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Rituximab Therapy for Musculoskeletal Involvement in Systemic Sclerosis

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Abstract : Objectives. There is very few data on changes of the musculoskeletal manifestations (artritis, arthralgia, muscle weakness, etc.) in systemic sclerosis (SSc) on rituximab (RTX) therapy. The aim of our study was to assess the severity of the musculoskeletal involvement in SSc patients (pts) and its changes during RTX therapy. Methods. Our study included 103 pts with SSc. The mean followup period was 12.6±10.7 months. The mean age was 47±12.9 years, female-87 pts (84%), the diffuse cutaneous subset of the disease had 55 pts (53%). The mean disease duration was 6.2±5.5 years. All pts had interstitial lung disease (ILD) and were positive for ANA, 67% of them were positive for antitopoisomerase-1. All patients received prednisolone at a dose of 11.3±4.5 mg/day, immunosuppressants at inclusion received 47% of them. Pts received RTX due to the ineffectiveness of previous therapy for ILD. The cumulative mean dose of RTX was 1.7±0.6 grams. Arthritis was observed in 22 pts (21%), arthralgias in 47 pts (46%). Muscle weakness was observed in 17 pts (17%). Tendon friction rubs was established in 7 pts (7%). The results at baseline and at the end of the follow up are presented in the form of mean values. Results. There was an improvement of all outcome parameters and musculoskeletal manifestations on RTX therapy. There was a decrease in the number of pts with arthritis from 22 (21%) to 10 (9%), a decrease in the number of pts with arthralgias from 47 (46%) to 31 (30%). The number of pts with muscle weakness decreased from 17 (17%) to 7 (7%). The number of pts with tendon friction rubs decreased from 7 (7%) to 3 (3%). The creatine phosphokinase decreased from 365.5±186 to 70.8±50.4 (p=0.00006). The C-reactive protein (CRP) decreased from 23.2±31.3 to 8.62±7.4 (p=0.001). The dose of prednisolone was reduced from 11.3±4.5 to 9.8±3.5 mg/day (p=0.0004). Conclusion. In our study, musculoskeletal involvement was detected in almost half of the patients with SSc-ILD. There was an improvement of musculoskeletal manifestations despite a small cumulative dose of RTX. We also managed to reduce the dose of glucocorticosteroids. The improvement of musculoskeletal manifestations was accompanied by a decrease in laboratory parameters - creatine phosphokinase and CRP. RTX is effective option for treatment of musculoskeletal manifestations in SSc.

Keywords : arthritis, musculoskeletal involvement, systemic sclerosis, rituximab
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