

**Annual European Congress of Rheumatology
(EULAR 2018)**

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**COMBINING NSAIDs AND TNF INHIBITORS MAY REDUCE RADIOGRAPHIC
PROGRESSION IN ANKYLOSING SPONDYLITIS**

Celecoxib combined with TNF inhibitors was associated with the greatest reduction in radiographic progression

Amsterdam, The Netherlands, 14 June 2018: The results of a cohort study presented at the Annual European Congress of Rheumatology (EULAR 2018) showed that, in patients with ankylosing spondylitis (AS) taking tumour necrosis factor (TNF) inhibitors, the addition of non-steroidal anti-inflammatory drugs (NSAIDs) was associated with significantly less radiographic progression in a dose-related manner at four years.¹

When looking at specific NSAIDs, celecoxib in combination with TNF inhibitor use was associated with the greatest reduction in radiographic progression, which was significant at both two and four years.¹

“Our results suggest that the use of TNF inhibitors and NSAIDs, particularly celecoxib, have a synergistic effect to slow radiographic progression in AS patients, particularly at higher doses,” said Lianne Gensler, Associate Professor of Medicine, University of California, San Francisco (study author). “This is the first study to compare whether effects are comparable among different NSAIDs in this setting.”

Ankylosing spondylitis is a chronic inflammatory disease that can be classified as being axial or non-axial (peripheral) disease, according to which joints in their body are affected. Over time, the joints can become damaged, a process referred to as radiographic or structural progression.

NSAIDs are first-line therapy for patients with AS. If patients have a poor response, contraindications or intolerance to NSAIDs, they may then be given TNF inhibitors.² Current treatment practice is based on symptomatic relief, however there is also some evidence that NSAIDs slow radiographic progression if taken continuously.³ The evidence for the impact of TNF inhibitors on radiographic progression is unclear despite their good clinical efficacy.^{4,5} Many patients discontinue NSAIDs when they are put onto TNF inhibitors due to good symptom control,⁶ therefore there is very limited data on the impact of combined therapy on radiographic progression.

“Radiographic progression has an important bearing on patient mobility, as well as affecting their general well-being and day-to-day living,” said Professor Robert Landewé, Chairperson of the Scientific Programme Committee, EULAR. “We welcome these results that support a

potential disease modifying effect in patients with ankylosing spondylitis taking current therapies.”

This prospective cohort study included 519 patients with AS who met the modified New York criteria with at least four years of clinical and radiographic follow up. The average age of participants was 41.4 years with an average symptom duration of 16.8 years, three quarters were male. NSAIDs were used in 66% of patients (half using an index below 50 and half above). TNF inhibitors were used in 46% of patients.¹

After baseline measures, clinical and medication data were collected every six months, and radiographs performed every two years. Radiographic progression was measured using the modified Stoke Ankylosing Spondylitis Spine Score (mSASSS). Statistical analysis which accounted for time-varying covariates was used to estimate the causal effect of TNF inhibitors and NSAIDs on radiographic progression. The analysis was adjusted for gender, race/ethnicity, education, symptom duration, enrolment year, number of years on TNF inhibitors, symptom duration at time of TNF inhibitor start, baseline mSASSS, ASDAS-CRP*, current smoking, and missed visit status.¹

In patients taking TNFi, the addition of NSAID therapy was associated with less radiographic progression in a dose-related manner at four years. Mean difference in mSASSS between TNFi use and no TNFi use at four years was 0.50 ($p=0.38$), -1.24 ($p<0.001$), and -3.31 ($p<0.001$) for no NSAID, low NSAID, and high NSAID. When NSAID specific effects were examined, celecoxib in combination with TNFi use was associated with the greatest reduction in radiographic progression and this was significant at both two and four years. The mean difference in mSASSS between TNFi and no TNFi use for celecoxib was -3.98 ($p<0.001$) and -4.69 ($p<0.001$) at two and four years respectively.¹

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NOTES TO EDITORS

For further information on this study, or to request an interview with the study lead, please do not hesitate to contact the EULAR Press Office:

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About Rheumatic and Musculoskeletal Diseases

Rheumatic and musculoskeletal diseases (RMDs) are a diverse group of diseases that commonly affect the joints but can affect any organ of the body. There are more than 200

* Ankylosing Spondylitis Disease Activity Score-C-reactive protein (ASDAS-CRP)

different RMDs, affecting both children and adults. They are usually caused by problems of the immune system, inflammation, infections or gradual deterioration of joints, muscle and bones. Many of these diseases are long term and worsen over time. They are typically painful and limit function. In severe cases, RMDs can result in significant disability, having a major impact on both quality of life and life expectancy.⁷

About 'Don't Delay, Connect Today!'

'Don't Delay, Connect Today!' is a EULAR initiative that unites the voices of its three pillars, patient (PARE) organisations, scientific member societies and health professional associations - as well as its international network - with the goal of highlighting the importance of early diagnosis and access to treatment. In the European Union alone, over 120 million people are currently living with a rheumatic disease (RMD), with many cases undetected.⁸ The 'Don't Delay, Connect Today!' campaign aims to highlight that early diagnosis of RMDs and access to treatment can prevent further damage, and also reduce the burden on individual life and society as a whole.

About EULAR

The European League against Rheumatism (EULAR) is the European umbrella organisation representing scientific societies, health professional associations and organisations for people with RMDs. EULAR aims to reduce the burden of RMDs on individuals and society and to improve the treatment, prevention and rehabilitation of RMDs. To this end, EULAR fosters excellence in education and research in the field of rheumatology. It promotes the translation of research advances into daily care and fights for the recognition of the needs of people with RMDs by the EU institutions through advocacy action.

To find out more about the activities of EULAR, visit: www.eular.org.

References

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⁷ van der Heijde D, *et al.* Common language description of the term rheumatic and musculoskeletal diseases (RMDs) for use in communication with the lay public, healthcare providers and other stakeholders endorsed by the European League Against Rheumatism (EULAR) and the American College of Rheumatology (ACR). *Annals of the Rheumatic Diseases.* 2018;doi:10.1136/annrheumdis-2017-212565. [Epub ahead of print].

⁸ EULAR. 10 things you should know about rheumatic diseases fact sheet. Available at: <https://www.eular.org/myUploadData/files/10%20things%20on%20RD.pdf> [Last accessed April 2018].