Manuscript title:
Anti-SRP Myopathy- A Disabling Myopathy and its response to Rituximab

Type of submission:
Original abstract

Topic:
Works related to broad areas of rheumatic & musculoskeletal disorders (RMDs)

Authors and Affiliations:
(SD) Sehriban Diab {1}, (RH) Raven Haan {2}, (MA) Mutaz Atieh {3}

1. Department of Medicine, division of Rheumatology, SSMC/Mayo Clinic, Abu Dhabi, UAE. sdiab@ssmc.ae Sheikh Shakhbout Medical City, P.O. Box 11001, Abu Dhabi. T +971 2 314 4444
2. Khalifa University, College of Medicine & Health Sciences, Abu Dhabi, UAE 100049943@ku.ac.ae P O Box 127788, Abu Dhabi, UAE T +971 56 134 8322
3. Clinical Trials Unit, Clinical Research Coordinator, SSMC/Mayo Clinic, Abu Dhabi, UAE. matieh@ssmc.ae Sheikh Shakhbout Medical City, P.O. Box 11001, Abu Dhabi. T +971 2 314 4444

Conflicts of Interest:
None of the authors declare COI

Word Count
242 words

Authorship Contribution
SD wrote the first draft of the manuscript. All authors vouch for the accuracy and contents of the manuscript. All authors approved the final version of the draft

All authors are aware that the abstract is being submitted to present at the 2nd GCC Rheumatology Conference. Sehriban Diab (SD) will be presenting the abstract.

Objective—Anti-signal recognition particle (SRP) myositis is a severe necrotizing auto-immune disease characterized by increased serum creatinine Kinase (CK) levels, and rapidly progressive proximal muscle weakness. Unlike other immune-mediated myopathies, it is often refractory to conventional immunosuppressive medications. B cells have been labelled as a causative agent in multiple autoimmune diseases, with mixed reports on the efficacy B cell depleting medications in anti-SRP myositis. We aim to assess the efficacy of using Rituximab (RTX) in treating refractory anti-SRP myopathies.

Methods—We identified 2 patients with anti-SRP antibodies, both refractory to prednisolone, who were then treated with rituximab. 40 further individuals with anti-SRP antibodies were identified and included via a subsequent literature review bringing the sample size to 42 individuals. We then retrospectively reviewed lab results and clinical features of each individual, and their response to RTX based on their CK level and muscle strength post-therapy.

Results— 38 of the 42 patients who did not respond to conventional immunosuppressive medications responded to RTX with declines in CK levels post-therapy. 30 patients also responded with improved muscle strength. 2 patients achieved partial or full remission after RTX. Side effects were reported in 5 of the 42 patients; 3 of which were mild in nature and resolved with treatment, 2 which resulted in death.

Conclusions— The majority of patients responded favorably to RTX therapy, with reductions in CK levels and improved muscle strength. RTX is effective for patients with anti-SRP refractory to traditional immunosuppressive therapies.