Sezary syndrome (SS) is a primary cutaneous T-cell lymphoma characterized by erythroderma, lymphadenopathy and leukemic involvement of the peripheral blood. The high relapse rates and a poor prognosis complicate its clinical course and treatment.

Mogamulizumab is an anti-CC chemokine receptor 4 monoclonal antibody that has been recently approved for the treatment of adult patients with relapsed or refractory mycosis fungoides or SS who have been treated with at least one prior line of therapy.

To describe the use of mogamulizumab in a patient with SS as well as the safety of this new treatment.

We ran a descriptive study of SS in a 77-year-old woman with erythema for 8 years. Skin lesions were widely distributed over the 80% body. The patient was initially diagnosed as contact dermatitis and then as psoriasis.

She received various treatments without success: antihistamines, topical corticosteroids, acitretin, cyclosporine, oral prednisone, phototherapy, ustekinumab, ixekizumab, methotrexate and bexarotene.

In June 2020, due to new recurrence, additional skin biopsy and study of bone marrow were done. Stage IV SS (pT4pM0pN0 B2) was diagnosed and physicians decided to start expanded access treatment with mogamulizumab.

The patient received nine doses (80 mg/dose) of mogamulizumab from June to October 2020. It was administered with the approved protocol: 1 mg/kg dose, as an intravenous infusion over at least 60 minutes, on days 1, 8, 15, and 22 of the first 28-day cycle, then on days 1 and 15 of each subsequent 28-day cycle until disease progression or unacceptable toxicity.

The woman presented good clinical evolution with reduction of skin lesions and symptoms. The treatment was well tolerated, with few reported adverse side effects: low-grade fever after first infusion and grade IV afebrile neutropenia after six dose. Severe neutropenia was successfully treated with granulocyte colony stimulating factors and the patient was able to continue the treatment.

Mogamulizumab has been used successfully to date in our case. Although more and longer treatment periods are needed, mogamulizumab seems to be a well-tolerated treatment option for SS.