

Haemorheopheresis in treatment of severe thyroid associated orbitopathy, the role of changes in selected pathogenetic indicators

Introduction:

Thyroid associated orbitopathy (TAO) is an autoimmune disease characterized by inflammatory swelling and cellular infiltration of orbital tissues. In severe cases causes disablement and disfigurement of patients. The treatment of choice has been for many years corticosteroid treatment. Its benefit was clearly demonstrated in spite of many important adverse events. The effect of other immunosuppressive treatment has not been clearly demonstrated.

Objective:

The aim of our study was to determine the effect of haemorheopheresis on the course of TAO in patients with very severe form of disease in a randomized study (10 patients treated with high doses of glucocorticosteroids and 10 patients on combination of glucocorticosteroids and haemorheopheresis). Secondary aim is to follow selected pathogenetically important immunological and biochemical parameters during haemorheopheretic treatment and to evaluate safety and tolerability of our method modification.

Patients and methods:

20 patients with very severe form of disease, without improvement on standard glucocorticoid treatment were enrolled into the study. They were randomized into two groups.

Ten patients were treated with glucocorticosteroid pulses - methylprednisolone 1 g iv. 3 times a week in first week and 0,5 g iv. 3 times a week in second and third weeks (9 pulses altogether, cumulative dose 4,5 g). Another group of 10 patients were treated with glucocorticosteroids pulses in the same way and also subjected to haemorheopheresis (twice weekly in weeks 1, 2, 4, 7, and 10 – ten procedures altogether). To evaluate the effect of treatment in both study groups a lot of investigations were done in fixed time schedule.

Results:

The clinical activity score (CAS) dropped in all patients, it occurred more rapidly in patients treated with haemorheopheresis. At the end of the study, there was no difference in the clinical activity score (CAS) and eye muscle width and proptosis measured by CT scan did not differ between the two groups. All immunoglobulin classes as well as specific autoantibodies dropped significantly, but only some markers of cell-mediated decreased.

Conclusion:

We conclude that haemorheopheresis can decrease disease activity more rapidly than standard high-dose glucocorticoid therapy. The procedure proved to be safe.

Key words: Thyroid associated orbitopathy, treatment, haemorheopheresis