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DECLINE IN EXCESS RISK OF DEMENTIA AND HEART FAILURE IN PATIENTS WITH RHEUMATOID ARTHRITIS

Population-based studies show trends over a 30-year period

Data released at the 2021 EULAR congress show a substantial decline in the risk of both dementia and heart failure in people with rheumatoid arthritis (RA) onset in the 2000s as compared to 1980s – coinciding with the advent of novel biologic treatments for RA. RA is an inflammatory autoimmune disease that causes pain, swelling and stiffness in the joints. It can also cause fatigue, and the underlying inflammation may affect other body systems. Dementia is a symptom of damage to the brain, which can be caused by a number of different diseases – for example, Alzheimer's. Symptoms include memory loss, difficulty concentrating, confusion, and mood changes. It is not known what causes all types of dementia, but it is thought that some of the damage could be caused by other underlying diseases. Heart failure happens when the heart becomes weak or stiff, and is not able to pump blood around the body properly. People with heart failure may be breathless even when at rest, feel very tired, and have swollen ankles or legs.

Heart failure is one of the most common cardiovascular conditions in people with RA, and previous studies have suggested that people with RA are twice as likely to develop heart failure as people in the general population without RA. For dementia, previous studies have delivered mixed results about the pattern of cognitive impairment and dementia in people with RA compared to the general population – with some showing increased odds, while others show the reverse. Furthermore, existing studies have not evaluated trends in incidence of dementia or heart failure to see if the risks have changed over time.

Two groups at the Mayo Clinic, USA have run population-based studies in Minnesota to assess the incidence of dementia or heart failure over time in people with RA, and compared to the general population.

Vanessa Kronzer and colleagues assessed the incidence of dementia over time in people with RA and compared it to that seen in the general population. Medical record data were collected for 895 people diagnosed with RA between 1980 and 2009. All individuals were followed until death, migration, or 31st December 2019 to see if they went on to develop dementia. The 10-year cumulative incidence of dementia in people diagnosed during the 1980s, 1990s, and 2000s was 12.7%, 7.2%, and 6.2%, respectively – showing a clear decline and markedly lower cumulative incidence of dementia for people diagnosed with RA in the 2000s compared with the 1980s. For 880 people in the general population without RA, the 10-year cumulative incidence of dementia in the 1980s, 1990s, and 2000s was 9.3%, 5.0%, and 7.1%, respectively. Overall, the risk of dementia in RA patients was significantly higher than in people without RA. When subdivided by decade, the risk of dementia in people diagnosed with RA was higher than non-RA comparators in the 1980s and 1990s – but not the 2000s.

Elena Myasoedova and colleagues used the same methods to look at the trends of heart failure in 905 people diagnosed with RA between 1980 and 2009, and followed until death, migration, or 31st December 2019. The 10-year cumulative incidence of heart failure in people diagnosed with RA in the 1980s, 1990s, and 2000s was 8.5%, 10.8%, and 7.1%, respectively. These results show there was no difference in incidence of heart failure in the 1990s and 2000s compared to the 1980s. For 903 people in the general population without RA over the same time period the incidence of heart failure was 7.4%, 7.5%, and 7.3%. When comparing the risk of heart failure in people with and without RA, those diagnosed with RA in the 2000s had no excess risk of heart failure compared to the general population. This finding is in contrast to the 2-fold excess risk seen in people diagnosed with RA in the 1980s, and around 1.5-fold increased risk in 1990s.

Further studies should investigate these association, and look at the role of inflammation, autoimmunity, and anti-rheumatic treatments in the risk of dementia and heart failure.

Sources

Kronzer V, et al. Trends in Occurrence of Dementia in Patients with Rheumatoid Arthritis: a Population-based Cohort Study, 1980-2009. Presented at EULAR 2021; abstract OP0216.

Myasoedova E, et al. Decline in Excess Risk of Heart Failure in Patients with Rheumatoid Arthritis in Recent Years. Presented at EULAR 2021; abstract OP0102.

About EULAR

EULAR is the European umbrella organisation representing scientific societies, health professional associations and organisations for people with rheumatic and musculoskeletal diseases (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.

About the EULAR European Congress of Rheumatology

Since its introduction in 2000, the annual EULAR European Congress of Rheumatology has become the primary platform for exchange of scientific and clinical information in Europe. It is also a renowned forum for interaction between medical doctors, scientists, people with arthritis/rheumatism, health professionals and representatives of the pharmaceutical industry worldwide. The EULAR congress is usually held in June in one of the major cities in Europe ([see previous congresses](#)).

The [scientific programme](#) at the congress covers a wide range of topics on clinical innovations, clinical, translational and basic science. Meetings set up by associations of people with arthritis/rheumatism, health professionals and the health care industry complement the programme. The poster sessions, offering lively interaction between presenters and participants, are regarded by many as the heart of the congress.

Over the years, the EULAR Congress has gained a reputation of being a most innovative platform for the practicing physician particularly with respect to the acquisition of information on novel clinical research. The congress attracts more than 18,000 delegates from more than 130 countries.

The aim of the EULAR European Congress of Rheumatology is to provide a forum of the highest standard for scientific, both clinical and basic, educational, and social exchange between professionals involved in rheumatology, liaising with patient organisations, in order to achieve progress in the clinical care of people with rheumatic diseases.

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