

## Effect Of Rituximab Therapy Depending on the Age of Disease Onset in Systemic Sclerosis

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**Abstract :** Objectives. The age of the disease onset could have an impact on the effect of therapy in systemic sclerosis(SSc). Late-age onset in SSc could have a more severe course of the disease and worse clinical effects on therapy. The aim of our study was to evaluate changes in skin fibrosis on rituximab(RTX) therapy in patients with SSc and different ages of the disease onset. Methods. 151 patients with SSc were included in this study. Patients were divided into groups depending on the age of the disease onset: group 1 - younger than 30 years (40 patients(26%), group 2 - 31-59 years (90 patients(60%) and group 3 - more than 60 years (21 patients(14%). The mean follow-up period was  $13\pm 2.3$  month. The mean age was  $48\pm 13$  years, female-83% of patients, and the diffuse cutaneous subset of the disease had 52% of patients. The mean disease duration was  $6.4\pm 5$  years. The cumulative mean dose of RTX was  $1.5\pm 0.6$  grams. Patients received RTX as a therapy for interstitial lung disease. All patients received prednisone at a dose of  $11.6\pm 4.8$  mg/day, immunosuppressants received 48% of them. The results at baseline and at the end of the follow-up are presented in the form of mean values. Results. There was a significant decrease of modified Rodnan skin score(mRss) in all groups: in group 1 - from  $10.2\pm 8$  to  $7.7\pm 6.5$  ( $p=0.01$ ); in group 2 - from  $9\pm 7.2$  to  $6.2\pm 4.7$  ( $p=0.0001$ ); in group 3 - from  $20.5\pm 14.1$  to  $10.8\pm 9.4$  ( $p=0.001$ ). There was a significant decrease of the activity index (EScSG-AI): in group 1 from  $2.5\pm 1.8$  to  $1.3\pm 1.1$ ; in group 2 - from  $3.2\pm 1.6$  to  $1.5\pm 1.2$ ; in group 3 - from  $4.2\pm 2.1$  to  $1.3\pm 1$ . Conclusion. There was a significant improvement in skin fibrosis in a year after initiation of RTX therapy regardless of the age of the disease onset. The improvement was more pronounced in the group with late-age onset of the disease, but these data require further investigations.

**Keywords :** skin fibrosis, systemic sclerosis, rituximab, disease onset

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