Background: Orthoses and footwear can play an important role in managing foot pathology in patients whose systemic disease is controlled. Foot orthoses are frequently prescribed in clinical practice as an intervention for people with rheumatoid arthritis (RA).

Objectives: The aim of our study is to evaluate the impact of thermoformable orthoses on the functional index of the foot (FFI) in patients with rheumatoid arthritis.

Methods: We conducted an open clinical trial, having consecutively included 14 patients (85.7% female, average age 54.8 ± 10 years) suffering from rheumatoid arthritis (median progression time of 9 years [5–12]). The average DAS28 was 2.7 ± 1.2 and the functional impact objectified by the Health Assessment Questionnaire (HAQ) was on average 0.9 ± 0.7 .

The median deadline from the start of RA and the onset of the foot problem was 3 years [0–7.75]. The foot problem was bilateral in 100% of the cases and inaugural in 85.7% of the cases.

We evaluated the functional impact of foot injury for all our patients at baseline and 8 weeks after the use of thermoformable orthoses, based on the FFI (Foot function Index) measuring the impact of foot pathology on function in terms of pain, disability and activity limitation.

The comparison of the FFI domains before and after the use of orthoses was carried out using parametric or nonparametric paired tests using The SPSS statistical software.

Results: With the use of foot orthoses, FFI values decreased in all subscales ($p=0.024$) (pain, disability and activity limitation). This reduction was significant for disability (0.011) but not for pain and activity limitation.

There were no significant correlations between the global FFI and the progression of RA, the duration of foot damage and the functional impact measured by the HAQ.

Table 1. The comparison of the FFI domains before and after the use of orthoses.

		Before orthoses	After orthoses	p-value
Pain scale	When the pain was the worst	9 [5,7–10]	7 [4,7–8]	0,09
	Pain in the morning	4,5 [2,2–6]	2 [0–3,5]	0,046
	Pain when walking barefoot	6 [4–8]	6,5 [3,7–8]	0,719
	Pain when standing barefoot	6 [3,7–7,2]	6 [3–7,2]	0,723
	Pain when walking with shoes	5 [2,7–5,2]	3,5 [2–5,2]	0,378
	Pain when standing with shoes	5 [2,7–6]	3,5 [2–5,2]	0,342
	Pain when walking with orthoses	0 [0–0]	0 [0–2]	0,157
	Pain when standing with orthoses	0 [0–0]	0 [0–2]	0,317
	Pain at the end of the day	6 [4–8]	3 [2–5,2]	0,027
Disability scale	Difficulty walking at home	4 [3–5,2]	2 [0–2]	0,002
	Difficulty walking outside	6 [4,7–7]	2 [1,5–2,5]	0,019
	Difficulty walking 800m	6 [3,7–7]	2 [1,5–2,5]	0,003
	Difficulty climbing stairs	5,5 [3–7,2]	3 [1–5,2]	0,032
	Difficulty descending stairs	5,5 [3–7,2]	3 [1–5,2]	0,022
	Difficulty standing on tiptoe	6,5 [5–10]	7 [2,5–9,2]	0,687
	Difficulty getting up from a chair	5 [4–6,2]	3 [3–5]	0,032
	Difficulty climbing a sidewalk	4 [2–5,5]	3 [0–5]	0,137
	Difficulty walking fast	5 [2,2–6]	3,5 [0–8]	0,648
Activity limitation	Stay all day at home	2 [1,5–5,2]	0 [0–2]	0,077
	Stay all day lying down	2 [0–4]	0 [0–2]	0,122
	Limitation of activities	2 [2–5]	1 [1–2,2]	0,1
	Use of indoor walking aids	0 [0–0]	0 [0–0]	1
	Use of walking aid outside	0 [0–0]	0 [0–0]	0,18
Pain scale		37 [32,5–47,5]	36 [24,5–40,5]	0,198
Disability scale		49 [34–59]	27 [13,2–46,2]	0,011
Activity limitation		7 [5,5–7]	2,5 [0–5,2]	0,126
Total FFI score		95 [82–106]	65,5 [37,5–87]	0,024

p significant if $p < 0,05$; Test used: Non-parametric test for two linked samples.

Conclusion: Foot orthoses were effective as an adjuvant in the management of rheumatoid foot. They significantly reduced disability as measured by the FFI. The absence of factors associated with pain and limitation of activity could possibly be related to the small sample size.

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2020-eular.6308

FRI0613-HPR THE EFFECTS OF PILATES TRAINING ON RESPIRATORY MUSCLE STRENGTH IN PATIENTS WITH ANKYLOSING SPONDYLITIS

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Background: Ankylosing Spondylitis (AS) is a chronic, inflammatory rheumatic disease that affects primarily axial spine. Reduction in flexibility and mobility is

important factors that can cause muscle weakness, impairment quality of life, reduction of exercise tolerance and pulmonary capacity with the progression of AS.

Objectives: The purpose of this study was to investigate the effects of pilates exercises on mobility, quality of life and respiratory muscle strength in patients with AS.

Methods: Forty patients with AS were randomly divided into two groups as pilates group and control group. Pilates group was performed pilates exercises and control group performed conventional exercises at home for 8 weeks, 3 days a week. Main outcome measures were maximal inspiratory pressure (MIP), maximal expiratory pressure (MEP). Secondary outcome measures were Forced Vital Capacity (FVC), Forced expiratory volume in one second/Forced Vital Capacity (FEV1/FVC), chest expansion, Bath Ankylosing Spondylitis Disease Activity Index (BASDAI), Bath Ankylosing Spondylitis Metrology Index (BASMI) and Ankylosing Spondylitis Quality of Life Questionnaire (ASQoL), 6 minutes walk test (6MWT). All participants were assessed by a blind assessor before and after the study.

Results: Thirty-six AS patients ($n=19$ in the pilates group, $n=17$ in the control group) completed the study. In the pilates group, respiratory muscle strength, FEV1/FVC, chest expansion, BASDAI, BASMI, ASQoL and 6MWT showed significant improvements at 8th week ($p<0.05$), while inspiratory muscle strength, FEV1/FVC, chest expansion and 6MWT showed significant improvements in the control group at 8th week compared to baseline ($p<0.05$). Although the pilates group had better outcomes for all parameters compared to the control group, significant differences were only observed in MIP and MEP.

Conclusion: Pilates method is an effective method for improving respiratory parameters, spinal mobility, disease activity and quality of life. Additionally, pilates training is found to be superior compared to conventional exercise training in improving respiratory muscle strength.

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Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2020-eular.2129

FRI0614-HPR RECOMMENDATIONS FOR PATIENTS WITH RHEUMATIC DISEASES IN TREATMENT WITH METHOTREXATE

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Background: Methotrexate (MTX) is the first choice disease-modifying anti-rheumatic drug (FAME) in the treatment of rheumatoid arthritis among other rheumatic diseases. It is therefore very important that patients are aware of this treatment and have an adequate management of it.

Objectives: The development of a recommendation leaflet for patients with rheumatic diseases in treatment with MTX.

Methods: A systematic review of the literature was conducted, defining the criteria for inclusion and exclusion of content. The coordinators of the work generated preliminary recommendations that were evaluated and discussed in GESVR meetings and 10 recommendations on the use of MTX were accepted, which were later ratified by the Valencian Society of Rheumatology.

Results: The final document with a brief introduction indicates that MTX can be administered orally or subcutaneously, depending on the prescribed dose and its tolerance. In the case of subcutaneous administration, pre-filled syringes or pens are used which do not require any preparation, so there is no risk of handling and/or inhalation toxicity. The proposed recommendations are described below:

- [1] MTX should be taken or administered ONLY once a week, and always on the same day of the week. It is important to follow these recommendations to ensure adequate effectiveness and avoid side effects.
- [2] It is common to add a folic acid supplement the day after MTX is taken to avoid certain side effects of the drug. In some cases it may be necessary to increase the dose to other days of the week.