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Title **Infliximab and Etanercept in Patients with Rheumatoid Arthritis: A Systematic Review and Economic Evaluation**

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Aim

To provide a clinical review and economic evaluation relating to the introduction of infliximab and etanercept to the sequence of disease-modifying anti-rheumatic drugs (DMARDs) used in treating rheumatoid arthritis (RA).

Conclusions and results

Two randomized trials reported data based on recommended Canadian doses and the recommended patient population. Compared to placebo, infliximab and etanercept are effective treatments for RA in terms of improving symptoms and in preventing radiological damage. The analysis failed to find convincing evidence that either treatment is a cost-effective alternative.

Recommendations

Not applicable.

Methods

Published trials of infliximab and etanercept were identified through a comprehensive literature search and included for further analysis if the studies lasted a minimum of 6 months and reported on patients who were at least 16 years of age and met the American College of Rheumatology (ACR) criteria for RA. Two researchers abstracted data on study characteristics and assessed study quality using the Jadad scale. Studies were pooled, where appropriate, and analyzed using intention-to-treat data. Primary outcomes were the ACR criteria for 20%, 50%, and 70% improvement. Functional, radiological, and clinical outcomes were also assessed. Cost-effectiveness and cost-utility analyses were used to evaluate the economic data. Analysis was restricted to the approved dose for use in Canada.

Further research/reviews required

More long-term randomized trials are needed to corroborate these findings and to determine the benefit-to-harm ratio, including an evaluation of potentially rare or delayed adverse events, and the sustainability of treatment response to infliximab and etanercept in patients with longstanding RA. Ongoing postmarketing surveillance is required to establish effectiveness and to determine the incidence of adverse events and the sustainability of treatment response.

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