PO 8

TOCILIZUMAB IN PATIENTS WITH THYROID EYE DISEASE – RESULTS OF A 12 MONTH FOLLOW-UP

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Introduction and Purpose: Thyroid eye disease (TED) is a challenging autoimmune disorder and tocilizumab (TCZ) is a monoclonal antibody indicated for resistant cases.
Our purpose is to evaluate the effects of tocilizumab in our TED population at Centro Hospitalar Universitário do Porto.

Materials and Methods: Retrospective analysis of 5 patients with moderate to severe TED who were treated with TCZ. Clinical data was analyzed. Defined outcomes were subjective symptoms (including blurred vision, abnormal colour vision, diplopia and subjective exophtalmia), clinical activity score (CAS), objective colour vision (using Hardy-Rand-Rittler pseudoisochromatic test), OCT changes (RNFL and ganglion cell layer variation) and orbital CT changes (including muscle width variation and Barret index – which measures the risk of dysthyroid optic neuropathy), at month 0, 3, 9 and 12 months of follow-up.

Results and Discussion: All patients analyzed were diagnosed with Grave's disease and all were female. Age at TED symptoms uprising was 51.6 (± 8.3) years old. CT scan findings were notable for bilateral but asymmetric thickening of extraocular muscles (medial, inferior and superior rectus), proptosis and in two cases conflict of space in the apex. One of the patients presented with clear signs of compressive neuropathy. Colour vision was normal in all but this patient at baseline (which subsequently improved during after treatment). OCT RNFL thickness and GCL thickness were normal in all patients but one who had been submitted to an epiretinal membrane surgery.
Previous treatments included anti-thyroid drugs in all patients, thyroidectomy in 2 of these. Both patients with apical conflict of space and risk of nerve compression received corticosteroids (one oral, one intravenous).
TCZ was given subcutaneously (sc) in 3 cases and intravenously (iv) in 2 cases. Dosage was 126mg sc (either weekly or every 2 weeks) and 8 mg/kg iv (either monthly or two times a month). At baseline, CAS was 4.2 (± 1.3). After initial treatment, the results at 3 months were a subjective improvement in 4 of the 5 patients, an average CAS of 1.6 (± 1.5). At 9 months, CAS was 2 (± 1.6) and symptoms improved in all but one patient, who eventually switched administration form to iv due to adverse cutaneous effects. At 12 months, CAS was 1.3 (± 1.9) and all patients reported symptomatic improvement.
Comparison of orbital CT scans before and at 12 months after TCZ first treatment revealed a difference between the average width of all four extraocular muscles: lateral rectus -2.2 mm; medial rectus -0.8 mm; inferior rectus -0.61 mm; superior rectus -1.6 mm. Both vertical and horizontal Barret index showed improvement from an average 58.8 ±12.0% and 50.9 ±14.9% pre-TCZ to 50 ±15.2% and 44 ±11.5% 12 months post-TCZ, respectively.
After 12 months, three of the patients continued to receive treatment with TCZ.

Conclusion: The analysis of our patients revealed that most of them improved in both subjective and objective outcomes with TCZ as it seems to reduce disease activity. Limitations of this study include a lower number of patients and absence of control group.