

case. The paravertebral abscess was associated to the disc involvement in 23 cases. Epididitis was associated in 21 cases. Plain radiography, performed in the majority of cases (63 cases, 94%), demonstrated pathological pictures in 56 (83.5%) patients. MRI, performed in 60 (89.5%) patients, disease was in all patients. Pathogens were isolated in 43 (64.1%) cases. Tuberculosis was the most common cause. The leading causative agents in non tuberculous spondylodiscitis were: *Staphylococcus aureus* (8 isolates, 11.9%), *Brucella* (7 isolates, 10.4%), *Escherichia coli* (2 isolates, 2.9%) and *Streptococcus B* (1 isolates, 1.4%). Two microorganisms combined (mycobacterium tuberculosis and a pyogenic) was found in one case. Medical treatment was adapted to the prescribed seed. Surgical treatment was performed in 6 patients. After therapy, 59 (88%) patients had regression of symptoms, two patients had a permanent neurological impairment (paraplegia), one patient had recurrence of infection and one patient was dead.

Conclusions: Infectious spondylodiscitis has been diagnosed with increasing frequency. It should be taken into consideration in differential diagnosis in patients with significant back pain and laboratory evidence of an acute inflammatory process, especially metastatic spinal disease or inflammatory spondyloarthritis

References:

- [1] Zimmerli W. Clinical practice. Vertebral osteomyelitis. *N Engl J Med* 2010 Mar; 362(11):1022–9.
- [2] Cottle L, Riordan T. Infectious spondylodiscitis. *J Infect* 2008 June;56(6): 401–12.

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AB0922 CLINICAL MANIFESTATIONS AND OUTCOMES OF ACUTE SEPTIC ARTHRITIS IN SONGKLANAGARIND HOSPITAL: A 10-YEAR RETROSPECTIVE STUDY

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Background: Septic arthritis is a rheumatologic emergency. Its delayed diagnosis and treatment cause joint morbidity and mortality.¹ Cases involving antimicrobial-resistant bacteria have been reported.^{2,3}

Objectives: To determine the clinical manifestations and outcomes of septic arthritis, find the factors associated with mortality, and discover the incidence of drug-resistant organisms in our institution

Methods: A retrospective study was performed. Septic arthritis was defined as the presence of acute inflammatory arthritis indicated by a positive synovial fluid or synovial tissue culture for bacteria. A total of 116 septic arthritis patients, who visited Songklanagarind Hospital from January 2005 to December 2014, were reviewed.

Results: The patient median age was 58 (IQR: 46, 72). Sixty-one patients (52%) were female. The median onset of symptoms and symptoms until diagnosis were 5 (IQR: 2, 7) and 6 (IQR: 3, 10) days, respectively. Eighty-eight cases (76.7%) had underlying diseases that might predispose to joint infection. Sixty-nine cases (59.5%) had pre-existing joint disease. Joint pain was the most common presenting symptom, and 58% of the cases had fever. The most common presentation was monoarthritis (87%), which was predominantly associated (78%) with knee joint involvement. The median synovial fluid leukocyte counts were 64,460 cells/ μ L (IQR: 30,300; 129,000). Blood cultures were positive in 53 patients (49.1%). Synovial fluid cultures commonly had *Streptococcus spp.* growth (41%). Seven cases (7%) involved drug-resistant organisms. All of them either were diagnosed with septic arthritis during hospitalization or had a history of previous surgery. Twenty-five percent of the cases obtained the empirical antibiotic, ceftriaxone, and 86 patients (80%) underwent arthroscopy drainage. The mortality rate was 12%, and its associated factors were cancer, liver disease and advanced age.

Conclusions: *Streptococcus spp.* is an emerging cause of septic arthritis in Southern Thai patients. Physicians should be aware of this in patients presenting with fever and acute monoarthritis, particularly those with comorbidities and underlying joint diseases. The proper empirical antibiotic of choice is ceftriaxone.

References:

- [1] Garcia-Arias M, Balsa A, Mola EM. Septic arthritis. Best practice & research Clinical rheumatology. 2011;25(3):407–21.
- [2] Frazee BW, Fee C, Lambert L. How common is MRSA in adult septic arthritis? *Annals of emergency medicine*. 2009;54(5):695–700.
- [3] Chao CM, Lai CC, Hsueh PR. Bacteriology of septic arthritis at a regional hospital in Southern Taiwan. *Journal of microbiology, immunology, and infection* = Wei mian yu gan ran za zhi. 2013;46(3):241–2.

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Fibromyalgia

AB0923 MEETING THE FIBROMYALGIA CRITERIA HAS A NEGATIVE IMPACT ON TNF INHIBITORS EFFICACY IN PATIENTS WITH AXIAL SPONDYLOARTHRITIS

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Background: Fibromyalgia and spondyloarthritis can coexist and the overlap between the two diseases could have consequences on TNF inhibitors efficacy.

Objectives: To evaluate TNF inhibitors efficacy in patients with axial spondyloarthritis fulfilling or not fibromyalgia criteria.

Methods: Prospective observational bicentric study on 25 patients who met ASAS 2009 axial spondyloarthritis criteria. Fibromyalgia was defined by ACR 2010 fibromyalgia criteria or by a $\geq 5/6$ score of the Fibromyalgia Rapid Screening Tool. Following items were recorded before and after a 6 months treatment with TNF inhibitors: Visual Analog Scale for pain and for patient global disease activity, values of ESR and CRP, number of tender joints, MASES score, number of Yunus tender points. All patients filled a self-questionnaire with BASDAI, BASFI, FiRST and ACR 2010 fibromyalgia scale items using SSS and WPI. Criterion of judgment: an ASAS partial remission state was compared in patients with or without fibromyalgia.

Results: Of the 25 patients enrolled, 15 (60%) fulfilled ACR 2010 fibromyalgia criteria and 9 (36%) had a $\geq 5/6$ FiRST score. The proportion of patients fulfilling an ASAS partial remission state was significantly lower in patients with fibromyalgia according to the ACR 2010 criteria (20% vs 70%, $p=0.034$) or to the FiRST score (0% vs 62.5%, $p=0.0028$). These patients had more severe disease activity and physical function than the patients without fibromyalgia. In this study, some factors were related with absence of ASAS partial remission: female gender, prior TNF inhibitor failure, ACR 2010 fibromyalgia criteria positivity, to have more than 11 Yunus points and to have a $\geq 5/6$ FiRST score.

Conclusions: Meeting the fibromyalgia criteria might have an impact on ASAS partial remission state and on efficacy of TNF inhibitors in patients with axial spondyloarthritis. The FiRST score was more specific to predict an absence of ASAS partial remission than the ACR 2010 fibromyalgia criteria. TNF inhibitors should be used with circumspection in case of FiRST score $\geq 5/6$ in patients with axial spondyloarthritis.

References:

- [1] Perrot S., Bouhassira D., Fermanian J., the CEDR (2010) Development and validation of the Fibromyalgia Rapid Screening Tool (FiRST). *Pain* 150(2):250–256.
- [2] Wolfe F., Clauw DJ., et al. (2011) Fibromyalgia criteria and severity scales for clinical and epidemiological studies: a modification of the ACR Preliminary Diagnostic Criteria for Fibromyalgia. *J Rheumatol* 38:1113–1122.

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AB0924 THE ROLE OF SELF LIMITING BEHAVIOUR, DEPRESSION AND SLEEP IN THE SEVERITY OF FATIGUE IN PATIENTS WITH FIBROMYALGIA

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Background: Fatigue and sleep disturbances are prominent symptoms in Fibromyalgia (FM) and significantly affect the level of the patients' impairment. Some studies reported a synergic interaction of depression and poor sleep quality associated with fatigue (e.g. [1]); while Marques et al. [2] showed a significant association of the fatigue severity with a limiting behaviour self-regulatory style of the patients, i.e. reducing daily activities and excessive resting.

Objectives: The purpose of this cross-sectional study was to analyse the predictors of severity of fatigue in Italian patients with FM.

Methods: Outpatients with a FM diagnosis who fulfilled both ACR/EULAR 1990 and 2010 criteria [3,4], after a medical visit at the Fibromyalgia center at Sapienza University Hospital "Umberto I", were invited to participate in a study on their cognitions and behaviours wearing for one week a wrist actigraph (AMI Motionlogger Watch). Actigraphic sleep parameters were averaged over six days. After 7 days the participants returned the actigraph and answered a structured interview conducted by a trained psychologist which included validated scales measuring depression (Brief Symptom Inventory [5]), perceived fatigue (Checklist of Individual Strength [6]), sleep habits (Sleep Disorder Questionnaire [7]) and behaviour regulation patterns (All-or-nothing and Limiting behaviour scales from Behavioural Responses to Illness Questionnaire [8]). In the previous month and during the study, pharmacological and non-pharmacological treatments were unchanged.

Results: Actigraphic monitoring and structured interview were completed by 39 female FM patients, with a mean age of 44.9 years (SD=8.55) and an illness mean duration of 6.5 years (SD=5.72). The majority of the patients reported insomnia complaints, and 29 (74.4%) met the DSM criteria for chronic insomnia. Fatigue severity resulted as the best subjective measure of fatigue, and was positively and significantly correlated with self-management through limiting behaviour, and with Total Time in Bed (TTB) measured through actigraphy. The correlation between TTB and Total Time Slept (TTS) and depression were not significant. Hierarchical regression considering TTB, Depression and Limiting behaviour, showed that all these variables give a significant independent contribution to the prediction

of perceived severity of fatigue (47% of variance): limiting behaviour ($\beta=0.52$, $p<0.01$), TTB ($\beta=0.31$, $p<0.05$), Depression ($\beta=0.29$, $p<0.05$).

Conclusions: These correlational findings suggest that self-regulation through limiting activity should be given priority attention in cognitive behavioural interventions aimed at reducing subjective fatigue.

References:

- [1] Nicassio et al. Pain 2002;100:271–9.
- [2] Marques et al. Int J Behav Med 2013;20:229–38.
- [3] Wolfe et al. Arthritis Rheum 1990.
- [4] Wolfe et al. Arthritis Care Res (Hoboken) 2010;62:600–10.
- [5] Derogatis et al. Pearson; 1993.
- [6] Beurskens et al. Occup Environ Med 2000;57:353–7.
- [7] Violani et al. Brain Res Bull 2004;63:415–21.
- [8] Spence et al. Psychol Med 2005;35:583–93.

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AB0925 GENDER DIFFERENCE IN FIBROMYALGIA: COMPARISON BETWEEN MALE AND FEMALE PATIENTS FROM AN ITALIAN MONOCENTRIC COHORT

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Background: Fibromyalgia (FM) is one of the main causes of chronic widespread pain (CWP). It is characterized by CWP, which is the cardinal symptom, and the presence of more than 11 tender points (hyperalgesia). [1] Other symptoms such as fatigue, sleep disturbances, difficulties with memory and concentration, irritable bowel syndrome, headache, depression are frequent. Worldwide mean prevalence of FM is 2,7% with female/male ratio of 4:1. In Italy the prevalence is 3,7% with the same female/male ratio. [2]

Objectives: The aim of the study is to analyze clinical features of a cohort of male patients with CWP and to evaluate gender differences in patients diagnosed as FM.

Methods: The study population consisted of 101 consecutive male subjects referred to the Clinic for the Diagnosis and Therapy of Fibromyalgia, in the period between January 2007 and October 2016, matched with a control group of 101 females with CWP referred to the clinic in the same period. Complete clinical evaluation was performed in all patients.

Results: Ninety-seven male subjects (96%) were referred to the clinic for a history of musculoskeletal pain, among these 53% reported fatigue and 60% complained about sleep disorders. A stressful trigger (work or family problems, bereavement, infections) at the onset of pain was reported by 42% of patients. Fifty-two percent of patients reported mood changes. Physical examination showed hyperalgesia in 15% of the subjects and a mean tender points' (TP) count was 4.6 (range 0–18). The diagnosis of FM was performed according to ACR 1990 criteria, since the enrollment included patients referred to the clinic before the publication of the latest ACR criteria [3, 4]. Only 18 male subjects (18%) fulfilled the classifying criteria. In the female group CWP was reported by 97%, fatigue by 65%, and sleep disorders by 72% of patients. Stressful events were reported by the 50% of female population. Mood changes were described by 54% of female subjects and were predominantly depressive. Physical examination revealed hyperalgesia in 48 subjects (47%) and the mean TP count was 11 (range 0–18). The diagnosis of FM was confirmed in 60% of subjects. Comparing the two cohorts of patients with FM, mean age at the time of the visit and mean age of onset of symptoms resulted significantly higher in females than in males ($p=0.02$ and $p=0.04$ respectively). There was no statistically significant difference in the number of TP, in fatigue, sleep and mood disorders and in the percentage of stressors considered as a trigger for the disease. Hyperalgesia was the only feature more common in females than in males ($p=0.03$).

Conclusions: The significant higher frequency of hyperalgesia in women suggests a different presentation of CPW, that is the cornerstone of FM, in the two sexes. Moreover, the prevalence of FM was higher in females than in males when 1990 ACR criteria were used. It can be assumed that further gender differences could be showed applying 2010 ACR criteria.

References:

- [1] Wolfe et al. 1990.
- [2] Queiroz LP. 2013.
- [3] Wolfe et al. 2010.
- [4] Wolfe et al. 2011.

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AB0926 AUTONOMIC DYSFUNCTION IN FIBROMYALGIA MAY BE MEDIATED BY HYPERMOBILITY SYNDROME

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Background: Neuropsychiatric symptoms are common in Fibromyalgia (FMS). FMS is associated with dysautonomia, particularly orthostatic intolerance, in

which there is a phenomenological overlap with anxiety. FMS and dysautonomia are both associated with joint hypermobility (JHS).

Objectives: To investigate whether signs and symptoms of dysautonomia in FMS are mediated by JHS.

Methods: Eighteen patients with FMS (all female; mean age 41.06 years) and 19 controls (14 female; mean age 46.42 years) were recruited. JHS was assessed by Brighton Criteria. Multi-systemic symptoms suggestive of dysautonomia were quantified using Autonomic Symptoms and Quality of Life Scale (ASQoLS). Neuropsychiatric symptoms were formally quantified including anxiety level (BAI), depressive symptom level (BDI), panic disorder symptom severity (PDSS) and dissociative experiences (DES). All participants underwent autonomic function testing (9 minute tilt table with heart rate (HR) recording).

Statistical comparison between groups was performed using independent samples t test and chi squared as required, correlations were explored using Pearson or Spearman rho as appropriate. Formal mediation analysis was performed using the method of Baron and Kenny (1), which stipulates that a mediator variable must reduce the statistical relationship between the independent and dependent variable.

Results: FMS patients had significant objective features of dysautonomia including higher baseline HR ($p=.001$) and maximal HR during tilt ($p=.002$) compared to controls and reported significantly higher autonomic symptom burden ($p=.001$). Symptoms correlated with changes in physiology during autonomic challenge in patients ($r=.536$, $p=.039$), but not controls. Across the study anxiety score correlated with absolute change in pre-tilt and average HR during tilt ($r=.483$, $p=.050$) and symptoms of dysautonomia ($r=.813$, $p=.001$). Dysautonomia symptoms correlated with DES ($r=.793$, $p=.001$), PDSS ($r=.742$, $p=.001$), interoceptive sensibility ($r=.627$, $p=.007$) and BDI ($r=.502$, $p=.040$). There was a significant association between JHS and FMS ($p=.001$), but not generalized joint laxity. Across all participants, dysautonomia symptoms correlated with Beighton score ($r=.353$, $p=.032$) and JHS participants reported higher heart rates during autonomic challenge ($p=.002$) and greater symptom burden ($p=.001$). The significant relationship between autonomic symptoms and maximum HR during tilt was fully mediated by presence of JHS or FMS (Figure 1). JHS partially mediated the relationship between FMS and increased anxiety scores and fully mediated the relationship between FMS and maximum HR during tilt (Figure 2).

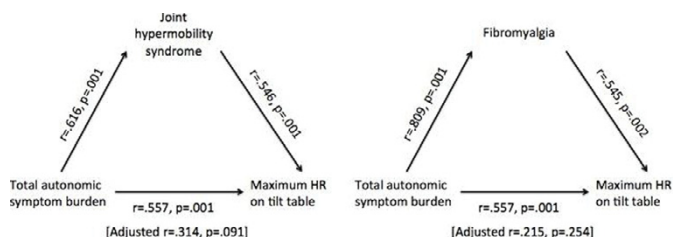


Figure 1: The significant relationship between autonomic symptoms and maximum HR during tilt was fully mediated by presence of JHS or FMS

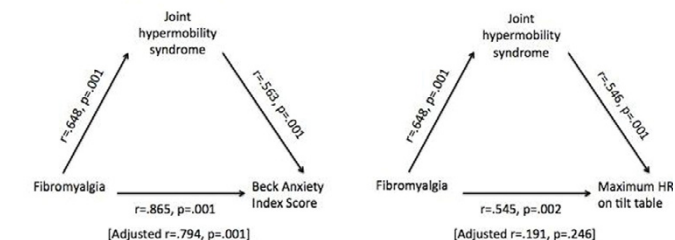


Figure 2: JHS partially mediated the relationship between FMS and increased anxiety scores and fully mediated the relationship between FMS and maximum HR during tilt

Conclusions: This study confirms that objective and subjective measures of dysautonomia are more common in FMS, and associated with JHS in this cohort, suggesting a common underlying mechanism which requires further exploration. We highlight the importance of assessing patients with FMS for both JHS and dysautonomia, which may inform further management of this often challenging condition.

References:

- [1] Baron RM, Kenny DA. The moderator-mediator variable distinction in social psychological research: conceptual, strategic, and statistical considerations. J Pers Soc Psychol. 1986 Dec;51(6):1173–82.

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