

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

Amsterdam, The Netherlands, 13-16 June 2018

**NSAIDs SHOWN TO HAVE CAUSAL ROLE IN CARDIOVASCULAR RISK OF PATIENTS  
WITH OSTEOARTHRITIS**

Non-steroidal anti-inflammatory drugs (NSAIDs) are the cornerstone of pain management in patients with osteoarthritis<sup>1</sup>

**Amsterdam, The Netherlands, 13 June 2018:** The results of a study presented today at the Annual European Congress of Rheumatology (EULAR 2018) suggest that over two thirds of the increased cardiovascular risk associated with osteoarthritis is linked to the use of non-steroidal anti-inflammatory drugs (NSAIDs).<sup>2</sup>

Osteoarthritis is a common condition that makes a person's joints stiff and painful, particularly in the morning. It is caused by, amongst others, thinning of the cartilage within the joints, which allows the bones to rub against each. Joint swelling and pain are frequent symptoms. It is the most common of all the different types of arthritis, and typically becomes more common as people get older.

"The examination of cardiovascular risk among individuals with osteoarthritis is an important area of research as very little is known about the association, despite osteoarthritis being the most common rheumatic disease with high prevalence among the elderly," said Professor Thomas Dörner, Chairperson of the Abstract Selection Committee, EULAR. "This study is important because it provides new information about the potential causal role of NSAIDs for the observed cardiovascular complications among individuals with osteoarthritis."

Recent research suggests that osteoarthritis is an independent risk factor for cardiovascular disease (CVD) and several mechanisms have been suggested to account for this association.<sup>3</sup> One of these is the frequent use of NSAIDs in the treatment of osteoarthritis as they have been shown to be a proven risk factor for CVD.<sup>1</sup>

"To the best of our knowledge, this is the first longitudinal study to evaluate the mediating role of NSAID use in the relationship between osteoarthritis and CVD in a large population-based sample," said Professor Aslam Anis, School of Population and Public Health, University of British Columbia (study author). "Our results indicate that osteoarthritis is an independent risk factor for CVD and suggest a substantial proportion of the increased risk is due to the use of NSAIDs. This is highly relevant because NSAIDs are some of the most commonly used drugs to manage pain in patients with osteoarthritis."

Results of the study demonstrate that people with osteoarthritis had a 23% higher risk of developing CVD. The increased risk of congestive heart failure (CHF), ischemic heart disease (IHD), and stroke was 42%, 17% and 14% respectively. Investigators then calculated the

impact of NSAID use on the increased risk and found that 68% of the total effect of osteoarthritis on CVD risk was due to NSAID use. The proportion of the increased risk due to NSAIDs seen in CHF was calculated at 45% and more than 90% for IHD and stroke respectively.<sup>2</sup>

This population-based cohort study used data from 7,743 osteoarthritis patients and 23,229 non-osteoarthritis controls matched for age and gender from health administrative data from British Columbia, Canada. Statistical analysis was used which adjusted the results for age, gender, socioeconomic status, body mass index, and several conditions known to be associated with CVD, such as chronic obstructive pulmonary disease (COPD), high blood pressure, diabetes, high cholesterol, and Romano comorbidity score.<sup>2</sup>

**Abstract number: OP0190**

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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 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.<sup>4</sup>

#### **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.<sup>5</sup> 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](http://www.eular.org).

## References

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- <sup>2</sup> Atiquzzaman M, Kopec J, Karim E, *et al.* The role of NSAIDs in the association between osteoarthritis and cardiovascular diseases: A population-based cohort study. EULAR 2018; Amsterdam: Abstract OP0190.
- <sup>3</sup> Wang H, Bai J, He B, *et al.* Osteoarthritis and the risk of cardiovascular disease: a meta-analysis of observational studies. *Sci Rep*. 2016;6:39672.
- <sup>4</sup> 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].
- <sup>5</sup> 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].