

THE USE OF BIOLOGIC DRUGS IN WOUND HEALING

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Aim: The authors review the use of new biologic therapies, which work via cytokine blockade or lymphocyte depletion such as tumour necrosis factor-alpha inhibitor: infliximab, etanercept, adalimumab and the anti-B-cell antibody rituximab, respectively in chronic wound healing.

Methods: These innovative drugs have been shown to be beneficial in several inflammatory ulcers such as vasculitic ulcers and pyoderma gangrenosum (PG) resistant to conventional therapies. The authors also focalize on the role of tumour necrosis factor-alpha (TNF-alpha). Elevated levels of TNF-alpha have been observed in fluids from chronic wounds and have been shown to decrease over time during the healing process. TNF-alpha is used at a dose of 5 mg/kg to achieve remission in PG.

Results: Therapeutic antibodies such as infliximab, a chimeric monoclonal antibody composed of constant regions of human IgGk (75%) spliced to the murine variable antigen-binding region (25%), can inhibit TNF-alpha activity. Remission time in PG is ranging between 12 and 16 weeks. Chronic hard-to-heal leg ulcers may respond well to systemic but also to topical administration of TNF-alpha antibody.

Conclusions: The use of biologics in inflammatory ulcers is a promising systemic therapeutic approach and randomised controlled studies should be conducted to further evaluate the effect of anti TNF-alpha antibodies on chronic wound healing.