

ORIGINAL ARTICLE

Anti-infliximab antibody status and its relation to clinical response in psoriatic patients: A pilot study

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ABSTRACT

Although the mechanisms underlying the loss of response to infliximab are not completely understood, the formation of antibodies to infliximab (ATI) are thought to play a role. The aim of this study was to investigate the presence of ATI in psoriatic patients and to evaluate its relationship to the clinical response. Fifteen patients with psoriasis were treated with infliximab (5 mg/kg) every 8 weeks after an initial three-dose induction treatment. An enzyme linked immunosorbent assay kit was used for analyzing the presence of ATI in sera. Effectiveness assessments included the change in Psoriasis Area and Severity Index (PASI) compared with study entry. Five (33.3%) patients developed ATI. While 5.9 ± 3.2 infliximab infusions achieved a fall in the PASI score from a mean of 20.4 ± 8.3 to 5.3 ± 2.4 in ATI-negative patients, these values changed from 23.3 ± 11 to 10 ± 4.9 after 9 ± 5.2 infusions in ATI-positive patients. Our results suggested that ATI measured in psoriatic patients are of clinical importance. Therefore, monitoring for the induction of ATI and rescue strategies should be developed to avoid or to maintain a delay in ATI development.

Key words: antibodies to infliximab, clinical response, infliximab, loss of efficacy.

INTRODUCTION

Infliximab is a recombinant immunoglobulin G1- κ , human-murine chimeric monoclonal antibody that specifically binds to both soluble and membrane-bound tumor necrosis factor (TNF)- α and neutralizes its biological activity. It has been shown to be highly effective for the treatment of psoriasis in several previous clinical studies. The recommended dose for psoriasis is 5 mg/kg given as an i.v. infusion lasting 2 h followed by similar doses at weeks 2 and 6, then every 8 weeks thereafter.^{1–6}

Several studies investigated the effects of varying dosing regimens on the clinical responses and showed that responses in every 8-week maintenance dosing regimens were significantly better when compared to on-demand therapy groups. In one study, at week 50, a 75% reduction in Psoriasis Area and

Severity Index (PASI 75) and PASI 90 was achieved by 54.5% and 34.3%, respectively, of patients receiving 5 mg/kg on an every 8-week regimen, compared with 38.1% and 10.4%, respectively, by patients receiving 5 mg/kg on an as-needed regimen.² Therefore, currently, continuous infliximab therapy is recommended in psoriatic patients. However, many clinical studies have reported that some patients treated with infliximab experienced a loss of efficacy over time. Although the mechanisms underlying the loss of response to infliximab are not completely understood, antibody formation against infliximab may play a role. In addition to loss of efficacy, the development of antibodies to infliximab (ATI) are thought to be related to the occurrence of acute and delayed type reactions. These reactions and loss of efficacy are the current problems encountered during the usage of infliximab.^{5–9}

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