

Tocilizumab in refractory and glucocorticosteroid-dependent eosinophilic fasciitis: a case report

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Introduction: Eosinophilic fasciitis (EF) is a rare autoimmune connective tissue disease classified among scleroderma-like disorders. It is characterised by painful, woody induration of the skin of the extremities, peripheral eosinophilia, elevated erythrocyte sedimentation rate (ESR) and hypergammaglobulinemia.

Case description: A 28-year-old man was diagnosed with EF in August 2024 based on progressive, symmetrical induration of the skin and subcutaneous tissue of the forearms, hands, lower legs and feet, associated with restricted joint mobility. Raynaud’s phenomenon was absent. Laboratory tests revealed elevated C-reactive protein (33 mg/l), ESR (22 mm/h), peripheral eosinophilia (12.5%), and hypergammaglobulinemia (1,44 g/dl). Magnetic resonance imaging (MRI) of the left lower leg showed inflammatory oedema of the muscular fascia (Fig. 1). Histopathology revealed inflammatory infiltrates composed predominantly of CD8+ > CD4+ T lymphocytes, CD68+ macrophages and scattered eosinophils.

Differential diagnosis included systemic sclerosis, other scleroderma-like syndromes, and a paraneoplastic process. Nailfold capillaroscopy was normal, antinuclear antibody test was negative, and oncological screening (computed tomography of the neck, chest, abdomen and pelvis) revealed no abnormalities. Additional investigations detected IgM antibodies in significant concentrations against *Borrelia burgdorferi*, and doxycycline therapy was administered for 28 days.

Initial treatment with oral glucocorticosteroids (GCs; prednisone equivalent 0.5 mg/kg/day) was ineffective. Subsequently, i.v. high-dose methylprednisolone pulse therapy (500 mg/day for 5 days) was administered, and methotrexate was introduced up to a target dose of 25 mg/week. Due to persistent disease activity and GC dependence, after reviewing the literature, treatment with the interleukin-6 (IL-6) inhibitor tocilizumab (162 mg s.c. once weekly) was initiated in January 2025. This resulted in improved joint mobility, stabilisation of skin induration, normalisation of eosinophil count and inflammatory markers, and allowed tapering of methylprednisolone to 6 mg/day. Follow-up MRI in January 2026 demonstrated near-complete resolution of fascial inflammatory changes (Fig. 2). Given the favourable response to anti-IL-6 therapy, treatment was continued.

Conclusions: This case highlights the efficacy of tocilizumab in refractory and GC-dependent EF, leading to clinical and laboratory remission as well as significant

improvement on imaging. Interleukin-6 inhibitors may represent a valuable therapeutic option in severe forms of eosinophilic fasciitis.

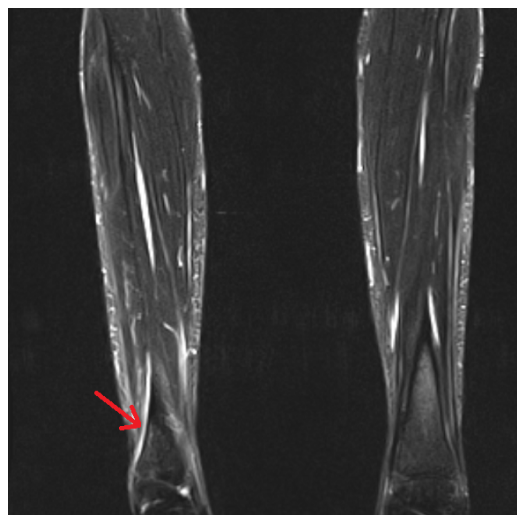


Fig. 1. Magnetic resonance imaging before treatment with tocilizumab.



Fig. 2. Magnetic resonance imaging one year after starting treatment with tocilizumab.