

# Fibromyalgia in Rheumatoid Arthritis: Features of Pain Syndrome, Impact on the Activity of Rheumatoid Arthritis and Quality of Life

E.S. Filatova<sup>1</sup>, N.A. Melikova<sup>1, 2</sup>, A.M. Lila<sup>1</sup>

<sup>1</sup>V.A. Nasonova Research Institute of Rheumatology, Moscow, Russian Federation; <sup>2</sup>Department of Neurology, I.M. Sechenov First Moscow State Medical University (Sechenov University), Moscow, Russian Federation

**Background:** Fibromyalgia (FM) prevalence in Rheumatoid Arthritis (RA) patients has ranged from 12 to 48%. The presence of concomitant FM affects the course of RA significantly.

**Methods:** 55 patients with RA were included. RA activity was determined by the Disease Activity Score of 28 joints (DAS28). Fibromyalgia was diagnosed according to the 2016 American College of Rheumatology (ACR) FM criteria. The Central Sensitization Inventory (CSI) and the PainDETECT questionnaire (PD) were completed. Pain intensity was assessed using a 10 cm VAS. A quality of life was assessed using the revised Fibromyalgia Impact Questionnaire (FIQR) and the EuroQol five-Dimensional questionnaire (EQ-5D).

**Objective:** to evaluate the impact of FM on the activity of RA, the features of pain syndrome and the quality of life of RA patients.

**Results:** Of 55 RA patients, 43.6% (n = 24) met 2016 ACR FM criteria. RA activity in groups with (FM(+)) and without (FM(-)) FM was high. The intensity of pain in FM(+) and FM(-) groups was 6.5 and 4.0 cm, respectively. The symptoms of central sensitization were more common in patients with FM. The Pain DETECT questionnaire average score was 17.5 in the FM(+) group and 11.0 in the FM(-) group. RA patients with comorbid FM had worse quality of life outcomes defined by the EQ-5D questionnaire and the FIQR (Table 1).

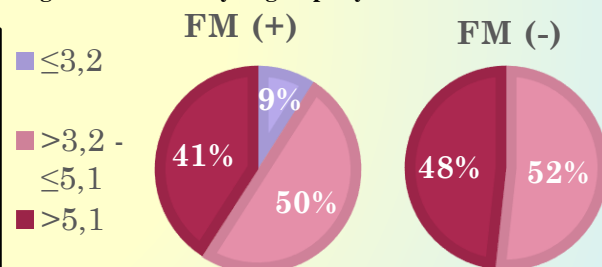
**Table 1. Baseline clinical and demographic characteristics of participants of study**

|                                      | FM+ (n=24)         | FM- (n=31)        | p value |
|--------------------------------------|--------------------|-------------------|---------|
| Gender - Male, n (%)                 | 2 (8,3%)           | 3 (9,7%)          | 1,000   |
| - Female, n (%)                      | 22 (91,7%)         | 28 (90,3%)        |         |
| Age, years, Me [P25; P75]            | 50,5 [44,5; 59,0]  | 47 [40,0; 52,5]   | 0,200   |
| Duration of RA, years, Me [P25; P75] | 8,0 [4,75; 18,8]   | 10,0 [5,00; 15,0] | 0,812   |
| DAS28, Me [P25; P75]                 | 4,58 [3,90; 5,51]  | 5,14 [4,55; 5,70] | 0,227   |
| VAS, cm, Me [P25; P75]               | 6,5 [4,75; 8,0]    | 4,0 [2,5; 7,0]    | 0,017   |
| WPI, Me [P25; P75]                   | 10,0 [8,75; 13,0]  | 4,0 [3,0; 6,0]    | <0,001  |
| SSS, Me [P25; P75]                   | 7,0 [6,0; 9,0]     | 5,0 [4,0; 7,0]    | <0,001  |
| CSI, Me [P25; P75]                   | 47,0 [40,5; 58,8]  | 36,0 [29,5; 44,0] | 0,002   |
| PD, Me [P25; P75]                    | 17,5 [10,0; 23,3]  | 11,0 [6,50; 13,5] | 0,015   |
| FIQR, Me [P25; P75]                  | 57,4 [45,2; 65,8]  | 30,8 [15,9; 44,3] | <0,001  |
| EQ-5D, Me [P25; P75]                 | 0,555 [0,42; 0,59] | 0,59 [0,52; 0,69] | 0,037   |

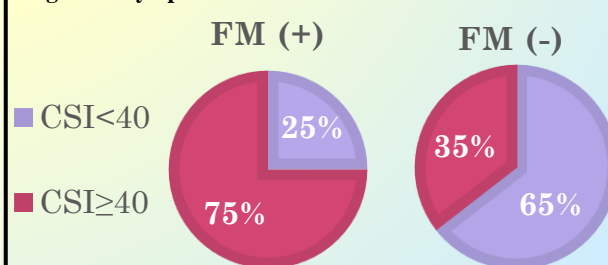
Abbreviations: VAS, VisualAnalogueScale; WPI, WidespreadPainIndex; SSS, SymptomSeverityScore; CSI, CentralSensitizationInventory, PD, PainDETECT questionnaire, FIQR, revised FibromyalgiaImpactQuestionnaire; EQ-5D, EuroQol five-Dimensional questionnaire.

**Conclusion:** Fibromyalgia is a serious burden for patients with RA. The pain syndrome in FM has a more intensity and prevalence and it is accompanied by neuropathic descriptors. All this leads to a significant decrease in the quality of life of RA patients.

**Figure 1. RA activity in groups by DAS28**



**Figure 2. Symptoms of central sensitization**



**Figure 3. Neuropathic pain component (according to the PainDETECT questionnaire)**

