THU0507

HETEROGENITY OF FIBROMYALGIA: PSYCHOPATHOLOGICAL CHARACTERISTICS OF DIFFERENT SUBTYPES AND EFFICACY OF THERAPY

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Background: fibromyalgia (FM) is one of the most complicated diseases in the rheumatology and therapeutic practice. Despite the relative success in diagnosing pathology and developing new diagnostic criteria, the treatment of FM remains uncertain. This, in particular, may be due to the presence of various subtypes of disease, which differ in their pathogenesis and, therefore, require differentiated therapy.

Objectives: to identify the subtypes of FM, to determine their basic psychopathological characteristics and adherence to therapy.

Methods: the study included 104 patients with FM according to 2010/2011 diagnostic criteria. All patients were questioned about their attitudes towards employment and sports, and determined the level of anxiety and depression by the HADS scale, as well as therapy compliance 2 months later.

Results: the results obtained support the presence of five subtypes of FM. Patients with a high level of anxiety (10.57 ± 2.87) and minimal widespread pain index (WPI) (6.30 ± 0.04) were included in Group 1. This group consisted of 40.35% of the total number of patients with the minimum average age (45 years) and the highest ratio of men/women (8/38). Group 1 was also characterised by the greatest employment (34 of 46 patients) and a relatively rare abandonment of physical exercises (14 of 46 patients). The second group of patients was conditionally called anxious-depressive because of the frequent detection of both anxiety and depression (11.33 ± 4.64 and 11.67 ± 3.64 , respectively) with a moderate number of WPI (10.78 ± 4.09). They differed from the Group 1 by mainly female sex and more frequent avoidance of physical exercises (8 of 18 patients). Group 3 (the proposed name is hysteroid) consisted of women with the maximum number of WPI (14.33 ± 4.22) and low levels of anxiety and depression. Despite the average working age, they were mostly unemployed with the lowest level of adherence to physical activity (4 of 24 patients). The fourth subtype of FM consisted of patients with concomitant chronic diseases. They were expected to be the oldest (68 years on average) with a high number of painful areas (13.44 ± 5.0), low levels of anxiety and depression. All of them refused to perform physical exercises and were unemployed. Finally, Group 5 included patients without concomitant affective and somatic disorders. This group has taken the middle position for all indicators, except the lowest level of anxiety and depression among all groups.

The lowest rates of therapy compliance were demonstrated in Group 3. At the same time, the time of communication with these patients was the maximum.

Conclusions: patients with FM are a heterogeneous group, differing in their psychopathological characteristics. Younger patients are more likely to exhibit an elevated level of anxiety and depression and are prone to catastrophize their sensations, while older patients usually have a severe somatic pathology. They are often found in therapeutic practice, which makes it necessary to conduct educational programs on FM diagnostic and management for general practitioners. We consider it very important to identify the hysteroid subtype of FM, since these patients are not inclined to seek recovery and represent a huge difficulty for the treating doctors. We proposed that they use their disease to attract the attention of others.

Disclosure of Interest: None declared

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EVALUATION OF TISSUE SPECIFIC AUTOANTIBODIES IN FIBROMYALGIA PATIENTS WITH SICCA AND/OR XEROSTOMIA

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Background: A significant proportion of patients with fibromyalgia complain of dry eyes and mouth. The 2010 preliminary criteria for fibromyalgia even includes dry eyes and mouth as part of the somatic symptoms severity complex used to diagnose this condition. A significant proportion of Sjögren's syndrome patients also complain of fibromyalgia symptoms, and there is literature that suggests that there is interplay between these two disorders. Recently, the presence of novel tissue specific autoantibodies (TSAs), SP-1, CA6, and PSP, has been observed in the early stages of Sjögren's syndrome (SS). These early markers present themselves before the classic autoantibodies, such as SSA/Ro, SSB/La, ANA, and RF.

Objectives: This study aims to examine the relationship between SS and fibromyalgia by testing patients with fibromyalgia, that also complain of xerostomia and sicca symptoms, for Sjögren's related biomarkers SSA/Ro, SSB/La, SP-1, CA6, and PSP.

Methods: Over the past 5 years, we identified a cohort of 310 patients that presented with symptoms of fibromyalgia and fulfilled both the 1990 and 2010

preliminary diagnostic criteria. These patients were further questioned about xerostomia and sicca symptoms. Patients that admitted to using artificial tears at least biweekly, drinking water excessively to relieve dry mouth, or have previously experienced a blocked tear duct, but did not meet the strict diagnostic criteria for SS and did not have elevated inflammatory markers ESR or CRP, were selected for this study. Serum from study patients was sent to a tertiary lab, Immco Diagnostics, for testing of the classic autoantibodies (SSA/Ro, SSB/La, ANA and RF) and Tissue Specific Autoantibodies (SP-1, CA6, PSP). Patients testing positive for the TSA markers were provided with literature on the disease and offered appropriate treatment options, such as hydroxychloroquine.

Results: As of November, 2017 310 patients were selected for this study and tested for the SS markers. 91.0% of the patients were female and 8.6% of the patients were male. The average patient age was 56.5 years. 271 of the study patients were tested for both the TSAs and classic autoantibodies, while 39 were tested for only TSAs. Of the patients that were evaluated for both the TSAs and classic Sjögren's autoantibodies, 29.8% (81) tested positive for SS. 22.8% (71) of the patients were positive for TSAs, 9.4%²⁹ were positive for the classic Sjögren's markers, and 2.3%⁷ were positive for both the TSA and classic Sjögren's autoantibodies. Further analysis of all the patients that tested positive for the TSAs (n=71), found 74.5% (53) were positive for SP-1, 8.5%⁶ were positive for CA6% and 44.7%³² were positive for PSP. 68.1%⁴⁸ of these patients were positive for only one of the TSA and 23 (31.9%) were positive for more than one TSA.

Conclusions: In this cohort of 310 fibromyalgia patients, about 1/3 of patients that were tested for both the TSAs and classic Sjögren's markers tested positive for SS, with the majority of those patients being positive for one or more of the TSAs. This suggests that autoimmunity, specifically early-stage Sjögren's syndrome, may be a confounding variable in the pathophysiology of fibromyalgia.

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THE ROLE OF THIOL-DISULFIDE HOMEOSTASIS IN THE ETIOPATHOGENESIS OF FIBROMYALGIA

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Background: Fibromyalgia syndrome (FMS) is a chronic disease with unknown etiology, characterised by widespread pain, fatigue, sleep disturbance, cognitive dysfunction and anxiety. Oxidative stress has also been implicated in etiopathogenesis in recent years.

Objectives: In this study we aimed to investigate the role of thiol-disulfide balance in the etiopathogenesis of fibromyalgia, as an indicator of oxidative stress.

Methods: 98 female patients with fibromyalgia, 61 of whom were newly diagnosed and 37 were presently ongoing treatment and 82 healthy female controls were included in the study. Fibromyalgia impact questionnaire, pain visual analogue scale, Pittsburgh sleep quality index, fatigue severity scale, short form-36, tender point count, Beck depression inventory and Beck anxiety inventory were evaluated in both groups. To determine the oxidative balance, the thiol/disulfide balance was investigated by the new automatic measurement method developed by Erel and Neselioglu.

Results: Serum native thiol levels were 394.43 ± 52.43 $\mu\text{mol/L}$ and 418.12 ± 49.95 $\mu\text{mol/L}$ ($p=0.002$), total thiol levels were $429.55^{53.5}$ $\mu\text{mol/L}$ and $440.95^{58.7}$ $\mu\text{mol/L}$ ($p=0.052$) and serum disulphide levels were 17.5 (9.8) $\mu\text{mol/L}$ and 14.8 (10.3) $\mu\text{mol/L}$ in the FMS and control groups, respectively ($p=0.002$). In the FMS group, disulphide/native thiol percent ratios ($p<0.001$) and disulphide/total thiol percent ratios ($p<0.001$) were statistically significantly higher while native/total thiol percent ratios ($p<0.001$) were statistically significantly lower than those of the control group. Serum native thiol levels ($p=0.008$) were 384.2 (76.7) $\mu\text{mol/L}$, 387.6 (65.05) $\mu\text{mol/L}$ and $416.55^{63.4}$ $\mu\text{mol/L}$; disulfide levels were measured as 17.2 (7.5) $\mu\text{mol/L}$, 18.3 (14.55) $\mu\text{mol/L}$ and 14.8 (10.3) $\mu\text{mol/L}$ newly diagnosed patients, treated patients and control groups, respectively. Serum native thiol values at the thiol-disulfide balance did not improve disulfide in spite of being slightly approaching the control group in the treated patients. When the ratio of disulfide-native thiol was examined, it was seen that both newly diagnosed and treated patients remained in a balanced disulfide state. There were statistically significant correlations between tender points (respectively $p=0.02$, $r=-0.241$; $p=0.039$, $r=-0.213$; $p=0.039$, $r=-0.213$; $p=0.039$, $r=0.213$), SF-36 pain subscale (respectively $p=0.032$, $r=0.216$, $p=0.041$, $r=0.206$, $p=0.042$, $r=0.206$, $p=0.041$, $r=0.207$) and Beck anxiety inventory scores (respectively $p=0.009$, $r=-0.216$, $p=0.027$, $r=-0.225$, $p=0.026$, $r=-0.225$, $p=0.026$, $r=0.225$) with disulphide levels, disulphide/native thiol, disulphide total thiol and native thiol/total thiol ratio.