

Seronegative patients have higher disease activity



The 2010 ACR/EULAR classification criteria for rheumatoid arthritis may not be appropriate for people with seronegative disease

INTRODUCTION

Rheumatoid arthritis is a chronic inflammatory disease that affects a person's joints, causing pain and disability. It can also affect internal organs. It is more common in older people, but there is also a high prevalence in young adults, adolescents and even children and affects both men and women.

An antibody is a protein that the immune system makes to attack foreign substances in the body, such as viruses or bacteria. In autoimmune disease, the body makes antibodies that attack its own tissues. Antibodies can be detected in a person's blood. Certain antibodies can be used as a marker to classify people with rheumatoid arthritis. The two most common are called rheumatoid factor (or RF) and anticitrullinated protein antibodies (often shortened to ACPA). People with rheumatoid factor or ACPA are said to have seropositive rheumatoid arthritis, which is often thought to be more severe. Not as much is known about seronegative rheumatoid arthritis.

WHAT DID THE AUTHORS HOPE TO FIND?

The authors hoped to learn about seronegative rheumatoid arthritis in people who had been classified according to some well-accepted criteria published in 2010 by the ACR (American College of Rheumatology) and EULAR (European League Against Rheumatism). In the 2010 criteria, quite a lot of emphasis is put on seropositivity. This means that doctors have been unsure about whether the criteria are able to identify seronegative disease equally well.

WHO WAS STUDIED?

The study looked at 234 people from 11 clinics in Norway. Almost two-thirds of the people included were women. These people had been diagnosed with rheumatoid arthritis according to the 2010 ACR/EULAR classification criteria. Everyone included had symptoms of rheumatoid arthritis that had lasted for less than 2 years. In that time, the people had not received any treatment with disease-modifying antirheumatic drugs (often called DMARDs – for example, methotrexate), but they were eligible for such treatment. In total, 36 people in the study had seronegative disease.

HOW WAS THE STUDY CONDUCTED?

This study used data from a trial that was set up to look at the benefit of ultrasound in people with rheumatoid arthritis (the ARCTIC trial). In the original trial, people were grouped as either seropositive or seronegative. For this study, the authors compared the disease characteristics between these two groups.

WHAT WERE THE MAIN FINDINGS?

The authors found that people with seronegative rheumatoid arthritis have higher levels of inflammation, assessed both clinically and by ultrasound, compared to people with seropositive rheumatoid arthritis. People with seronegative disease also had more swollen joints than people with seropositive disease. This is in contrast with most previous studies, which have shown either no difference between the subgroups or more severe disease in seropositive patients. The authors suggest that people with seropositive disease are referred to a rheumatologist regardless of disease severity, while those who are seronegative with mild disease are less frequently referred.

ARE THESE FINDINGS NEW?

Yes. It was thought that people with seronegative rheumatoid arthritis classified according to the 2010 criteria would have more joint involvement compared to those with seropositive disease, but the differences found were much larger than expected. The authors are not aware of other studies comparing the clinical presentation of seronegative and seropositive rheumatoid arthritis in people classified according to the new criteria who have not taken DMARDs.

ARE THERE ANY LIMITATIONS?

A limitation of this study is that only people who had been classified as having rheumatoid arthritis according to the 2010 ACR/EULAR criteria were included. This means that it was not possible to assess people who fulfilled only the older criteria (1987), and impossible to compare between the two.

WHAT DO THE AUTHORS PLAN ON DOING WITH THIS INFORMATION?

The authors are working on analysing 2-year follow-up data to assess differences between seropositive and seronegative rheumatoid arthritis.

WHAT DOES THIS MEAN FOR ME?

These results may indicate that the 2010 criteria perform less well in the early identification of seronegative rheumatoid arthritis. If you have rheumatoid arthritis, you may want to talk to your doctor about your serological (antibody) status, and the impact it may have on your disease, as well as the best treatment choices for you.

FURTHER READING

1. Aletaha D, *et al.* 2010 rheumatoid arthritis classification criteria: an American College of Rheumatology/European League Against Rheumatism collaborative initiative. *Ann Rheum Dis* 2010;69(9):1580–1588. doi: 10.1136/ard.2010.138461.
2. Arnett FC, *et al.* The American Rheumatism Association 1987 revised criteria for the classification of rheumatoid arthritis. *Arthritis Rheum* 1988;31:315–324.

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