Optimising the management of psoriasis with biologics

Reported by KHN Chan 陳厚毅

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Sheraton Hotel, Tsimshatsui
Professor John Koo
Professor and Vice Chairman, UCSF
Department of Dermatology,
Director, UCSF Psoriasis Treatment Centre, USA

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Alefacept (Amevive®) is the first biologic launched in the market. It acts by blocking T-cell activation. It can be given by weekly intravenous bolus or intramuscular injection. About 15% of patients receiving 12 weekly injections of alefacept at 10 mg/week will achieve more than 75% reduction in Psoriasis Area and Severity Index (PASI 75). Efalizumab (Raptiva®) blocks T-cell binding and trafficking into dermis and epidermis. Twelve weekly subcutaneous injections of 1.0 mg/kg/week resulted in PASI 75 in about 27%. Rebound and flare occurred in 14% of Efalizumab-treated patients in clinical trials. They occurred more often in non-responders. A number of psoriasis therapies, especially cyclosporin, can be effective in managing rebound. Etanercept (Enbrel®) is the only soluble Tumour necrosis factor (TNF) receptor antagonist. It has low immunogenicity with no neutralising antibody formation. With etanercept administered subcutaneously at 50 mg twice a week, about 49% of patients achieved PASI 75 by week 12. Asians are expected to do much better, even with lower dose, than Caucasians. With dose reduction to 25 mg twice a week, about 54% of patients achieved PASI 75.

With narrowband UVB (3 times per week) and etanercept (50 mg twice a week) administered together, 84.9% of patients achieved PASI 75 by week 12. Etanercept takes 2 to 3 months for its efficacy to manifest. One can speed up the improvement by combining it with strong topical agents or adopting a sequential therapy strategy. Etanercept is a safe drug for psoriasis. The only evidence-based side effect is injection site reaction. It has neither black box warning nor requirement for PPD testing.

In controlled trials of Infliximab (Remicade®) at 3 mg/kg by intravenous infusion every 8 weeks, about 73% of patients reached PASI 75. Adalimumab (Humira®) is a human anti-TNFα monoclonal antibody and about 80% of patients receiving 40 mg a week subcutaneously achieved PASI 75. However, meta-analysis of randomised, placebo-controlled trials showed increased risks in cancer and serious infections.

Learning points:
Biologics work by different mechanisms. It may take months for their efficacy to become manifest. It is important to understand their possible risks and side effects. The critical issue on the use of biologics is trying not to cross the ‘risk’ threshold while achieving ‘good enough’ efficacy.