A Case Series: Rituximab in the Treatment of Ocular Surface Disease

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Purpose

Assess the efficacy of rituximab in the treatment of ocular surface disease in patients at our local unit over a five year period, between December 2017-September 2022 .

Methods

A retrospective review of clinical records was performed for patients who had received rituximab in this time frame and 11 patients were identified.

Main outcomes included clinically evident remission of disease, best corrected visual acuity, the reduction in oral corticosteroid therapy and other adjunct immunosuppression.

Remission was confirmed after review by two corneal specialists in ocular surface disease after consecutive clinic reviews for 2 months post rituximab. Absence of progressive scarring and active inflammation was noted.

Results

Prior to rituximab commencement, all patients were on >30mg oral prednisolone or other systemic immunosuppression. No adverse events were documented with rituximab use. All 11 patients received 1 cycle of rituximab and 1 patient received 2 cycles.

- Patients had one of the following diagnoses; ocular mucous membrane pemphigoid, other cicatricial conjunctivitis, peripheral ulcerative conjunctivitis, atopic eye disease, Steven Johnson Syndrome or corneal graft rejection.
- The median follow up period was 17 months (IQR: 6-44 months) since the last rituximab infusion.
- Clinical remission was observed in 9 patients. Of these, 5 had ocular mucous membrane pemphigoid, 2 had peripheral ulcerative keratitis, 1 had Sjögren's Syndrome, and 1 had cicatricial conjunctivitis of another cause.

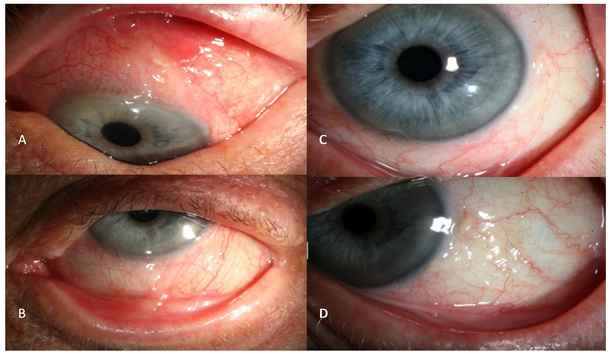


Figure 1: (A and B) Pre rituximab treatment. Ocular surface inflammation with cicatricial changes, symblephara.

(C and D) Improved clinical appearances post rituximab treatment.

(Photographs used with patient consent)

Results

- BCVA improved in 6 patients, remained stable in 3 patients and worsened in 2 patients after rituximab therapy.
- The 2 patients with worsening vision despite rituximab were deemed to have recalcitrant disease and were escalated to cyclophosphamide therapy.
- At most recent follow up 7 patients remain on a tapering course of oral steroids and 1 patient remains on other adjunct immunosuppression.

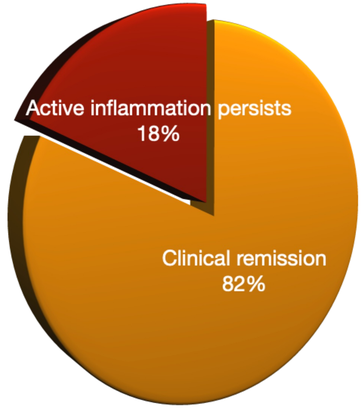


Figure 2: Response post rituximab

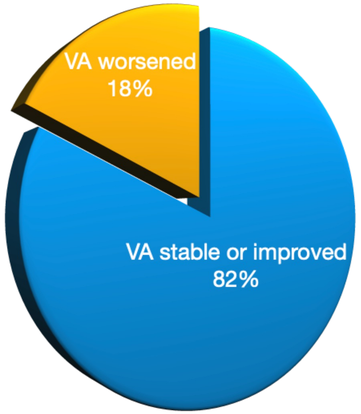


Figure 3: BCVA post rituximab treatment.

Conclusion

Rituximab therapy has been shown to be an effective treatment in ocular surface disease patients who are refractory to standard immunosuppression.

The beneficial response demonstrated includes stabilisation of inflammation and improvement in visual acuity in most patients.