

Decline in risk of dementia and heart failure in patients with rheumatoid arthritis

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Rheumatoid arthritis (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.

More information: 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.

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