

F. Salaffi¹, S. Farah¹, V. Giorgi², P. Sarzi-Puttini³, M. Di Carlo¹. ¹Polytechnic University of Marche, Rheumatology Department, Jesi (AN), Italy; ²IRCCS Istituto Galeazzi - Sant'Ambrogio, Rheumatology Department, Milan, Italy; ³IRCCS Istituto Galeazzi - Sant'Ambrogio, Milan State University School of Medicine, Rheumatology Department, Milan, Italy

Background: Fibromyalgia (FM) is characterized by debilitating pain that is unresponsive to standard analgesics and the multi-modal approach, including drugs' combination, represents the standard of care. Combination therapeutic strategies also include the integration of drugs and nutraceuticals. Both palmitoylethanolamide (PEA) and acetyl-L-carnitine (ALC) have demonstrated an effect on chronic widespread pain (CWP).

Objectives: The aim of this study was to evaluate the efficacy of pregabalin (PGB) and duloxetine (DLX) supplemented with palmitoylethanolamide (PEA) and acetyl-L-carnitine (ALC) in FM patients over a 24-week period.

Methods: After 6 months of stable treatment with DLX+PGB, FM patients were randomized to continue the treatment (Group 1) or to add PEA (600 mg BID)+ALC (500 mg BID) at the ongoing treatment (Group 2). Patients were then followed for 24 weeks. Cumulative disease severity, estimated using the Widespread Pain Index (WPI) (primary outcome), the revised Fibromyalgia Impact Questionnaire (FIQR), and the modified Fibromyalgia Assessment Status (FASmod) (secondary outcomes), was calculated every two weeks during the 24-week follow-up and expressed as time-integrated values (AUC).

Results: One hundred and forty-two FM patients started the study (91.5%), 130 completed both steps, respectively 68 patients in Group 1 and 62 in Group 2. After 24 weeks of follow-up after randomization, Group 2 experienced an adjunctive significant improvement in WPI, FIQR (Figure 1), and FASmod, compared to Group 1. Although there was some fluctuation in both Groups throughout the study period, the AUC values of the WPI scores steadily decreased in Group 2 (p=0.048). Group 2 showed better outcomes also in terms of FIQR and FASmod scores' AUC values (p=0.033 and p=0.017, respectively).

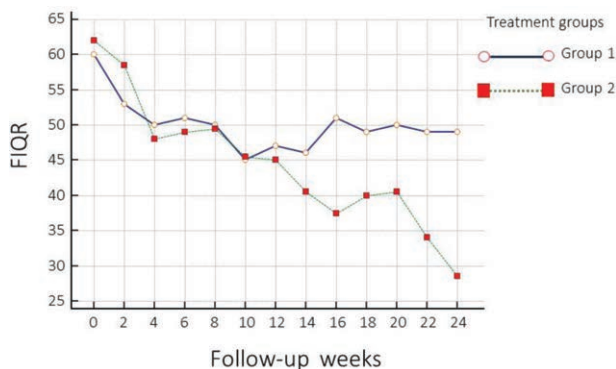


Figure 1. Comparison of the trend of the mean values of the FIQR in the two groups.

Conclusion: This study supports the supplementary value of PEA+ALC in FM patients care and, to best of our knowledge, it is the first study investigating this association treatment.

REFERENCES:

- [1] Sarzi-Puttini P et al. Acetyl-L-carnitine in chronic pain: A narrative review. *Pharmacol Res* 2021; 173: 105874. <https://doi.org/10.1016/j.phrs.2021.105874>
- [2] Del Giorno R et al. Palmitoylethanolamide in Fibromyalgia: Results from Prospective and Retrospective Observational Studies. *Pain Ther* 2015; 4: 169-178. <https://doi.org/10.1007/s40122-015-0038-6>

Acknowledgements: NIL.

Disclosure of Interests: None Declared.

DOI: 10.1136/annrheumdis-2023-eular.5944

POS0265

ASSOCIATION OF PREGABALIN VS GABAPENTIN WITH INCIDENT CONGESTIVE HEART FAILURE IN PATIENTS WITH NON-CANCER PAIN

Keywords: Pain, Cardiovascular disease, Heart

E. Park¹, L. Daniel², A. Dickson², M. Corriere², P. Nepal³, K. Hall², D. Plummer², W. Dupont², K. Murray², C. M. Stein², W. Ray², C. Chung³. ¹Columbia University Irving Medical Center, Rheumatology, New York, United States of America; ²Vanderbilt University Medical Center, Medicine, Nashville, United States of America; ³University of Miami Miller School of Medicine, Medicine, Miami, United States of America

Background: Chronic pain affects 30% of all patients in developed countries, accounting for up to 35% of prescriptions in acute care settings. Non-opioid pain

medications are widely utilized for treatment of non-cancer chronic pain. Among these, pregabalin is a commonly prescribed anticonvulsant, which works by antagonizing L-type calcium channels, decreasing the release of neurotransmitters[1]. Pregabalin use has been associated with reports of congestive heart failure (CHF), including peripheral and pulmonary edema[2-4]. However, the relationship between CHF incidence and pregabalin use among patients at the highest risk of adverse reactions (i.e., senior patients with various co-morbidities) remains unclear.

Objectives: To compare incident CHF among new users of pregabalin versus gabapentin (the active comparator) in Medicare beneficiaries treated for non-cancer chronic pain.

Methods: This was a retrospective cohort study among Medicare beneficiaries aged 65-89 years old with chronic non-cancer pain, without prior history of CHF. We included patients who were newly prescribed users of pregabalin or gabapentin were followed up between 2015-2018. The outcome was incident CHF, ascertained by hospital admissions or emergency room visits with ICD 9 and or 10 codes in the first position codes. Inverse probability of treatment weighting was used to account for differences between pregabalin and gabapentin users in time-dependent analysis (i.e., Cox proportional-hazards regressions). Covariates used in the propensity scoring were selected based on prior knowledge and literature review, and included categories such as concurrent baseline cardiovascular, neurologic, pain, and psychiatric diagnoses and corresponding medications including opioids and antipsychotics. Non-diagnostic covariates were included, as well as demographics, socioeconomic status, and indicators/metrics of health care utilization.

Results: This study included 17,756 new users of pregabalin and 221,053 new users of gabapentin. The cohort was predominantly female gender (66.7%), and non-Hispanic White (79.9%), with a median age of 73 (IQR: 69-78) years. The most common diagnostic indications for pregabalin and gabapentin were musculoskeletal and back pain. Prior to inverse probability weighting, pregabalin vs gabapentin users had higher daily short-acting opioid morphine equivalent doses (median; 18.0 vs 8.9 mg/d), higher use of coxibs (8.6% vs 4.9%), and higher prevalence of diabetic neuropathy (15.9% vs 11.3%) and fibromyalgia (19.9% vs 13.2%). After propensity score weighting, none of the covariates had a standardized difference >0.10. During 110,439 person-years of follow-up, 1,428 patients developed new CHF. The outcome rate for CHF incidence was 18.67 per 1000 person-years for pregabalin vs 12.57 per 1000-person years for gabapentin (adjusted HR 1.48 [95% CI, 1.20-1.81]).

Conclusion: In this retrospective study of Medicare beneficiaries aged 65-89 years with chronic non-cancer pain, new users of pregabalin had higher rates of incident CHF hospitalizations or emergency room visits compared to new users of gabapentin.

REFERENCES:

- [1] Bockbrader HN, Wesche D, Miller R, Chapel S, Janiczek N, Burger P. A comparison of the pharmacokinetics and pharmacodynamics of pregabalin and gabapentin. *Clin Pharmacokinet*. 2010 Oct;49(10):661-9.
- [2] Murphy N, Mockler M, Ryder M, Ledwidge M, McDonald K. Decompensation of chronic heart failure associated with pregabalin in patients with neuropathic pain. *J Card Fail*. 2007 Apr;13(3):227-9.
- [3] Page RL 2nd, Cantu M, Lindenfeld J, Hergott LJ, Lowes BD. Possible heart failure exacerbation associated with pregabalin: case discussion and literature review. *J Cardiovasc Med (Hagerstown)*. 2008 Sep;9(9):922-5.
- [4] Zaccara G, Gangemi P, Perucca P, Specchia L. The adverse event profile of pregabalin: a systematic review and meta-analysis of randomized controlled trials. *Epilepsia*. 2011 Apr;52(4):826-36

Acknowledgements: NIL.

Disclosure of Interests: None Declared.

DOI: 10.1136/annrheumdis-2023-eular.2795

All about COVID-19 in Rheumatology

POS0266

CELLULAR IMMUNE RESPONSE PERSISTENCE AFTER COVID-19 MRNA VACCINES AMONG PATIENTS WITH RHEUMATOID ARTHRITIS UNDER RITUXIMAB

Keywords: Rheumatoid arthritis, Vaccination/Immunization, COVID

J. Marin¹, P. Bourgoin², N. Saverna², C. Cartagena García², P. Lafforgue¹, J. Roudier^{1,3}, J. M. Busnel², N. Balandraud^{1,3}. ¹Sainte Marguerite University Hospital- AP-HM, Rheumatology, Marseille, France; ²Immunotech - Beckman Coulter, Global Research Organization, Marseille, France; ³Inserm and Aix Marseille University, UMRS -1097- Arthrites Autoimmunes, Marseille, France

Background: Humoral response induced by anti-SARS-CoV-2 mRNA vaccine is significantly lower or even absent in patients with inflammatory rheumatic diseases treated with anti-CD20 therapies such as Rituximab (RTX) than in those treated with cytokine therapies (e.g., anti-TNF or anti-IL6) [1]. However, a specific cellular immune response exists 1 or 2 months after vaccination (2, 3). As