

Triple Modulation on Wound Healing in Glaucoma Surgery Using Mitomycin C and Ologen Augmented with Anti-Vascular Endothelial Growth Factor

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Abstract : Purpose: To describe a novel technique of trabeculectomy targeting triple modulation on wound healing to increase the overall success rate. Method: Ten eyes of 10 patients underwent trabeculectomy with subconjunctival mitomycin C (0.4mg/ml for 4 minutes) application combined with Ologen implantation subconjunctivally and subsclerally. Five of these patients underwent additional phacoemulsification with intraocular lens implantation. The Ologen implant was wet with 0.1 ml Bevacizumab. Result: All the eyes achieved target intraocular pressure (IOP), which was maintained until one year of follow-up. Two patients needed anterior chamber reformation at day two post surgery. One patient needed cataract surgery after four months of surgery and achieved target intraocular pressure on two topical antiglaucoma medicines. Conclusion: Vascular endothelial growth factor (VEGF) concentration has been seen to increase in the aqueous humor after filtration surgery. Ologen implantation helps in collagen remodelling, antifibroblastic response, and acts as a spacer. Bevacizumab augmented Ologen, in addition, targets the increased VEGF and helps in decreasing scarring. Anti-VEGF augmented Ologen in trabeculectomy with mitomycin C (MMC) hence appears to have encouraging short-term intraocular pressure control.

Keywords : ologen, anti-VEGF, trabeculectomy, scarring

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