

Can anti-rheumatic treatments deliver cardiovascular protection?



People with rheumatoid arthritis have increased arterial inflammation that is responsive to effective treatments.

INTRODUCTION

Rheumatoid arthritis is a chronic inflammatory disease that mainly affects a person's joints, causing pain and disability among other symptoms. Rheumatoid arthritis can affect people of all ages, but it most often starts between the ages of 40 and 60. It is more common in women than men.

The same inflammation that drives rheumatoid arthritis can also cause cardiovascular disease – also called heart disease. Cardiovascular disease is a general term for conditions that affect the heart or blood vessels. It leads to narrowed arteries and an increased risk of cardiovascular events, such as heart attacks or strokes. On average, people with rheumatoid arthritis have a 50% increased risk of these events compared to people in the general population.

Recent trials have shown that treatments that dampen the underlying inflammation reduce the number of cardiovascular events that happen in people with cardiovascular disease. But there is limited information about whether these treatments can also prevent cardiovascular events in people with rheumatoid arthritis.

WHAT DID THE AUTHORS HOPE TO FIND?

The authors wanted to see whether specific treatment strategies that are used for rheumatoid arthritis would reduce people's cardiovascular risk.

WHO WAS STUDIED?

The study looked at 115 people with active rheumatoid arthritis. Everyone had received methotrexate as their first treatment for rheumatoid arthritis, but they had not been able to achieve adequate control of their disease with this therapy.

HOW WAS THE STUDY CONDUCTED?

This was an open-label, randomised clinical trial, which means that patients were assigned by chance to one of two treatment groups. Using chance in this way means the groups are similar and allows the treatments to be compared objectively. During the treatment both patients and their doctors knew which group they were in.

The first group were given a type of medicine called a TNF inhibitor (either etanercept or adalimumab) in addition to their methotrexate. The second group were given so-called *triple therapy*, with hydroxychloroquine and sulfasalazine added to their methotrexate. These two different treatment strategies were continued for 24 weeks.

People's cardiovascular risk was assessed using a heart imaging technique that can show arterial inflammation and correlates well with cardiovascular events. This was measured at the start of the study, and after 24 weeks. Blood tests were also done to see if people had markers that are known to relate to cardiovascular risks. Finally, information about rheumatoid arthritis disease severity was collected.

WHAT WERE THE MAIN FINDINGS OF THE STUDY?

The main finding was that cardiovascular risk was reduced in both treatment groups between the start and end of the study. Overall, the two different treatment approaches had about the same effect on arterial inflammation, with about a 7–9% reduction in the arterial signal, a similar amount that is observed with treatments known to reduce cardiovascular events.

While rheumatoid disease activity was significantly reduced across both treatment groups, there was no association between this and change in arterial inflammation.

ARE THESE FINDINGS NEW?

Yes, until now, nobody has studied the effect of these two treatment strategies on cardiovascular risk in a head-to-head trial like this one.

WHAT ARE THE LIMITATIONS OF THE STUDY?

This was an open-label study, which means that everyone taking part knew what drugs they were using. In some studies, this can cause bias in the results. However, the experts assessing the arterial inflammation were not aware of treatments, so the open-label design should not have affected the results collected.

Another limitation is that the study did not collect information on actual cardiovascular events, just arterial inflammation.

WHAT DO THE AUTHORS PLAN ON DOING WITH THIS INFORMATION?

The authors are currently trying to work out how to best assess the cardiovascular risk of people with rheumatoid arthritis, and which biomarkers might be useful.

WHAT DOES THIS MEAN FOR ME?

If you have rheumatoid arthritis this study is good news, as it shows that treatments that work for your arthritis to reduce pain and disability could also reduce your cardiovascular risk. It is therefore important to find what works for you and stick with it.

If you have any concerns about your disease or its treatment, you should talk to your doctor or a healthcare professional involved in your care.

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