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Background: Growing evidence points to considerable mental health impacts of the prolonged COVID-19 pandemic, though data from longitudinal studies in rheumatic diseases are sparse.
Objectives: We explored distinct trajectories ofdepressive symptoms in the year prior to and throughout the first 2-years of the COVID-19 pandemic inadults with RA.
Methods: CATCH is a prospective multi-center study of adults with early RA (symptoms <1 year; 81% met 2010 ACR/EULAR criteria at enrolment) who receive care from rheumatologists across Canada. Prior to the pandemic, participants completed PROs and rheumatologists conducted RA assessments during scheduled in-person study visits. After March 2020, ongoing collection of PROs continued at in-person and remote visits. We used group-based trajectory modeling to identify latent groups with at least mild depression (PROMIS 4a depression score ≥55) in participants with ≥1 visits in the year prior to the pandemic (3/19-2/20) and ≥1 visits during pandemic (3/20-1/22) and identified prepandemic individual and clinical characteristics and PROs associated with each trajectory.
Results: The analytic sample included 989 participants with a mean (SD) age of 60 (14) and disease duration of 6 (4) years. 73% were women, 84% white, 60% had completed some post-secondary education, and 77% were in CDAI REM/LDA at visit closest to the start of pandemic. The best model included 4 groups (posterior probabilities ≥0.80 for each group): 1) **Resilient** (none-minimal depression throughout: N=594; 60%); **Worsening** (none/minimal to mild: N=222;22%); **Improving** (mild-resilient: N=80;8%); and **Persistent** (moderate-severe throughout: N=93;9%)(Figure 1). As compared with the Resilient group, those with Worsening Depression were more likely to be female, have a higher prepandemic CDAI, MD and patient global, and report worse pain, disability, anxiety, depression, fatigue, sleep disturbance, and lower participation (Table 1).

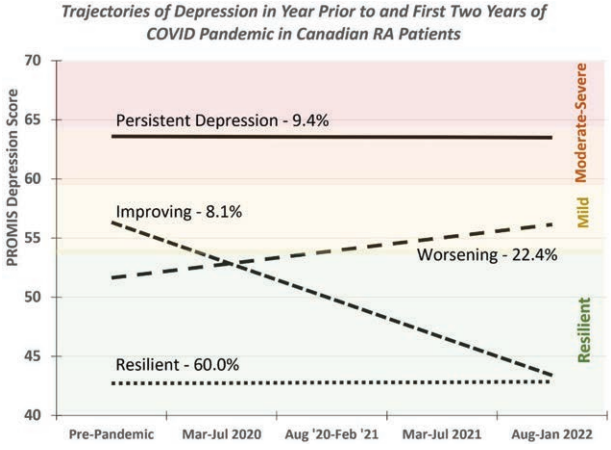

Figure 1.

Table 1.

Mean(SD); N(%)	Worsening N=222 (22%)	Resilient N=594 (60%)	Improving N=80 (8%)	Persistent N=93 (9%)	SIG
Age	60 (15)	61 (13)	59 (13)	61 (13)	0.538
Female	173 (78%)	406 (68%)	57 (71%)	74 (80%)	0.016
White	194 (87%)	533 (90%)	67 (84%)	71 (76%)	0.004
Education > high school	143 (64%)	388(65%)	56 (70%)	42 (45%)	0.001
RDCI (excl depression)	1.2 (1.2)	1.0 (1.2)	1.0 (1.1)	1.0 (1.1)	0.174
CDAI	6.7 (8.2)	5.4 (8.5)	11.3 (13.9)	13.0 (13.1)	<0.001
csDMARDs ±MTX	198 (89%)	547 (92%)	73 (91%)	67 (94%)	0.513
MTX only	153 (69%)	436 (73%)	62 (78%)	67 (72%)	0.443
Biologic or JAK	43 (19%)	102 (17%)	12 (15%)	26 (28%)	0.073
Corticosteroids	36 (16%)	86 (14%)	26 (33%)	20 (22%)	0.001
Patient Global	3.1 (2.4)	1.2 (2.1)	3.9 (2.9)	5.3 (2.7)	<0.001
PROMIS Anxiety >55	97 (44%)	44 (7%)	58 (73%)	86 (92%)	<0.001
PROMIS Depression >55	83 (37%)	13 (2%)	70 (88%)	90 (97%)	<0.001
PROMIS Fatigue >55	83 (37%)	94 (16%)	42 (53%)	74 (80%)	<0.001
PROMIS Pain >55	125 (56%)	187 (31%)	55 (69%)	76 (82%)	<0.001
PROMIS Physical Function <45	132 (59%)	238 (40%)	51 (64%)	78 (84%)	<0.001
PROMIS Participation <45	107 (48%)	141 (24%)	49 (61%)	72 (77%)	<0.001
PROMIS Sleep Problems >55	62 (28%)	88 (15%)	33 (41%)	so (54%)	<0.001

Conclusion: Although 60% of Canadian RA patients had consistently good mental health during the first 2 years of the COVID-19 pandemic, more than 1 in 5 reported deteriorating mood suggesting a cumulative impact over time; 9% had persistent depression and 8% improving mood. The proportion of adults with RA with at least mild symptoms of depression may be more than twice that reported for the general Canadian population. Participants with worsening depressive symptoms during the pandemic were more likely to be female, have higher prepandemic disease activity, symptoms, disability, and higher impairments in participation. Given the impact of depression on quality of life, inflammation, and disease management, vulnerable groups may benefit from more frequent evaluation and additional support from rheumatology providers.
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HPR Interventions (educational, physical, social and psychological)

POS0585-HPR EFFECTIVENESS OF INSPIRATORY MUSCLE TRAINING ON AEROBIC CAPACITY, RESPIRATORY FUNCTIONS AND RESPIRATORY MUSCLE STRENGTH IN CHILDREN WITH JUVENILE IDIOPATHIC ARTHRITIS: A SINGLE-BLINDED RANDOMISED CONTROLLED TRIAL

Keywords: Physical therapy/physiotherapy, Randomized control trial, Lungs

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Background: Children with juvenile idiopathic arthritis (JIA) may present lower aerobic capacity, lung volumes, and respiratory muscle strength compared to their healthy peers [1].
Objectives: This study aimed to investigate the effectiveness of inspiratory muscle training (IMT) on aerobic capacity, lung volumes, respiratory muscle strength, functional capacity, and quality of life in children with JIA.
Methods: Thirty-three children with JIA who were on the same biologic disease modifying anti-rheumatic drugs for at least three months were included and divided into two groups as exercise group (n=17, mean age: 15.1±2.2 years, 12 male) and control group (n=16, mean age: 15.7±1.6 years, 11 male). Exercise group performed IMT daily for eight weeks. Initial IMT load was set as the 60% of maximal inspiratory pressure (PI_{max}) and was increased by %10 every two weeks. Control group received no additional intervention. Forced vital capacity

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(FVC), forced expiratory volume in one second (FEV_1), FVC/FEV_1 ratio, PI_{max}, and maximal expiratory pressure (PE_{max}) were evaluated using a portable pulmonary function test device (Cosmed Pony FX, Rome, Italy). Participants performed a maximal Cardiopulmonary Exercise Test to measure maximal oxygen consumption (VO_{2peak}), metabolic equivalent (MET) and maximal heart rate. Six-minute walking distance (6MWD) was used to evaluate lower-extremity related functional capacity. The Pediatric Quality of Life Inventory (PedsQL) 3.0 Arthritis Module was used to evaluate the quality of life. Participants were evaluated at baseline and at the end of eight weeks.

Results: The groups were similar at baseline. FVC, FEV_1, PI_{max}, PE_{max}, VO_{2peak}, and MET significantly improved at the end of eight weeks in the exercise group ($p<0.05$), while no significant differences were observed in the control group ($p>0.05$). The difference over time in FVC, FEV_1, PI_{max}, VO_{2peak}, and MET were significantly higher in the exercise group compared to control group ($p<0.05$, Table 1). No other between group differences were detected ($p>0.05$).

Conclusion: IMT seems beneficial for improving respiratory functions in children with JIA.

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Table 1. Comparison of change-over-time values between groups

	Mean Differences (95 %CI)			
	Exercise Group (n=17)	**Control Group** (n=16)	**p***	**ES**
Lung Volumes				
FVC (l)	0.20 (0.07/0.32)	-0.01 (-0.11/0.09)	**0.010**	0.96
FEV_1 (l)	0.14 (0.02/0.25)	0.02 (-0.11/0.14)	0.124	-
FEV_1/FVC (%)	0.16 (-1.96/2.30)	1.74 (-1.50/4.98)	0.389	-
Respiratory Muscle Strength				
PI_{max} (cmH_2O)	19.11 (9.52/28.71)	1.56 (-3.37/6.50)	**0.002**	1.18
PE_{max} (cmH_2O)	12.41 (3.09/21.72)	5.06 (-1.55/11.68)	0.187	-
Cardiopulmonary Exercise Test				
VO_{2peak} (ml/min)	158.2 (63.8/252.7)	16.8 (-68.9/102.6)	**0.026**	0.81
VO_{2peak}/Body weight	3.28 (1.14/5.42)	0.33 (-1.47/2.14)	**0.034**	0.78
METs (ml/kg/min)	0.92 (0.34/1.49)	0.06 (-0.35/0.48)	**0.015**	0.88
HR_{peak} (pulse/min)	3.47 (0.17/6.76)	1.18 (-3.0/5.37)	0.367	-
HRR (pulse)	-3.47 (-6.76/-0.17)	-1.18 (-5.37/3.0)	0.367	-
VO_{2peak}/HR_{peak}	0.59 (0.18/1.00)	-0.02 (-0.37/0.34)	**0.024**	0.82
Lower Extremity Related Functional Status 6MWD (m)	9.52 (-15.53/34.58)	4.25 (-9.78/18.28)	0.704	-
Quality of Life PedsQL 3.0 (score: 0-100)	2.0 (-1.0/6.0)	0.5 (0.0/4.0)	0.470	-

*Student's t test, ES: Effect size (Hedge's g), CI: Confidence Interval, FVC: Forced vital capacity, FEV_1: forced expiratory volume in the first second, l: litres, %: percent, PI_{max}: maximal inspiratory pressure, PE_{max}: maximal expiratory pressure, cmH_2O: centimeters water, VO_{2peak}: peak oxygen consumption, m: meters, ml: milliliters, min: minute, kg: kilograms, MET: Metabolic Equivalent, HR_{peak}: peak heart rate, HRR: heart rate reserve, 6MWD: six-minute walk distance, PedsQL 3.0: The Pediatric Quality of Life Inventory 3.0 Arthritis Module

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Disclosure of Interests: None Declared.
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HPR Patients' perspectives, functioning and health (descriptive: qualitative or quantitative)

POS0586-HPR SARCOPENIA IN PATIENTS WITH AXIAL SPONDYLOARTHRITIS OLDER THAN 65 YEARS: PREVALENCE AND PREDISPOSING FACTORS

Keywords: Sarcopenia, Spondyloarthritis

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Background: Sarcopenia is a muscle disease that presents as a loss of skeletal muscle mass and function. It is a condition associated with chronic diseases and aging that predicts disability, hospitalization and death.

Objectives: To describe the prevalence of sarcopenia and identify risk factors associated with sarcopenia in patients with spondyloarthritis (SpA) older than 65 years.

Methods: Design: Case-control study. Participants: Cases: They were recruited by simple random sampling among patients over 65 years of age with SpA (ACR/EULAR 2010 criteria) treated at 2 university hospitals. Controls: They were recruited for convenience by asking the cases to attend a consultation with a person of the same age (+/- 5 years) and sex. Variables: The main variable: sarcopenia, defined according to the European Working Group on Sarcopenia in Older People (EWGSOPII) 2019 criteria. The risk factors for sarcopenia evaluated were: economic level, malnutrition, measured with the Mini Nutritional Assessment (MNA), toxic habits, comorbidities and Charlson index, physical activity measured with the Global Physical Activity Questionnaire (GPAQ) and Short Physical Performance Battery (SPPB), muscle assessment measured by ultrasound. Other variables were: hemoglobin, calcium, vitamins D and B12, albumin, C-reactive protein, BMI (body mass index), polypharmacy (≥5), quality of life (EQ-5D) and factors related to SpA: activity of disease measured with BASDAI and ASDAS, physical function measured with BASFI, and treatments. Statistical analysis: descriptive and multivariate analysis was performed to identify factors associated with sarcopenia in SpA.

Results: 36 patients and 36 controls were recruited, of whom 54 (75%) were men, with a mean (± SD) age of 70 years (±4.37). Of the 36 patients with SpA, 20 (55.6%) had axial SpA and 15 (44.5) had SpA with axial and peripheral involvement with a mean of 32 years (±10.9) of disease. The prevalence of sarcopenia in patients with SpA is 8.3%. No differences were found in sarcopenia between patients [3(8.3%) and controls [1(2.8%)], p=0.614.Patients with SpA who had sarcopenia, compared with those who did not, had a mean years of evolution of their major disease [45.6 (±3.1) Vs 31.06 (± 10.5)], p=0.24; worse performance tests in the Short Physical Performance Battery (p=0.26), in relation to ultrasound parameters, a lower thickness was observed in the right forearm 75% radial and left forearm 66% radial [11.1(0.2) Vs 14, 7(2.4)], p=0.17 and left rectus femoris area [11.5(1.2)Vs15.4(2.8)], p=0.26, greater thigh fat right to 50% [25.6(4.7) Vs 15.2(8.3)], p=0.041 and lower albumin levels [7.17(21.5) Vs 19.02(608, 5)] p=0.053. On the other hand, no significant differences were found in the rest of the parameters studied for disease activity, disability, quality of life (EQ-5D), malnutrition, toxic habits, comorbidities or physical activity. In the multivariate model, the years of disease evolution (p=0.041) Table 1 were identified as an independent predictor of sarcopenia in patients with SpA. This model would explain 33% of sarcopenia in RA (R2=0.37).

Conclusion: In our study we found no differences in sarcopenia in patients older than 65 years with SpA compared to controls. The longer evolution time of their disease in patients with SpA is associated with a greater risk of sarcopenia.

Table 1. Multivariate analysis (VD: Sarcopenia) in patients with SpA

	OR(IC)	*p-valor*
Evolution of SpA (years)	***1,172 (1,002-1,363)***	***0,047***

R2=0,33

REFERENCES: NIL.
Acknowledgements: NIL.
Disclosure of Interests: None Declared.
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POS0587-HPR IMPACT OF COMBINED INTERVENTION WITH CLINICAL NURSE SPECIALIST IN THE MANAGEMENT OF CARDIOVASCULAR RISK IN PATIENTS WITH GOUT

Keywords: Cardiovascular disease, Gout, Non-pharmacological interventions

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Background: Gout is associated with increased cardiovascular risk (CVR). Traditional CVR factors (CVRF) are frequently present in patients with gout, further worsening the prognosis. Several studies have shown that clinical nurse specialist (CNS) contributes effectively to the management of gout.

Objectives: To analyze the detection of CVRF in patients with gout in a rheumatology consultation with CNS and to evaluate short-term changes after a targeted approach.

Methods: Patients with gout according to ACR/EULAR 2015 criteria referred from Primary/Specialized Care due to poor control of the disease. At the first visit, demographic and clinical variables were collected: age, sex, smoking, alcohol consumption, duration of gout, tophi, comorbidities, urate-lowering treatment

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