Orbital Floor Depomedrone as a Temporising Measure in Moderate to Severe Thyroid Eye Disease and other Orbital Conditions During the Covid 19 Pandemic

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Introduction

Thyroid eye disease can have a significant impact on a patient's quality of life with functional problems ranging from dry eye and associated discomfort, socket pain, double vision and blurred vision. At the extreme end of the spectrum the disease can be sight threatening. The patients can also suffer cosmetically with red eyes and eyelids, swelling of the eyelids, proptosis of the eyes and a staring appearance, all of which can lead to significant psychological impact. The age at which patients can be affected is broad, although the median age of presentation is 43, with a higher prevalence in women [1].
Disease management during covid has been particularly challenging.

Aim

To review the effectiveness of orbital floor methylprednisolone acetate (depomedrone) (OFDMA) injections used in thyroid eye disease (TED) and other orbital conditions, as an alternative to intravenous methylprednisolone (IVMP) during COVID times.

Methods

Patients with TED and other inflammatory orbital conditions requiring IVMP would have to shield and would be at risk of COVID infection due to immunosuppression. Periocular steroids have been investigated in the past with some success [2,3]. As per national guidelines they were given the option of OFDMA.

Data was collected from patients receiving OFDMA from 27/11/2019 to 15/9/21, at the Royal Hallamshire Hospital, Sheffield, using written notes. The clinical activity score (CAS) was determined prior to the administration of OFDMA in 17 patients aged between 28 and 82 with moderate to severe TED. This was compared to the CAS score taken at clinical follow up, to check for changes in TED activity. 3 patients with orbital xanthogranuloma, myositis and IgG4 dacroadentis were also assessed prior to and following administration of OFDMA, with clinical assessment guiding the need for further intervention.

Results

In the patients with TED, after administration of orbital floor depomedrone injection(s) 35% of patients remained stable and 47% of patients had an improvement in the CAS score. In the 3 patients with other orbital conditions, all had a good response to the orbital floor depomedrone injection. The patient with myositis went on to have radiotherapy.

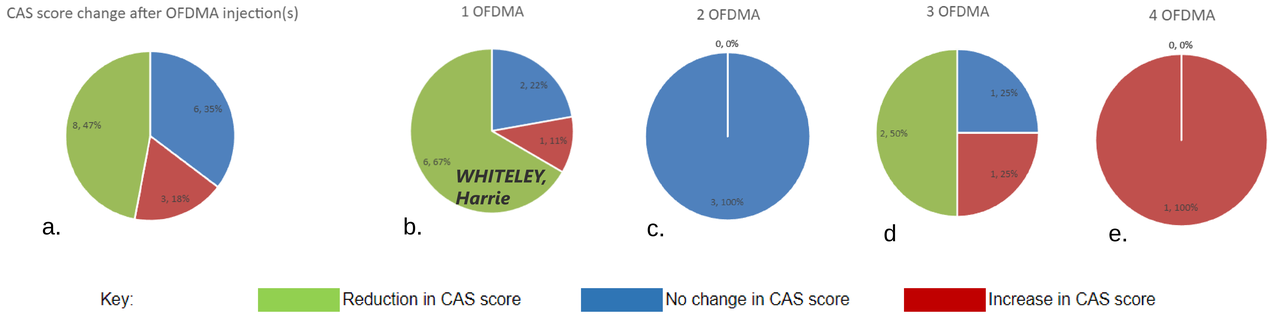


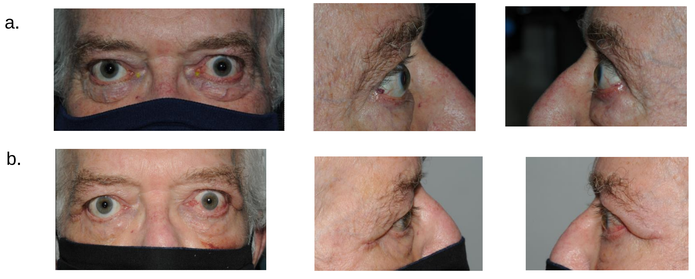
Figure 1 (pie charts above):

a. Shows the change in CAS score for all 17 patients that underwent any number of depomedrone injection(s). 8 patients (47%) had an improvement in CAS score.
b. to e. Show the change in CAS score for patients that underwent 1 through to 4 OFDMA injection(s) respectively.

Figure 2:

An example of a patient with moderate TED, who underwent a single OFDMA injection.

The images show a. before and b. after, with improved lid swelling 6 weeks post OFDMA.



Discussion

The results suggest that patients with moderate to severe thyroid eye disease can effectively be prevented from disease progression by using OFDM as a temporising measure. If this is the case then it is more likely to be evident after the initial injection(s). 4 or more OFDMA injection(s) may not be of benefit if there is continued disease progression.

This study is limited by the number of cases examined.

Conclusions

Orbital floor depomedrone injections were effective as a temporising measure to prevent worsening of TED when given as an alternative to IVMP due to patient or clinician concerns regarding Covid 19, risk of immunosuppression and necessity for shielding while on IVMPA. It is also an effective treatment for other non-TED orbital conditions.

References

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Acknowledgement

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