

Good response to infliximab in rheumatoid arthritis following failure of interleukin-1 receptor antagonist

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Introduction: To evaluate the efficacy of tumor necrosis factor inhibitor infliximab in patients with rheumatoid arthritis (RA) who were disease resistant to recombinant human interleukin-1 receptor antagonist (IL-1Ra).

Methods: A total of 104 patients with active RA despite methotrexate (MTX) therapy were enrolled. Among them, 27 patients who failed to respond to at least 3-month IL-1Ra treatment ("Switchers") were assigned to an infusion of 3 mg/kg infliximab at weeks 0, 2, 6 and 14, combined with concurrent MTX therapy. The Other 77 patients who had never previously received any biologics were double-blindly randomized in a 2:1 ratio to receive infliximab (n=51, "Naivers") or placebo n=26, "Controls") plus MTX treatment. Clinical outcomes and safety were assessed at weeks 0, 2, and every 4 weeks thereafter for 18 weeks with the American College of Rheumatology (ACR) core set criteria, the disease activity score in 28 joints (DAS28), and the records of adverse events (AEs) and abnormal laboratory findings.

Results: At week 18, an ACR20 response was achieved in 56% of switchers and 61% of naivers, compared with 23% of controls (P=0.0013 and 0.0126, respectively). Between the two infliximab-treated groups, naives had achieved an ACR20 response by week 2, earlier than switchers; but switchers achieved a greater benefit from HAQ score than naives. Infliximab was well tolerated, with a similar incidence of AEs, serious AEs and AEs leading to withdrawal across all study groups. However, more switchers developed infusion-related reactions, compared with the placebo group.

Conclusion: Switching from IL-1Ra to infliximab is effective in improving disease activity and maintaining joint function obtained with IL-1Ra. Caution for infusion-related reactions should be required during switching treatment of RA.