**POS1340 \* VALIDATION OF QUALISEX QUESTIONNAIRE TO EVALUATE SEXUAL DYSFUNCTION IN WOMEN AFFECTED BY FIBROMYALGIA**

**Keywords:** Quality of life, Lifestyles, Fibromyalgia

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**Background:** Fibromyalgia (FM) is a common chronic widespread pain condition, also characterized by fatigue, sleep and mood disorders, with higher prevalence in women. Sexual function is an important feature in people’s well-being; its alterations include decreased sex drive, sexual satisfaction, orgasm, and arousal, as well as increased genital pain. Emerging but still too few studies observed a higher prevalence of sexual dysfunction in FM, especially related to depression.

**Objectives:** The aim of this study was to evaluate sexual dysfunctions in a large cohort of FM women through Qualisex questionnaire, used in other rheumatic diseases but not yet validated for FM.

**Methods:** We consecutively enrolled women affected by FM (ACR 2016) referring to our out-patient clinic. Demographic and clinical examination as well as evaluation of severity of FM symptoms (R-FIQ, SSS and WPI) were assessed for each patient. Moreover, Hospital Anxiety and Depression Scale (HADS) and questionnaire for sexual dysfunction-Qualisex were anonymously administered. Qualisex questionnaire is composed by 10 questions on different items of sexual life with higher scores suggesting of greater negative impact of FM on sexual life.

**Results:** The cohort was composed by 373 FM female patients, median age 49.1 years. Qualisex questionnaire was validated with Cronbach’s alpha test (0.878), median value 5.3. Women with lower grade of education (p<0.002), married (p<0.001) and with lower sexual feeling with partner (p<0.001) showed higher values of Qualisex. Menopause status, drug assumption and comorbidity did not influence patients’ sexual quality. High values of HADS-A and HADS-D showed a positive correlation with Qualisex Total (p<0.001 r=0.312; p<0.001 r=0.542 respectively) as well as high values of VAS pain, VAS fatigue and VAS dryness (p<0.001 r=0.438; p<0.001 r=0.375; p<0.001 r=0.70 respectively). Relationship duration also presented a positive correlation (p<0.001 r=0.202). Multivariate analysis observed a significantly influence of relationship duration, VAS pain, fatigue and dryness, HADS-A/D, R-FIQ and all specific items of Qualisex, on Qualisex Total correcting for patients’ age (p<0.001).

**Conclusion:** Qualisex questionnaire represents a good test to evaluate sexual disorders in FM women. Different aspects contribute to sexual dysfunction both from a psychological (anxiety, depression, loss of self-esteem, decreased sexual attraction) and a physical (pain, fatigue etc.) point of view with an important prevalence of sexual dysfunction in FM, especially related to depression.

**REFERENCES:**


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**POS1341 \* GENDER DIFFERENCES IN THE REVISED FIBROMYALGIA IMPACT QUESTIONNAIRE (FIQR) A PILOT STUDY**

**Keywords:** Patient reported outcomes, Gender/diversity issues, Fibromyalgia

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**Background:** Fibromyalgia (FM) is a chronic syndrome clinically characterized by widespread musculoskeletal pain associated with symptoms like fatigue, sleep disturbances and cognitive impairment. Prevalence is higher in females but the 2010/2011 and 2016 revisions of the American College of Rheumatologist (ACR) criteria reduced prevalence differences and the actual female/male ratio is approximately 3:1. Even if in the last years some studies have been conducted regarding gender differences in FM, disease severity is still assessed using questionnaires, such as the Revised Fibromyalgia Impact Questionnaire (FIQR), designed for female patients and validated through a predominantly female sample.

**Objectives:** Aim of this pilot study was to compare the 21 items of the FIQR-R among male and female patients in order to evaluate the possible existence of a gender bias.

**Methods:** In this case control study, all the consecutive patients with a diagnosis of FM (2016 ACR criteria) referring to our out-patients Fibromyalgia Clinic between May 2020 and December 2022 were asked to answer an online survey, including demographic characteristics, disease variables and the Italian version of the FIQR. Among the 544 patients that compiled the questionnaire, 78 patients, 39 males and 39 females matched for age and disease duration, were consecutively enrolled in order to compare their total FIQR score and the different domains scores.

**Results:** The univariate analysis of the FIQR scores, taking account of the total score and of the different domains of FIQR, showed that total scores and physical function domain scores were significantly higher in females compared to males. No significant differences emerged between the two groups regarding the overall impact domain score and symptoms domain score. Among the 21 items of the FIQR, the female group obtained significantly higher scores answering the questions FIQR1 (brush or comb your hair), FIQR4 (vacuum, scrub, or sweep floors), FIQR5 (lift and carry a bag full of groceries), FIQR7 (change bed sheets), FIQR9 (go shopping for groceries) and FIQR21 (sensitivity to loud noises, bright lights, odors, cold).

**Conclusion:** The results of our pilot study showed that female patients obtain significantly higher scores in the FIQR total score and in the physical function domain score, in particular in 5 out of the 9 sub-items of the FIQR physical function domain. These preliminary results indicate that the use of the FIQR as a severity index in male patients probably underestimates the disease impact in this group. In order to confirm these results the sample needs to be increased but it seems reasonable to conclude that the assessment of disease impact should be diversified, taking gender differences into account.

**REFERENCES:**

Cognitive Function, Spondyloarthritis, Fibromyalgia

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Background: Normal cognitive status is essential for daily activities, but many people with chronic autoimmune rheumatic diseases are impaired in this function. This is probably related to the age of the patients, the education level, the duration of the disease, the disease activity. Pronounced pain syndrome in ankylosing spondylitis (AS) patients is a risk factor of cognitive dysfunction [1, 2]. There are also literature data regarding the involvement of neurotransmitters, namely brain-derived neurotrophic factor (BDNF), in the mechanisms of pain regulation and psychoemotional disorders [3].

Objectives: Our study aimed to evaluate the cognitive status in patients with AS and the relationship with BDNF.

Methods: We examined 143 patients (81.8% male) with AS according to modified New York criteria. The mean age of the examined patients was 42.1±11.3 years. The Mini Mental State Examination MMSE (Folstein M.F. et al., 1975) was used to assess the psychological and cognitive status. The level of BDNF in plasma was determined twice a day (at 8:00 and 20:00) by the ELISA method, also we calculated the ratio between morning and evening BDNF level (BDNF index ‘8:00/20:00’). The study was conducted in compliance with bioethical standards.

Results: Cognitive dysfunction, according to MMSE, was diagnosed in 90 (62.9%) AS patients. The values of the MMSE scale in AS patients ranged from 25 to 30. It should be noted, that 57.4% had mild cognitive impairment (MMSE - 26-27 points) and only seven patients (4.9%) had moderate (MMSE - 24-25 points) cognitive impairment.

Plasma levels of BDNF (pg/ml) in AS patients shown in Table 1.

Table 1: Value of the plasma levels of BDNF (pg/ml) in AS patients

<table>
<thead>
<tr>
<th>Group</th>
<th>BDNF</th>
<th>Morning level</th>
<th>Evening level</th>
<th>BDNF index</th>
<th>Daily average</th>
</tr>
</thead>
<tbody>
<tr>
<td>AS with normal cognitive status 970.6±302.0</td>
<td>758.3±448.26</td>
<td>758.3±448.26</td>
<td>758.3±448.26</td>
<td>0.836</td>
<td>0.077</td>
</tr>
<tr>
<td>AS with cognitive dysfunction 957.8±387.2</td>
<td>879.7±657.2</td>
<td>879.7±657.2</td>
<td>879.7±657.2</td>
<td>0.444</td>
<td>0.413</td>
</tr>
</tbody>
</table>

We established the circadian rhythm of BDNF production during the day. It was revealed in patients with normal cognitive status, as well as in patients with cognitive dysfunction. The BDNF level in the morning was significantly higher than in the evening. We compare BDNF levels in patients with normal cognitive status and in patients with cognitive dysfunction. Patients with cognitive dysfunction showed a trend toward higher evening BDNF level compared with patients with normal cognitive status (P=0.077). We established a negative correlation between cognitive status and the evening BDNF level - with an increase in evening BDNF level, cognitive dysfunction deepens (P<0.05).

Conclusion: Cognitive dysfunction is a frequent condition in patients with AS. Our study results demonstrate circadian rhythm of BDNF production during the day and relationship between BDNF production and cognitive status – cognitive dysfunction in AS patients is associated with high evening BDNF levels.

REFERENCES:

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Abstract:

1POS1342  COGNITIVE DYSFUNCTION IN PATIENTS WITH ANKYLOSING SPONDYLITIS: RELATIONSHIP WITH BRAIN-DERIVED NEUROTROPHIC FACTOR (BDNF)

Keywords: Cognitive function, Spondyloarthritis, Fibromyalgia

1POS1343  INFLUENCE OF REPETITIVE TRANSCRANIAL MAGNETIC STIMULATION OF CNS ON FIBROMYALGIA PATIENTS - A RANDOMIZED, DOUBLE-BLIND, PLACEBO-CONTROLLED STUDY (INTERIM ANALYSIS)

Keywords: Patient reported outcomes, Fibromyalgia, Non-pharmacological interventions

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Background: Fibromyalgia syndrome (FMS) is a chronic disorder characterized by diffuse pain, sensitivity to sensory stimuli, fatigue, cognitive impairment, mood and sleep disorder. The side effects of drugs used in treatment (i.e. antiepileptics) can mimic certain symptoms of fibromyalgia (i.e. impaired balance, dizziness), so there is a huge need for alternative treatment. Repetitive transcranial magnetic stimulation (rTMS) is a non-invasive therapy utilizing a magnetic field to stimulate different brain structures. rTMS is registered as adjuvant therapy for major depressive disorder, migraine, and obsessive-compulsive disorder, and its efficacy is being investigated for other conditions.

Objectives: The main aim was to evaluate the influence of rTMS in alleviating the symptoms in patients with fibromyalgia.

Methods: Sixteen patients were randomized to rTMS (n=10) or sham treatment (n=6). rTMS was applied in 10-day sessions with a frequency of 10 Hz and an intensity of 130% of the predetermined motor threshold over the left dorsolateral prefrontal cortex (DLPFC). One session of rTMS consisted of 5 seconds of stimulation (frequency of 10 Hz, for a total of 50 stimuli) and a 10-second pause. Patients received 2000 stimuli per day (50 stimuli in 40 repeated sessions). The placebo was applied with an inactive “sham” coil which resembles active treatment. The intensity of symptoms was assessed with Tender Point Examination (TPE), Visual Analog Scale of Pain (VAS), Brief Pain Inventory (BPI), Beck Depression Inventory II (BDI II), Beck Anxiety Inventory (BAI), Montreal Cognitive Assessment (MoCa), Medical Outcome Studies Sleep Scale (MOS SS), Functional Assessment of Chronic Illness Therapy – Fatigue (FACT-F), 36-item Short Form Survey (SF-36), and Revised Fibromyalgia Impact Questionnaire (FIQOR).

Results: There was no difference between groups in any of the characteristics at baseline. There was a decrease in BDI score after the treatment period, but the change was more prominent in the rTMS group compared to the placebo (p=0.064). rTMS was also superior in a decrease in FIQOR score (p=0.054) (Table 2.) and an increase in vitality through SF-36 (p=0.003). Moreover, placebo treatment led to a significant reduction in sleep disturbances (p=0.035). There were no differences between groups in delta values before and after treatment regarding the rest of investigated characteristics (Table 1., p> 0.05).

Conclusion: Preliminary results suggest a reduction in the impact of the disease and depression, as well as an increase in the vitality of participants who have been treated with rTMS. The placebo effect on a reduction of sleep disturbance can be partly explained by the stimulating effect of rTMS. Because this was an interim analysis, the presented results should be taken with caution.