A Novel Way Of Managing Corneal Neovascularisation (CoNV)

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INTRODUCTION

Corneal Neovascularisation (CoNV) is estimated to affect 1.4 million people worldwide through a variety of pathologies by sacrificing corneal clarity, leading to compromised visual acuity through oedema, lipid deposit and scarring. The pathogenesis of CoNV is largely down to a homeostatic imbalance between pro-angiogenic and anti-angiogenic factors [1]. Treatment armamentarium includes topical corticosteroids, NSAIDs, argon laser and fine needle diathermy all with varying levels of success. Vascular endothelial growth factor (VEGF) plays a crucial role in corneal angiogenesis which if targeted by inhibiting this pathway could be an effective treatment option.

We present 2 cases with images demonstrating the use of anti-VEGF injections where conventional treatment options have not been adequate.

CASES

1. 38 yr old recurrent episodes of HSK over the years, Right CoNV with lipid keratopathy secondary to Herpes Simplex Virus (Image A & B)

2. 2) 50 yr old male, Left CoNV with lipid keratopathy secondary to Herpes Zoster Virus (Image C & D)

METHOD

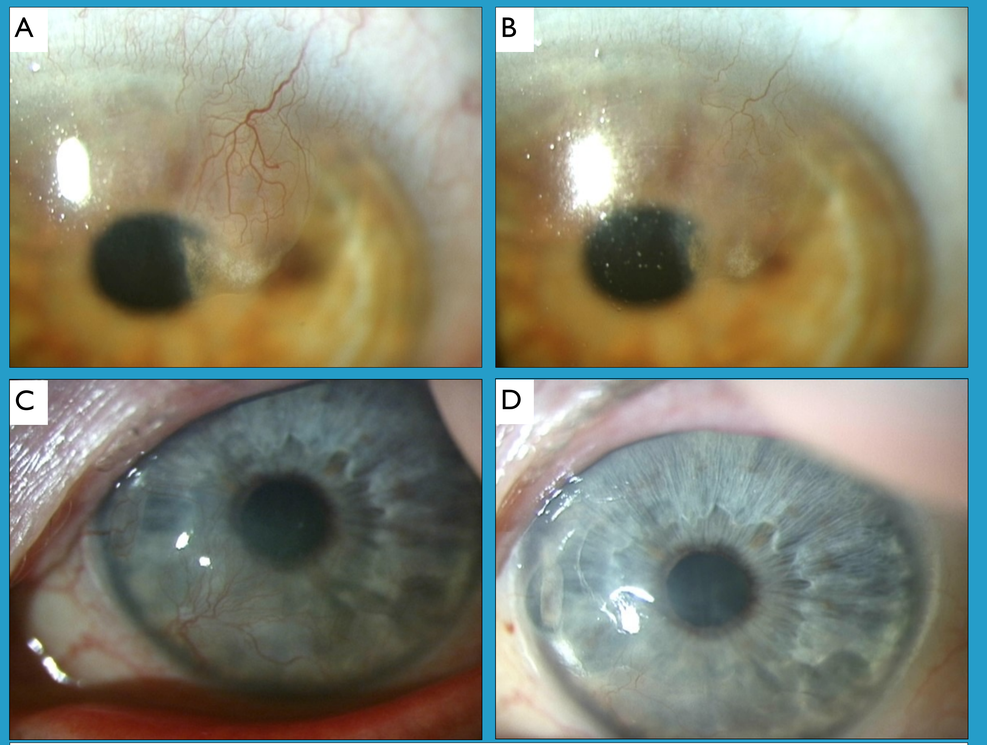
All ranibizumab injections were performed on the slit lamp under topical oxybuprocaine hydrochloride 0.4% and povidone 5% cover

1) 0.05 ml given intrastromally toward the distal end of the pathologic blood vessels

2) 0.05ml given subconjunctivally near the limbus adjacent to the pathologic blood vessels

CONCLUSION

The use of subconjunctival and intrastromal ranibizumab resulted in lighter lipid deposition, improved corneal clarity and regression of corneal vessels in these cases where conventional medical treatment had failed. No adverse effects such as IOP changes, epitheliopathy, epithelial defect or stromal thinning were seen making it a safe and effective treatment option to be considered in the management of CoNV. Further work is needed on long term efficacy and dosing regimen.



A) Lipid keratopathy secondary to HSV B) 4 months post 1st and only injection
C) CoNV secondary to HZV D) 6 months post 2nd injection

REFERENCES

1. Feizi, S., Azari, A.A. & Safapour, S. Therapeutic approaches for corneal neovascularization. Eye and Vis 4, 28 (2017).