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Tofacitinib effective despite previous biologic therapy

Tofacitinib is effective in reducing the signs and symptoms of rheumatoid arthritis when used either before or after biologics.

INTRODUCTION

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

Tofacitinib is a fairly new drug for rheumatoid arthritis. It works in a different way to other drugs by targeting a specific pathway inside cells, helping to reduce inflammation. The approved dose of tofacitinib in most countries (but currently not in the European Union) is 5 mg taken two times a day as an oral pill.

WHAT DID THE AUTHORS HOPE TO FIND?

The authors wanted to investigate two different doses of tofacitinib in people with rheumatoid arthritis who could not take conventional disease modifying anti-rheumatic drugs (also called cDMARDs), such as methotrexate or leflunomide, or biologic disease modifying anti-rheumatic drugs such as etanercept or adalimumab (also called bDMARDs) – either because these drugs did not work for them, or because they experienced side effects.

WHO WAS STUDIED?

The study looked at how well tofacitinib worked in 3517 people with rheumatoid arthritis who did not respond well to or who had side effects with conventional DMARDs or bDMARDs. This is called treatment failure.

HOW WAS THE STUDY CONDUCTED?

This was a pooled analysis of nine randomised controlled trials of tofacitinib. This means that the authors looked back on data that had already been collected in several groups of people. They then used this information to work out if tofacitinib was more likely to work in people who had failed previous bDMARDs, or in people who had not received bDMARDs before.

WHAT WERE THE MAIN FINDINGS OF THE STUDY?

The study found that tofacitinib improved the signs and symptoms of rheumatoid arthritis, such as joint swelling and tenderness. This effect was seen regardless of which treatment people had previously received (conventional DMARDs or bDMARDs), although the response was slightly higher in people who had not previously received a bDMARD treatment. The safety of tofacitinib also appeared to be similar whether people had been previously treated with conventional DMARDs or bDMARD. In both groups of people, the higher dose of tofacitinib (10 mg taken twice a day) gave better clinical results than the lower dose (5 mg taken twice a day), but also resulted in more side effects. The authors concluded that tofacitinib is effective in reducing the signs and symptoms of rheumatoid arthritis when used before or after biologics.

ARE THESE FINDINGS NEW?

Yes. This is the first time that someone has compared the efficacy and safety of an available treatment for rheumatoid arthritis in people who have previously failed conventional DMARDs compared to patients who have previously failed bDMARDs.

WHAT ARE THE LIMITATIONS OF THE STUDY?

As this was a large pooled analysis from the different tofacitinib clinical trials, it was not a randomised controlled trial. Pooling the results from studies with different designs and methods may mean it is difficult to detect changes because there are large variations in the types of people being studied. The original clinical trials were not designed to compare these two groups of people.

WHAT DO THE AUTHORS PLAN ON DOING WITH THIS INFORMATION?

The authors plan to use this paper to tell rheumatologists and people with rheumatoid arthritis about the benefits and risks of tofacitinib. They are also undertaking a new study to examine the efficacy and safety of a dose

of tofacitinib 5 mg taken twice daily compared to a bDMARD in people who did not tolerate or respond well to methotrexate.

WHAT DOES THIS MEAN FOR ME?

If you have rheumatoid arthritis, there are a lot of treatment options available and new ones in development. These results suggest that tofacitinib is an effective treatment even if you have previously failed on conventional DMARDs or bDMARD. However, at the time of writing, tofacitinib is not approved for use in all countries (and not in EU countries).

If you are concerned that your current medicine is not working, or if you are getting side effects, you should talk to your doctor about different options that might be suitable for you.

FURTHER READING

EULAR recommendations for management. Available at: http://www.eular.org/recommendations_management.cfm

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From: Charles-Schoeman C, *et al*. Efficacy and safety of tofacitinib following inadequate response to conventional synthetic or biological disease-modifying antirheumatic drugs. *Ann Rheum Dis* 2016;75:1293–1301. doi:10.1136/annrheumdis-2014-207178