Disclosure of Interests: Paula Mullu Grant/research support from: I have received a Congress trip from UCB Pharma and a Congress trip from MSD Finland outside the submitted work. Dr. Rantalaiho has received a congress trip from Pfizer and a congress trip from Celegen outside the submitted work.

Speakers bureau: Dr. Rantalaiho reports a speaker’s honorarium from Pfizer. Hannu Kauhtainen: None declared, Lauri Virta: None declared, Kari Paualakka: None declared


FRIO374

THE RISK OF INFECTION BY TUMOR NECROSIS FACTOR INHIBITORS AND ITS ASSOCIATED FACTORS IN PATIENTS WITH ANKYlosing SPONDYLITIS: RESULT FROM KOREAN NATIONAL HEALTH INSURANCE DATA

Bong San Ko1, Yu Cheel Lim2, Min-Young Lee3, Ja Young Jeon4, Hyun-Jeong Yoo5, In-Sun Oh6, Ju-Young Shin7, Eui-Kyung Lee8, Ta-Hwan Kim9, Inje University Seoul Park Hospital, Inje University College of Medicine, Department of Internal Medicine, Seoul, Korea, Rep. of (South Korea); Sungkyunkwan University, School of Pharmacy, Suwon, Korea, Rep. of (South Korea); VITALplus, Sihaeong, Korea, Rep. of (South Korea); Pfizer Inc, Seoul, Korea, Rep. of (South Korea); Hanyang University Hospital for Rheumatic Diseases, Department of Rheumatology, Seoul, Korea, Rep. of (South Korea)

Background: Tumor necrosis factor inhibitors (TNFi) are effective in patients who do not respond to non-steroidal anti-inflammatory drugs, or disease modifying anti-rheumatic drugs, and have been widely used in patients with ankylosing spondylitis (AS). However, there is some evidence that treatment with TNFi can increase the risk of infection in patients with AS.

Objectives: The aim of this study was to investigate the risk of infection in patients with AS treated with TNFi.

Methods: Data was obtained from insurance claims database of the Health Insurance Review & Assessment Service (HIRA) in South Korea. Patients who have been prescribed a TNFi such as etanercept (ETN), adalimumab (ADA), golimumab (GLM), and infliximab (IFX) to treat AS from 1 July 2012 to 30 June 2017 were enrolled. We evaluated the incidence rate (IR) and hazard ratio (HR) of serious infections including pneumonia, tuberculosis, and herpes zoster in each TNFi treatment group by using cox proportional hazard model. We further analyzed the HR of infection by sex.

Results: A total of 2,515 patients were included in the study, and they were prescribed ETN (n=528), ADA (n=914), GLM (n=628), or IFX (n=455). The IRs of serious infection were 1688.63, 1498.88, 1457.58, and 1399.16 per 1,000 person years (pys) in ETN, ADA, GLM, and IFX treated groups, respectively. There was no significant difference in HR of serious infection between the TNFi groups. In the subgroup analysis of major infections, there was no difference in the HR of pneumonia between TNFi groups. However, the HR of tuberculosis with IFX group was significantly higher than that with ETN (adjusted HR 8.95, 95% CI: 1.12-71.4). In herpes zoster infection, there was no difference between TNFi groups in all patients, but the adjusted HRs significantly increased with GLM (adjusted HR 15.40, 95% CI: 1.64-144.34) and IFX (adjusted HR 10.02, 95% CI: 1.12-89.9) treatment as compared to ETN in female patients.

Conclusion: Patients receiving IFX had a higher risk of contracting tuberculosis than those receiving ETN. Moreover, the risk of herpes zoster was higher in female patients treated with GLM and IFX than in those treated with ETN in Korea.

REFERENCES:


Background: Enthesitis is a hallmark of spondyloarthritis (SpA), with substantial impact on quality of life. Although pathophysiological mechanisms of enthesitis may include both mechanical and autoimmune features, improvements upon initiation of TNF-inhibitors (TNFi) across individual enthesitis sites have not been reported in real-world patients with axial spondyloarthritis (axSpA).

Objectives: To investigate the effectiveness of TNFi in axSpA patients without prior DMARD treatment at specific enthesitis sites, including spine, thoracic cage, Achilles tendon and the plantar fascia. AxSpA patients initiating TNFi without previous DMARD (biologic or conventional non-steroidal anti-inflammatory drugs) treatment at specific enthesitis sites, including spine, thoracic cage, Achilles tendon and the plantar fascia were included. The primary endpoint was change in SpondyloArthritis International Society Enthesitis Score (SARI) at 6 months. Secondary endpoints included change in SpondyloArthritis International Society Enthesitis Score (SARI) at 3 months, and change in number of active entheses sites.

Methods: This was a prospective cohort study using the Swiss Clinical Quality Management in Rheumatic Diseases (SCQM) registry. AxSpA patients initiating TNFi without previous DMARD (biologic or conventional non-steroidal anti-inflammatory drugs) treatment at specific enthesitis sites, including spine, thoracic cage, Achilles tendon and the plantar fascia were included. The primary endpoint was change in SpondyloArthritis International Society Enthesitis Score (SARI) at 6 months. Secondary endpoints included change in SpondyloArthritis International Society Enthesitis Score (SARI) at 3 months, and change in number of active entheses sites.

Results: 781 DMARD-naive patients with axSpA were included. At baseline, patients (57% male) were a median of 40 (interquartile range 31-50) years of age with a median disease duration of 9 (IQR 3-18) years and median Ankylosing Spondylitis Disease Activity Score (ASDAS-CRP) of 3.4 (IQR 2.8-3.9) at treatment initiation. A subgroup of 160 TNFi patients had active entheses at baseline (MASES mean 4.14, standard deviation [sd] 2.87) and a 6-month follow-up visit with MASES available (MASES mean 2.07, sd 2.82), with a mean MASES reduction at the follow-up visit of 2.07 (sd 3.06). At the 6-month follow-up, complete enthesitis resolution was observed for 72 (45.0%) of patients. Enthesitis resolution was most frequent at the following sites: the costosternal sternum, the costochondral joint, the lumbar vertebrae, the pelvic crest, and spin iliaca anterior (Figure 1). Limited resolution of enthesitis was observed in the spina iliaca anterior, plantar fascia, and the Achilles tendon.

Conclusion: Our results suggest that for real-world DMARD-naive axSpA patients, TNFi are generally effective for resolving enthesitis. Significant resolution was observed for enthesitis of the spine and thoracic cage even though resolution was more limited for plantar fascia or Achilles tendon entheses. Lower limb entheses are more prone to mechanical strain and may therefore require alternative or more prolonged therapy.

Acknowledgement: This study was funded by AbbVie Inc. All authors were involved in the study design, review, data interpretation and approval of the abstract.

Disclosure of Interests: Thomas Huegle, Burkhard Moeller, Adrian Cireasa, Michael Nissen, Patrick Zueger, Martin Schulz, Fabiana Ganz, Almut Scherer, Eletherios Papagianoulinis, Lausanne University Hospital (CHUV), Lausanne, Switzerland; University Hospital of Bern, Bern, Switzerland; University Hospital Zurich, Zurich, Switzerland; Geneva University Hospital, Geneva, Switzerland; AbbVie Inc., North Chicago, United States of America; AbbVie AG, Baar, Switzerland; Swiss Clinical Quality Management in Rheumatic Diseases Foundation, Zurich, Switzerland.

Disclosure of Interests: Bas Hilberdink, Florus van der Giesen, Thea Vlet Vlieiland, Floris A. van Gaasten, Karel Ronday, Andreas Peetters, Salima van Weely, Leiden University Medical Center, Orthopaedics, Rehabilitation and Physical Therapy, Leiden, Netherlands; Leiden University Medical Center, Rheumatology, Leiden, Netherlands; Haga Hospital, The Hague, Netherlands; Reinier de Graaf Gasthuis, Delft, Netherlands.

Background: Physical activity (PA) according to public health guidelines is effective and safe for people with rheumatic and musculoskeletal diseases, including axial spondyloarthritis (axSpA), and should be promoted by healthcare providers. In axSpA, in particular high intensity aerobic PA is beneficial, yet this was found to be incompletely implemented in physical therapy programs. Studies describing aerobic PA in axSpA patients with and without physical therapy are lacking.

Objectives: To describe the amount, frequency and intensity of aerobic PA in axSpA patients with and without physical therapy treatment.

Methods: A survey, which included questions on patient characteristics, current physical therapy use (individual or group), PA (Short QUestionnaire on Adequacy of exercise, SQUASH), was sent by postal-mail to 458 axSpA patients registered in three hospitals in the Netherlands. From the SQUASH, besides amount (minutes/week) of all PA (response rate: 45%) of whom 200 completed the SQUASH correctly. Differences in PA behaviour between patients with and without current physical therapy were analyzed with the Mann-Whitney U or Chi-square test, where appropriate.

Results: The questionnaire was returned by 206 axSpA patients (response rate: 45%) of whom 200 completed the SQUASH correctly. Overall, 64% met the PA guideline. Half of the patients were using physical therapy (n=99; 77 individual, 11 group and 11 both); these patients had a significantly longer disease duration. Regarding overall PA, there were no differences in the total amount and the proportion meeting the guideline between patients with and without physical therapy. For moderate and vigorous intensity aerobic PA during commuting and leisure (including sports) were extracted. Differences in PA behaviour between patients with and without current physical therapy were analyzed with the Mann-Whitney U or Chi-square test, where appropriate.

Conclusion: More than half of people with axSpA were physically active according to public health PA guidelines. People using physical therapy engaged in significantly more moderate intensity, but not high intensity aerobic PA than those without physical therapy. These results indicate that high intensity aerobic PA should be more intensively advocated and implemented, also in physical therapy treatment.

REFERENCES: