

Title	Etanercept and Infliximab for the Treatment of Psoriatic Arthritis: A Systematic Review and Economic Evaluation
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Aim

To evaluate the clinical effectiveness, safety, tolerability, and cost effectiveness of etanercept and infliximab in treating active and progressive psoriatic arthritis (PsA) in patients with inadequate response to standard treatment, including disease-modifying antirheumatic drug (DMARD) therapy.

Conclusions and results

Across the two trials, at 12 weeks, around 65% of patients treated with etanercept achieved an American College of Rheumatology (ACR) 20, showing basic efficacy in terms of arthritis-related symptoms, with around 45% of patients achieving an ACR 50, and around 12% achieving an ACR 70. Subgroup analyses in one trial revealed that the effect of etanercept was not dependent on patients' concomitant use of methotrexate. Almost 85% of patients treated with etanercept achieved PsA Response Criteria (PsARC). The Health Assessment Questionnaire (HAQ) score with etanercept compared with placebo indicates a beneficial effect of etanercept on function. Uncontrolled followup of patients indicates that treatment benefit may be maintained for at least 50 weeks. At 16 weeks, 65% of patients treated with infliximab achieved an ACR 20, showing basic efficacy in terms of arthritis-related symptoms. This was not dependent on patients' concomitant use of methotrexate. Almost half the patients treated with infliximab achieved an ACR 50, and over 25% achieved an ACR 70 versus none in the placebo group, demonstrating a good level of efficacy. In addition, 75% of patients treated with infliximab achieved a PsARC. The beneficial effect on psoriasis was statistically significant with a mean difference in percentage change from baseline in PASI of -5, as was the percentage improvement from baseline in HAQ score with infliximab versus placebo, indicating a beneficial effect of infliximab on functional status. Using the York cost-effectiveness model, infliximab was consistently dominated by etanercept because of its higher costs without superior effectiveness. The incremental cost per QALY gained of etanercept compared

with palliative care ranged from GBP 14 818 (females, 40-year time horizon) to GBP 49 374 (males, 1-year time horizon) assuming that when patients eventually fail on biological therapy, their disability (HAQ score) deteriorates by the same amount as it improved when they initially respond to treatment. Results for etanercept ranged from GBP 25 443 (females, 40-year time horizon) to GBP 49 441 (males, 1-year time horizon) per QALY gained, assuming that when patients fail on therapy, their disability level returns to what it would have been had they never responded.

Recommendations

Limited data indicated that etanercept and infliximab are efficacious in treating PsA, with beneficial effects on joint and psoriasis symptoms and functional status. No controlled data indicate that infliximab can delay joint disease progression. Treatment with both etanercept and infliximab for 12 weeks demonstrated a significant degree of efficacy, with no statistically significant difference between them. Adverse events, mainly mild injection/infusion reactions, were common for both drugs. The York model indicated that etanercept is more cost effective than infliximab. The cost effectiveness of etanercept is also sensitive to assumptions regarding the extent of disease progression when patients are responding to therapy.

Methods

A systematic review based on literature searches (2004) evaluated the clinical efficacy and adverse effects of etanercept and infliximab. The efficacy of DMARDs in treating PsA was also reviewed and, where data allowed, treatments were compared utilizing Bayesian evidence synthesis methods. Economic evaluations of etanercept and infliximab in psoriatic arthritis were assessed, and a new economic model was developed (York Model).

Further research/reviews required

Further research should include long-term controlled trials to confirm benefits, review adverse events, and explore further the implications of biologic therapy.