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Title **Etanercept and Efalizumab for the Treatment of Psoriasis: A Systematic Review**

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Aim

To evaluate the clinical effectiveness, safety, tolerability, and cost effectiveness of etanercept and efalizumab in treating moderate to severe chronic plaque psoriasis.

Conclusions and results

Three RCTs of etanercept 25 mg twice a week for 12 weeks resulted in 62% of patients achieving PASI 50 on the psoriasis area and severity index (PASI), 33% achieving PASI 75, 11% achieving PASI 90, and 40% were assessed as clear or almost clear. Improvement in the dermatology life quality index (DLQI) was around 59% with etanercept 25 mg twice a week versus 9% with placebo (mean differences were statistically significantly in favor of etanercept). Two RCTs of etanercept 50 mg twice a week for 12 weeks found that 76%, 49%, and 21% of patients achieved PASI 50, 75, and 90 respectively (pooled relative risks were all statistically significantly in favor of etanercept). Five RCTs studied efalizumab (1 mg/kg once a week subcutaneously). Across these trials, 12 weeks of active treatment resulted in an average of 55% of patients achieving PASI 50, 27% PASI 75, 4.3% PASI 90, and 27% clear or minimal psoriasis. A mixed treatment comparison found a higher response rate with etanercept than with efalizumab. Injection site reactions were the most common adverse effects of etanercept, and it seems to be well tolerated in short- and long-term use. Common adverse events with efalizumab include headache, chills, and nausea. Withdrawal rates due to adverse events are low. In primary analysis comparing etanercept, efalizumab, and supportive care, results of the York Model suggest that the biological therapies would only be cost effective for all patients with moderate to severe psoriasis if the NHS were willing to pay over GBP 60 000 per QALY gained. In patients with poor baseline quality of life, efalizumab, etanercept 25 mg (intermittent), etanercept 25 mg (continuous), and etanercept 50 mg (intermittent) would be cost effective in a treatment sequence if the NHS were willing to pay 45 000, 35 000, 45 000, and 65 000 British pounds (GBP) per QALY gained, respectively. In patients at high risk of hospitalization (21 days/year), these therapies would be cost effective in a sequence at 25 000, 20 000, 25 000, and 45 000 GBP per QALY gained, respectively. In a secondary analysis, the York Model found that it would only be cost effective to use etanercept and efalizumab in a sequence after methotrexate, ciclosporin, and Fumaderm.

Recommendations

Clinical trial data indicate that etanercept and efalizumab are efficacious in patients eligible for systemic therapy, but economic evaluation found these biological therapies likely to be cost effective only in patients with poor baseline QoL and who are at risk of hospitalization.

Methods

Efficacy, safety, and economic evaluations of etanercept and efalizumab were systematically reviewed. Electronic databases and Internet resources were searched up to April 2004. A systematic review of other treatments for severe psoriasis was also updated. Economic models supplied by the manufacturers of etanercept and efalizumab were critiqued, and later an economic model was developed on treating moderate to severe chronic plaque psoriasis.

Further research/reviews required

- Efficacy trials in the specific population for which etanercept and efalizumab are licensed
- Long-term comparisons of etanercept and efalizumab with other treatments for moderate to severe psoriasis
- Long-term efficacy trials and safety/tolerability data for patients treated with etanercept or efalizumab
- Trials on the response of specific subtypes of psoriasis to different drugs
- Hospitalization rates for moderate to severe psoriasis and effects of treatment on this rate.

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