Benefits of targeting TNF-α in the treatment of RA

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Rheumatoid arthritis (RA) is a representative autoimmune disorder characterized by inflammatory synovitis, erosive arthritis and articular degradation, in which disease processes TNF-α plays a central role. The TNF-α blockers: infliximab, etanercept and adalimumab have been successful at improving the signs and symptoms of RA with ACR20 responses in around 60–70%, and, thereby, have set a new standard for disease control of RA and have the potential to protect joints from structural damage. Although MTX is a standard DMARD, MTX-resistant patients are often experienced. We have treated 70 cases of refractory RA patients with infliximab (3 mg/kg, every 8 weeks) combined with MTX. Any serious infusion reactions and adverse effects of infliximab were not observed. The response to infliximab was rapid and about 90% of the patients obtained ACR20 improvement within 2 weeks and the response lasted for 22 weeks in about 80% of the patients. High responders to the therapy represented earlier stage I/II or lower serum MMP-3 (<350 ng/ml). Infliximab is also approved for inhibiting the progression of joint destruction at 2 years in established RA shown in ATTRACT study and at 1 year in early RA by ASPIRE study. We also observed that urine NTx, a marker for bone resorption, decreased in RA patients treated with infliximab at the week 22, although bone mineral density has not changed. In conclusion, infliximab in the combination with MTX is the most likely therapy to provide major clinical response, improve patients function and slow x-ray progression without major organ damage. Since it is well known that RA progresses rapidly in the first few years, it can be recommended that infliximab is started early in the disease, which could lead to evade functional decline and reach complete remission of RA.