

TNF inhibitors help reduce the change of ankylosis as well as improve symptoms



Compared to other treatments, TNF inhibitors slowed radiologic progression significantly.

INTRODUCTION

Ankylosing spondylitis is a chronic inflammatory disease. It mainly affects the joints in the spine, and the sacroiliac joint (in the back part of the pelvis), causing back pain and stiffness. Some changes in ankylosing spondylitis are very slow. For example, the destruction of bony structures or other changes in the spine. Because these can eventually be seen on an X-ray they are called *radiographic progression*. This type of damage can cause permanent loss of mobility in the spine.

Ankylosing spondylitis can also affect other joints and be linked with other diseases, such as psoriasis (a skin disease), inflammatory bowel disease and uveitis (an inflammation in the eye). These non-joint symptoms are known as extra-articular manifestations and they may arise from the same underlying causes, typically inflammation in the body.

People with ankylosing spondylitis may be given a type of medicine called a tumour necrosis factor inhibitor (often shortened to TNF inhibitor, or TNFi). This is a biologic drug (short for biologic disease-modifying anti-rheumatic drug, or bDMARD). Biologic drugs work by targeting specific molecules that cause inflammation, in this case TNF. By doing so, they reduce inflammation and decrease pain and disease worsening. Because it can take many years to be able to see radiographic progression on an X-ray, it also takes a long time to be able to say whether a drug has slowed or stopped this kind of damage.

WHAT DID THE AUTHORS HOPE TO FIND?

The authors hoped to show whether TNF inhibitors change radiographic progression in people with ankylosing spondylitis.

WHO WAS STUDIED?

The study looked at 1,280 people with ankylosing spondylitis. Of these, they identified 338 people who had been treated with a TNF inhibitor at least once. Everyone had been diagnosed with ankylosing spondylitis and treated at one clinic in Korea.

HOW WAS THE STUDY CONDUCTED?

This was a retrospective observational study. This means that the authors looked back at existing databases of information, and there was no intervention being tested. The authors used medical records going back 18 years and found 338 people who had been treated with a TNF inhibitor at the clinic. They looked at X-rays of people's spines and used a scoring system called the modified Stoke AS Spinal Score (mSASSS) to see how radiographic progression had changed over time, and what the differences were between periods when people were taking a TNF inhibitor compared to when they were not.

WHAT WERE THE MAIN FINDINGS OF THE STUDY?

The main finding was that compared to other treatments, TNF inhibitors slowed the radiographic progression. This suggests that these treatments may play an important role in radiographic progression.

ARE THESE FINDINGS NEW?

Yes. Previous studies have suggested there is a link between TNF inhibitors and slowing or stopping radiographic progression. However, it is difficult to compare results with a control group because most people with increased inflammation tend to be treated with TNF inhibitors. In clinical trials it is not ethical to leave people without treatment for long periods of time to see what happens to their radiographic progression. These findings are new, because the authors used an advanced statistical method that let them show that the TNF inhibitors are causing the slowing of disease progression over a long period of time, and that the findings are not just by chance. This is the first time there has been strong evidence to show that TNF inhibitors can slow radiographic progression in ankylosing spondylitis.

WHAT ARE THE LIMITATIONS OF THE STUDY?

The main limitation is that not all records in the database were complete or well organised. This means that there was some information missing. For example, smoking is known to affect radiographic progression, but this variable was excluded from this study because people's smoking status was often not recorded in the database.

WHAT DO THE AUTHORS PLAN ON DOING WITH THIS INFORMATION?

This research will be shared. The authors plan to do more research about radiographic progression in people who have not been treated with TNF inhibitors.

WHAT DOES THIS MEAN FOR ME?

If you have ankylosing spondylitis, your disease may evolve slowly over a long period of time. This study shows that treatment with TNF inhibitors can slow radiographic progression in people with ankylosing spondylitis, and might help to slow down disability.

If you have any questions or concerns about your disease or its treatment, speak to your doctor.

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Date prepared: September 2020

Summary based on research article published on: 13 July 2020

From: Koo, BS, *et al.* Necrosis Factor Inhibitors Slow Radiographic Progression in Patients with Ankylosing Spondylitis: 18-Year Real-world Evidence. *Ann Rheum Dis* 2020;79(10):1327–1332. doi: 10.1136/annrheumdis-2019-216741.

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