

Treatment of Pinguecula with Eye Drops of Dobesilate

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Abstract

Inhibition of fibroblast growth factor and vascular endothelial growth factor signalling pathways is effective in causing vessels regression in pinguecula. Regression of aberrant conjunctival vessels was documented 2 weeks after topical administration of ocular drops of dobesilate twice a day. At 2-months follow-up no recurrence nor ocular irritation were noted.

Keywords: Pinguecula; Dobesilate; Fibroblast Growth Factor; Vascular Endothelial Growth Factor

Introduction

Pinguecula is an inflammatory and angiogenesis condition affecting conjunctiva [1-4]. Solar damage due to ultraviolet radiation is implicated in the development of pinguecula. It has been reported that dobesilate is a well-characterized inhibitor of Fibroblast Growth Factor (FGF) and Vascular Endothelial Growth Factor (VEGF) signalling pathways in inflammatory and angiogenesis related conditions [5-7]. Thus, dobesilate is a good candidate for treating inflammation and angiogenesis-dependent diseases. In this report we assess the efficacy of dobesilate eye drops in a patient with pinguecula.

Case Presentation

A 48-year-old female presented with pinguecula in the nasal side of her right eye. This study was performed with patient consent after the Ethical Committee approval of our Institution. The patient was given a sterile eye drops bottle containing dobesilate (2.5 mg/ml) for a 2 weeks self-administration (1 drop/twice a day). At baseline, an intense vascularization in the conjunctiva was observed (Fig. 1). After treatment (Fig. 1) scattered residual vessels of pinguecula was depicted. At 2-month follow-up no recurrence of vascularization was noted.



Figure 1: Aspect of pinguecula before and after treatment with ocular drops of dobesilate for two weeks.

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Discussion

We present a case of pinguecula that displays prominent vascularization treated with dobesilate. The treatment decreased conjunctival vascularization. Dobesilate, is a medicament which has been used since the sixties, showing a safe profile as powerful inhibitor of FGF and VEGF [8].

It also shows powerful anti-inflammatory and anti-angiogenic activities in patients with inflammatory and angiogenic conditions [9,10]. Thus, it seems obvious that these activities may, at least in part, contribute to the improvement of pinguecula, observed after the dobesilate treatment described in the present report.

Conclusion

We describe the efficacy of dobesilate to treat pinguecula topically. These results open new avenues for treating corneal inflammatory and angiogenesis-dependent diseases.

Conflict of Interest

The authors declared no potential conflicts of interest with respect to the research, authorship and/or publication of this article.

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None.

Data Availability Statement

Not applicable.

Ethical Statement

The project did not meet the definition of human subject research under the purview of the IRB according to federal regulations and therefore was exempt.

Informed Consent Statement

Informed consent was taken for this study.

Authors' Contributions

All authors contributed equally to this paper.

References

1. Suarez MF, Echenique J, López JM. Transcriptome analysis of pterygium and pinguecula reveals evidence of genomic instability associated with chronic inflammation. *Int J Mol Sci.* 2021;22:12090.
2. Jung S, Kwon JW, Hwang HS, Chuck RS. Vascular regression after pinguecula excision and conjunctival autograft using fibrin glue. *Eye Contact Lens.* 2017;43:199-202.
3. Lemercier G, Cornand G, Burckhart MF. Pinguecula and pterygium: Histologic and electron microscopic study. *Virchows Arch A Pathol Anat Histol.* 1978;379:321-33.
4. Beheshtnejad AH, Ghassemi H, Abdolkhalegh H, Atighehchian M. Clinical and autofluorescence findings in eyes with pinguecula and pterygium. *J Ophthalmic Vis Res.* 2023;18:260-66.
5. Cuevas P, Sánchez I, Lozano RM, Giménez-Gallego G. Dobesilate is an angiogenesis inhibitor. *Eur J Med Res.* 2005;10:369-72.
6. Albiñana V, Giménez-Gallego G, García-Mato A. Topically applied etamsylate: A new orphan drug for HHT-derived epistaxis (antiangiogenesis through FGF pathway inhibition). *TH Open.* 2019;3:e230-43.
7. Fernández IS, Cuevas P, Angulo J. Gentisic acid, a compound associated with plant defense and a metabolite of aspirin, heads a new class of *in-vivo* fibroblast growth factor inhibitors. *J Biol Chem.* 2010;285:11714-29.

8. Angulo J, Cuevas P, Cuevas B. Diacetyloxyl derivatization of the fibroblast growth factor inhibitor dobesilate enhances its anti-inflammatory, anti-angiogenic and anti-tumoral activities. *J Transl Med.* 2015;13:48.
9. Cuevas P, Angulo J, Outeiriño LA. Intravitreal injection of etamsylate improves visual acuity in patients with dry age-related macular degeneration: Results from an international multicentric randomized sham-controlled study. *Eur J Med Res Clin Trials.* 2023;5:103-13.
10. Cuevas P, Outeiriño LA, Azanza C. Clinical efficacy of intravitreal injection of dobesilate for reversing choroidal angiogenesis in age-related macular degeneration. *J Aging Gerontol.* 2013;1:1-8.

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