 181 juvenile idiopathic arthritis children who do not attend school and their families who applied to Hacettepe University, Faculty of Medicine, Department of Pediatric Rheumatology. The reasons for not attending school was assessed with one of the questions of Juvenile Arthritis Biopsychosocial Questionnaire (JAB-Q)(3) with three answers. Functional status of the children was assessed with the functional score of JAB-Q and Child Health Assessment Questionnaire (CHAQ) and psychosocial status with the psychosocial score of JAB-Q. Mean and standard deviations were used for descriptives and Chi-Square test was used to compare the family and children responses.

Results: Mean age of children was 12,65 \pm 3,736 and mean scores of CHAQ, JAB-Q function and JAB-Q psychosocial were 0,48 \pm 0,59, 4,36 \pm 7,7 and 13,74 \pm 8,13, respectively (Table 1). Children and families gave the same answer with% 92,4 to the question about the reason for not attending school (Table 2). There wasn't any difference between children's and family's answers (p>0,05). Functional status of children was good according to JAB-Q and CHAQ, and psychosocial status was good according to JAB-Q.

Table 1. Descriptive Statistics

	Mean	Std. Deviation
Age (year)	12,65	3,73
CHAQ-Total (between 0-3 points)	0,48	0,59
JAB-Q Function (between 0-66 points)	4,36	5,70
JAB-Q Psychosocial (between 0-52 points)	13,74	8,13

Table 2. Children's and Parent's Answers

Children's Answers		Count	Parent's Answers			Total
			He/she couldn't go because he/she felt unwell.	I didn't let them go.	He/she was worried about attending school. He/she was concerned about doing well in exams.	
I was ill and felt unwell.	Count	159	9	4	172	
	%	92,4%	5,2%	2,3%	100,0%	
My parents didn't let me go.	Count	2	1	0	3	
	%	66,7%	33,3%	0,0%	100,0%	
I'm worried/scared about going to school. I can't go because I'm scared I won't do well in exams.	Count	6	0	0	6	
	%	100,0%	0,0%	0,0%	100,0%	
Total	Count	167	10	4	181	
	%	92,3%	5,5%	2,2%	100,0%	

Conclusion: Child's psychosocial adjustment is likely to be related with school attendance. When the attendance decreases, problems such as social functioning and isolation can occur. The fact that families and children agreed on the reasons about not to go to school but their functional and psychosocial status were good may have been due to different reasons. It was thought to normalize and encourage children to go to school. In addition, families should motivate their children with positive reinforcements.

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OP0271-HPR ASSESSMENT OF MUSCLE MASS RELATIVE TO FAT MASS AND ITS ASSOCIATION WITH DISEASE ACTIVITY STATUS AND PHYSICAL FUNCTIONING IN RHEUMATOID ARTHRITIS

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Background: Rheumatoid arthritis (RA) is an autoimmune, chronic, progressive, inflammatory disease characterized by symmetrical, destructive polyarthritis and is accompanied by systemic manifestations. RA patients show low appendicular lean mass index (ALMI) and higher fat mass index. Impaired physical function is associated greater with fat mass and the adiposity is an important confounder that may mask true relationships between physical functioning and ALMI (1).

Objectives: To assess muscle mass relative to fat mass and verify associations this parameter with disease activity status, functional capacity and biologics treatments.

Methods: 90 RA patients, aged between 40 and 70 years, were recruited and followed for 12 months. Body composition was assessed by total body dual-energy x-ray absorptiometry for measurement of appendicular lean mass index (ALMI, kg/m²) and fat mass index (FMI, kg/m²). Age-, sex-, and race-specific Z- Scores and T-Scores were determined by comparison to published reference ranges. ALMI values were adjusted for FMI (ALMIZ/FMIZ) using a published method. Disease activity was assessed by Disease Activity Score-28 with erythrocyte sedimentation rate (DAS28). RA patients were divided in non-remission (DAS28<2.6) and in remission (DAS28>2.6). Physical functioning was assessed by Health

Assessment Questionnaire (HAQ). Pharmacological treatment used by patients were assessed in patient medical records and the RA were divided in RA patients treated with biologic disease modifying antirheumatic drugs (bDMARDs) and non-treated with bDMARDs. Frequency analysis, Pearson Correlations and GEE analyses were used and statistical significance was considered as p<0.05.

Results: Of the 90 patients analyzed, most were women (86.7%,78/91), with mean age of 56.5±7.3 and median disease duration time of 8.5 (3-18) years. At baseline, the mean±SD DAS28 score was 3.7±1.4 and thirty percent of the RA patients (27/90) were treated with bDMARDs. After 12 months, the use of bDMARD did not change (p>0.05), however, mean DAS28 increased over time (mean and SD of 4.0±1.3; p<0.05). Eleven RA patients (12.2%) showed low ALMI/FMI for age (Z-score ≤-1) at baseline, and 13 (16.0%) after 12 months. After 12 months, ALMIZ/FMIZ was inversely associated with HAQ (r=-0.3; p<0.05). At baseline, women in remission had higher ALMIZ, lower FMIZ and higher ALMIZ/FMIZ, while men had lower ALMIZ, lower FMIZ and higher ALMIZ/FMIZ. In men, remission was associated with decreases in FMIZ (p<0.05). The use of bDMARDs was not related with alterations in ALMIZ, FMIZ and ALMIZ/FMIZ (p>0.05).

Conclusion: Low skeletal muscle mass relative to adiposity was common in RA patients. This condition was associated with low physical functioning and its changes over time are associated with disease activity status. The observations that skeletal muscle mass relative to adiposity was affected by remission state stresses and that associated negatively with poor physical functioning demonstrate the importance of adequate control of disease activity in RA established. In addition, from our results, further studies are necessary to elucidate the direct impact of bDMARDs on body composition in RA patients.

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OP0272-HPR FITNESS STATUS OF PEOPLE WITH AXIAL SPONDYLOARTHRITIS (AXSPA): FIRST RESULTS AFTER IMPLEMENTATION OF FITNESS ASSESSMENTS IN AXSPA EXERCISE GROUPS

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Background: Public health recommendations for physical activity (PA) advice that exercise programs include all four fitness dimensions, i.e. cardiorespiratory, muscle strength, flexibility and neuromotor exercise training at well-defined