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**Abstracts**

|                               |       |
|-------------------------------|-------|
| Invited Speaker Presentations | S-196 |
| Oral Presentations            | S-207 |
| Poster Presentations          | S-210 |
| Author index                  | S-219 |

**P-10** Classification, Diagnosis, Epidemiology and the Evolving Concept of Fibromyalgia**Ear nose and throat symptoms analysis in a cohort of Chilean fibromyalgia patients**Lilian Soto<sup>1,2</sup>, Francisca Tala<sup>1</sup>, Cristian Olavarria<sup>1,2</sup>, Jaxaira Maggi<sup>1</sup><sup>1</sup>Facultad De Medicina, Universidad De Chile, Chile;<sup>2</sup>Hospital Clinico, Universidad De Chile, Chile.

**Background.** Fibromyalgia (FM) is a common health problem, that affects mainly women, where it exists diffuse muscle-joint pain and a broad and variable number of sensitive symptoms caused by Central Sensitization (CSs). FM has association with other chronic visceral Pain syndromes as Irritable Bowel Syndrome (IBS) or Interstitial Cystitis, but more data from are needed.

**Objective.** Exploring prevalence of ENT symptoms in a cohort of Chilean FM patients.

**Methods.** This is an analytic descriptive study in a cohort of 32 patients from CoFibreChile. All patients filled the 2010-2016 ACR criteria for FM classification, FIQ, Sensitive Symptoms Scale (SSS), Widespread Pain Index (WPI) and ENT surveys about Hearing Impairment (HI), Dysphonia (D), Swallowing Alteration (SA), Tinnitus (T), Dizziness Evaluation (DE). We used T-tests, Chi-Square tests or Fisher's exact tests.

**Results.** The media for age was 54.34 years old (30 to 76), 100% females. Time between symptoms onset to diagnosis was 88,94 months (~7 years). FM assessments: WPI media 12.32 (1-19); SSS media 9.61 (4-12), VAS of pain media 6.91 (0-10), FIQ media 67.60 (10,01-90,9), 56.3% showed signs of HI, 75% showed D; 78% SA, 62.5% showed T, 65.6% physical DE and 59.4% functional DE. Data shows significant relation between higher WPI and Dysphonia ( $p=0.030$ ) as well as higher VAS and D ( $p=0.030$ ). A statistical significance between HI and TMD ( $p=0.016$ ) in FM patients.

**Conclusion.** More than 50% in this cohort, had at least one of the ENTs. Dysphonia has the higher significance with WPI, EVA and SSS.

**P-11** Classification, Diagnosis, Epidemiology and the Evolving Concept of Fibromyalgia**Psychosomatic syndromes and traumatic events discriminate between patients with fibromyalgia and patients with rheumatoid arthritis**Ada Ghiggia<sup>1,2</sup>, Annunziata Romeo<sup>1</sup>, Marialaura Di Tella<sup>1</sup>, Lorys Castelli<sup>1</sup>, Valentina Tesio<sup>1</sup><sup>1</sup>Department of Psychology, University of Turin, Italy;<sup>2</sup>Clinical Psychology Unit, A.O.U. Città della Salute e della Scienza Hospital, Italy.

**Background.** Many studies have highlighted the importance of the psychological component in fibromyalgia (FM), although the underlying implications are not yet clear.

**Objectives.** The current study aims to assess the prevalence of psychosomatic syndromes and traumatic events in patients with FM and patients with Rheumatoid Arthritis (RA), and to evaluate their group membership (FM vs. RA) predictive abilities.

**Methods.** The Visual Analogue Scale (VAS) for pain, the State-Trait Anxiety Inventory (STAI-Y), the Beck Depression Inventory - II (BDI-II), the Toronto Alexithymia Scale (TAS-20), the Traumatic Experiences Checklist (TEC) and the Diagnostic Criteria for Psychosomatic Research (DCPR) were administered to 107 women with FM and 104 with RA.

**Results.** Group comparison showed that patients with FM had significantly higher levels of anxiety and depressive symptoms and difficulties in identifying feelings (TAS-DIF subscale), and a higher prevalence of psychosomatic syndromes and traumatic events, compared to patients with RA. The binary logistic regression showed that pain (OR=0.584; 95% CI=4.74 -0.719), psychosomatic syndromes (OR=0.596; 95% CI=0.459-0.773) and trauma score (OR=0.859; 95% CI=0.759-0.971) were statistically significant predictors of group membership (FM vs. RA). The final model explained 62% of the variance, with 83.3% of patients correctly classified.

**Conclusion.** The present study confirmed the higher prevalence of psychosomatic syndromes and trauma events in patients with FM compared to patients with RA, further supporting their role in FM symptoms exacerbation and maintenance and thus their importance in the treatment planning.

**P-12** Classification, Diagnosis, Epidemiology and the Evolving Concept of Fibromyalgia**Gender differences in depression comorbidity of fibromyalgia**

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**Background.** The mechanism of fibromyalgia, characterized by chronic widespread pain (CWP), is complex, hindering the development of effective treatments to release patients from poor life quality.

Female with fibromyalgia syndrome usually show higher pain intensity than male, yet more research studies have been done in male.

Furthermore, the prominent comorbidity of fibromyalgia is found to be depression, where they share similar pathophysiology and the same dual serotonergic and noradrenergic agonists in pharmacological treatments, supporting the concept that they are "differential symptom presentations of a single underlying conditions", yet it is unclear about the intensity of depression symptoms between genders.

**Objectives.** To investigate the differences in depression symptoms and respective intensity between male and female rats of Chronic Widespread Pain (CWP) model.

**Methods.** Bilateral mechanical hyperalgesia in rats of both genders will be developed through repetitive unilateral intramuscular injections of acid saline. The intensity of pain and depressive comorbidity of acid-induced pain model of rats are evaluated by Von Frey filament testing on pain behaviors, and by forced swimming, sucrose consumption, and sucrose preference tests on depression-like behaviors.

**Results.** The study is in progress. We are interested to understand if the types of depression symptoms and respective intensity are in proportion to the intensity of muscle pain between male and female rats.

**Conclusion.** The differences in depression symptoms and respective intensity between male and female rats would suggest a different phenotype for each gender, thus future drug development with gender specific considerations may be of benefits to the patients.

**P-13** Complex CNS**Walking on treadmill or on the ground? a fibromyalgia case study based on multiscale dispersion entropy**Nancy Brígida<sup>1,4</sup>, Marco Branco<sup>1,2,4</sup>, Cristiana Mercê<sup>1,2,4</sup>, David Catela<sup>1,3,4</sup><sup>1</sup>Escola Superior de Desporto de Rio Maior, Instituto Politécnico de Santarém, Portugal;<sup>2</sup>CIPER, Faculdade de Motricidade Humana, Universidade de Lisboa, Portugal;<sup>3</sup>Centro de Investigação da Qualidade de Vida (CIEQV), Instituto Politécnico De Santarém, Portugal;<sup>4</sup>Centro de Investigação do Instituto Politécnico de Santarém (UIIPS), Instituto Politécnico de Santarém, Portugal.

**Background.** Use of ergometers alters the perceptual layout, so a person needs to adapt to new constraints, meaning a change in motor complexity; that non-linear methods can measure, based on the action process analysis.

**Objective.** To analyse if different context constraints result in different levels of motor complexity in a person with fibromyalgia.

**Methods.** Case study of a 59-year-old sedentary woman with fibromyalgia. An inertial sensor placed above the external malleolus was used for data collection, while walking on a treadmill and on the ground, each performed for 2 minutes, with a 24h interval. Refined Composite Multiscale Dispersion Entropy was estimate based on gyroscope data.

**Results.** Higher complexity was found when the body adjustments occur at shorter perception-action cycles, and lower complexity was found at longer perception-action cycles, reaching its lowest entropy value at cycles around 500ms. Walking on the treadmill resulted more complex than on the ground, which can be explained by unusual perceptual stimulations, as optic array and surface elasticity.

**Conclusions.** Probably, perceptual novelty resulted in greater complexity in motor behavior, which may have required more adjusts from the neuromotor system; therefore, preparing the fibromyalgia patient to more attuned daily live tasks, and to faster response to unexpected unbalances.