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NOVEL TREATMENTS FOR GO: RITUXIMAB AND IGF-1 ANTAGONIST

Affecting only around 100-200 individuals per million population per year, the treatment of Graves' orbitopathy (GO) remains a challenge. Around 10-20% of patients with Graves' disease (GD) have GO in a form demanding therapy. Conventional anti-inflammatory medical therapy remains unsatisfactory in up to 1/3 of patients, either due to being inefficient or by failing to hinder reactivation.

Based on small non-randomized case-series showing overwhelmingly positive effects in moderate to severe active GO, Rituximab (RTX) a chimeric (mouse-human) monoclonal antibody directed against the CD20 antigen on B lymphocytes has recently been investigated in two small randomized blinded studies. One study (Salvi et al., 2015), in 32 patients, demonstrated better efficacy (decreased clinical activity score [CAS], fewer cases of reactivation, and less rehabilitation surgery), when compared to i.v. methylprednisolone. The other study (Stan et al. 2015), comparing RTX with placebo, failed to demonstrate superiority of RTX, whether evaluated as a decrease in CAS or a number of secondary end-points. We remain to understand this discrepancy. Additionally, cost and side-effect profile of RTX mandates cautious interpretation of the data. Carrying out larger studies with longer follow-up, before determining the place of RTX in GO-therapy, remains a priority. Efficacy, side-effects and current EUGO-recommendations will be reviewed.

Teprotumumab, a human monoclonal anti- IGF-1Receptor blocking antibody inhibits TSH and IGF-1 action in orbital fibrocytes (Chen et al. 2014). In particular, Teprotumumab blocks the induction of proinflammatory cytokines by TSH. A current phase 2 clinical trial in man investigates the therapeutic efficacy in GO.

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