Background: Atopic Dermatitis (AD) is a frequent, chronic and chronically relapsing inflammatory skin disease characterized by exacerbations and flares over years. It affects >20% of children and 1-8% of adults with a negative impact of quality of life. Omalizumab, a recombinant humanized monoclonal anti-IgE antibody, binds to Immunoglobulin E and is approved for the treatment of both Allergic Asthma and Chronic Spontaneous Urticaria. Nowadays it has frequently been suggested as a potential new systemic treatment for patients with Atopic Dermatitis with elevated IgE based on its efficacy in treating Asthma and Allergic Rhinitis.

Observations: We describe a 53-year-old man with a 20 year history of severe Atopic Dermatitis resistant to conventional drug treatment (Cyclosporine, Systemic Corticosteroids, PUVA, azathioprine, methotrexate). Last year a severe flare was managed to be controlled with thalidomide for a couple of months, and then a new flare appeared. Clinical examination revealed erythema and nodules, crusts and lichenification, involving the flexures, neck, trunk, upper and lower extremities. Histopathologic examination (performed three times over the years) confirmed the diagnosis. The patients received omalizumab at a dosage of 300mg subcutaneous injection once every 4 weeks for 8 months, with significant clinical improvement and without any new flare. During his follow up visits every month the disease was well controlled. Our patient experienced no adverse events throughout the course of treatment.

Key message: In view of our result we suggest that Omalizumab might be a well-tolerated and safe treatment option for the management of severe and relapsing atopic dermatitis in adult population. Large studies with long-term follow-up are needed to confirm its efficacy.