



Podcast transcript

Biologics for rheumatoid arthritis: an overview of Cochrane reviews (Clinical)

Prepared by Mike Clarke, for Jasvinder Singh (30 September 2009)

Hello Jasvinder. Can you tell us what is rheumatoid arthritis? And what treatments did you include for your study?

Rheumatoid arthritis affects hundreds of millions of people around the world, causing considerable discomfort and limiting their quality of life. In rheumatoid arthritis the person's immune system, which normally fights infection, attacks the lining of their joints, leading to inflammation. This makes the joints hot, swollen, stiff, and painful. If left untreated, the inflammation can cause irreparable damage to the joints.

Our overview of Cochrane reviews brings together the best available, most up-to-date evidence on one group of treatments, called the biologics. We studied the following six drugs: abatacept, adalimumab, anakinra, etanercept, infliximab, and rituximab. The drugs suppress the immune system, reducing inflammation in the joints, but they work differently and are used in different ways.

What is the need for doing an overview? Isn't there enough information that we can find about these biologics?

We wanted to put all the relevant evidence in one place, present it in a standard way and, where possible, make comparisons between the drugs. When we did this, we were able to show that some are more effective than others, and that some have fewer side effects.

What studies and biologics did you include in this study?

Unlike Cochrane reviews which look at individual research studies, we were looking first at the Cochrane reviews and then, through these, to the trials that they had included. We focused on up-to-date Cochrane reviews, which means that some drugs, such as certolizumab, are not currently included in our overview, because they don't yet have a full Cochrane review. But by restricting ourselves in this way, we were able to draw on the evidence that had already been identified, appraised and considered by the authors of the other reviews.

What were your main findings?

A total of 31 trials had been included in the six Cochrane reviews, and most of these had reported an outcome known as ACR50. Among other things, this measures improvement in tender and swollen joint counts, and the patient's quality of life. It is the preferred outcome for rheumatoid arthritis trials and, alongside data about patients who stopped taking their drugs because of adverse effects, we were able to compare the benefits and harms of the biologics against no treatment, and against each other.

A total of more than 7500 patients were available for our analyses, making our findings particularly strong. Most of these patients were receiving other drug treatments for their rheumatoid arthritis, such as disease-modifying anti-rheumatic drugs like methotrexate. They continued with these drugs during the trial and all the patients were randomised to a standard dose of a biologic drug or placebo on top of these other drugs. In summary, we found that all biologic drugs, except anakinra, lead to better ACR50 rates than placebo. This translated into a number needed to treat of 3 to 5 patients with biologics (except anakinra) to have one more patient than placebo to achieve benefit. Comparing the drugs, anakinra seems less efficacious than etanercept, adalimumab and rituximab. In terms of harms, etanercept seems to lead to lower withdrawal rates compared to adalimumab, anakinra and infliximab. Although the data is sparse, the preliminary evidence is that treatment with these biologics for one year was associated with 92-100% less radiographic progression compared to placebos.

How can this information be used by patients and doctors?

These findings should be part of the information considered by doctors and patients when choosing a biologic for the treatment of rheumatoid arthritis. However, our Cochrane overview cannot identify the "best" biologic for any individual patient. That choice needs to

use other knowledge as well. Some of that knowledge is in the individual Cochrane reviews, such as specific types of side effects. But some of it will need to come through local information and discussion with the patients. For example, how much experience is there with a particular biologic in the clinical team and does the patient have preferences about the different ways in which the drugs need to be taken?

Thank you.