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Alefacept

Alefacept belongs to the class of biological response modifiers called T-cell blockers. It is currently approved in the US for the treatment of moderate to severe [psoriasis](#). Clinical trials have shown significant improvement in psoriasis after a single 12-week course of treatment, with some patients not requiring treatment again for several months. This supports the use of alefacept as an intermittent therapy for chronic and recurrent psoriasis.

How does it work?

Alefacept is genetically engineered from human protein. It works by blocking T cell activation and proliferation by binding to CD2 receptors on T cells. This stops the T cells from releasing cytokines, which is the primary cause of the inflammation, redness, itching and flaky skin patches characteristic of psoriasis.

How is it given?

Alefacept is given by either intramuscular (IM) or intravenous (IV) injection under the supervision of a doctor. Both routes are equally effective in treating moderate to severe psoriasis. The IM dose (15mg) or the IV bolus dose (7.5mg) is given once weekly for 12 consecutive weeks. This is followed by a 12-week observation period. A second course can be given any time after this observation period. Sometimes the interval between treatments can be extended, particularly if patients also follow a topical management plan for their psoriasis. Usually patients will request a repeat course of alefacept when they have lost more than half of their maximal improvement.

Whilst a patient is receiving alefacept, laboratory monitoring of their lymphocyte (T-cell) counts at weekly intervals is recommended.

Precautions

Because alefacept works by selectively targeting only those chemicals involved in causing psoriatic arthritis or psoriasis, theoretically it should not have an effect on the rest of the body's immune system. Even so caution must be taken when considering its use in patients prone to infections or in those with chronic or recurrent infections. Compared with other biological response modifiers, alefacept may pose less of a risk for infections.

Side Effects

Alefacept appears to be very well tolerated by IM and IV administration. Side effects were comparable or lower during repeat courses relative to the first course. The most common side effect was chills, which tended to occur within 24 hours of dosing and only occurred in the first couple of doses of the 12-week course.

Related information

References:

- Krueger GG, Callis KP. J Am Acad Dermatol 2003;49:S87-97.

On DermNet NZ:

- [Biological response modifiers](#)
- [Psoriasis](#)

Other websites:

Books about skin diseases:

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