Tumour necrosis factor-α inhibitors for ankylosing spondylitis and non-radiographic axial spondyloarthritis: a systematic review and economic evaluation

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Declared competing interests of authors: Lesley Kay has received sponsorship to attend meetings by AbbVie and Merck Sharp & Dohme Limited in 2014. Helena Marzo-Ortega has received grants, sponsorship and/or honoraria from AbbVie, Janssen, Merck Sharp & Dohme Limited, Pfizer and UCB.

Published February 2016
DOI: 10.3310/hta20090

Plain English summary

Anti-TNFs for ankylosing spondylitis and nr-AxSpA
Health Technology Assessment 2016; Vol. 20: No. 9
DOI: 10.3310/hta20090

NIHR Journals Library www.journalslibrary.nihr.ac.uk
Plain English summary

Axial spondyloarthritis is a progressive form of arthritis which causes severe back pain because of inflammation of spinal and/or pelvic joints. If definite changes on plain radiographs are present, the disease is classified as ankylosing spondylitis (AS), but if they are absent the disease is classified as non-radiographic axial spondyloarthritis (nr-AxSpA). Usual therapy includes anti-inflammatory drugs, exercise and physiotherapy. Tumour necrosis factor inhibitors (also known as anti-TNFs) are typically used when the disease has not responded adequately to this.

This project systematically reviewed the evidence on five anti-TNF treatments (adalimumab, certolizumab pegol, etanercept, golimumab and infliximab), for treating severe active AS or nr-AxSpA. The objective of this project was to assess the benefits and adverse effects of these anti-TNFs and to run an economic model using both response to treatment and the impact of disease progression, to evaluate if their use to treat these patients is a cost-effective use of NHS resources.

In total, 28 eligible randomised controlled trials were identified and 26 were placebo controlled (most of the trials which used a placebo did so for no more than 12 weeks); the majority were good quality and 17 were extended into active treatment-only phases. In both AS and nr-AxSpA populations, anti-TNFs produced clinically important benefits to patients in terms of improving function and reducing disease activity. The benefit of treatment was consistently slightly smaller for nr-AxSpA than for AS. In AS the different anti-TNFs are approximately equally effective and effectiveness appears to be maintained over time. The results of the economic model indicated that anti-TNFs may be an effective use of NHS resources depending on which assumptions are considered appropriate.
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This report

The research reported in this issue of the journal was commissioned and funded by the HTA programme on behalf of NICE as project number 13/46/01. The protocol was agreed in June 2014. The assessment report began editorial review in January 2015 and was accepted for publication in April 2015. The authors have been wholly responsible for all data collection, analysis and interpretation, and for writing up their work. The HTA editors and publisher have tried to ensure the accuracy of the authors’ report and would like to thank the reviewers for their constructive comments on the draft document. However, they do not accept liability for damages or losses arising from material published in this report.

This report presents independent research funded by the National Institute for Health Research (NIHR). The views and opinions expressed by authors in this publication are those of the authors and do not necessarily reflect those of the NHS, the NIHR, NETSCC, the HTA programme or the Department of Health. If there are verbatim quotations included in this publication the views and opinions expressed by the interviewees are those of the interviewees and do not necessarily reflect those of the authors, those of the NHS, the NIHR, NETSCC, the HTA programme or the Department of Health.

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