

Posterior sub-Tenon capsule anesthesia for photocoagulation treatment of diabetic retinopathy performed in an inner-city county hospital clinic setting

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Proliferative diabetic retinopathy (PDR) is a blinding eye disease demanding prompt therapy. However, treatment with panretinal photocoagulation (PRP) can be painful thereby limiting its extent. In addition, compliance to diabetic eye visits remains poor particularly in inner cities. Therefore, it is imperative to optimize treatment during clinic visits. The purpose of this study is to present the effect of sub-Tenon (Sub-T) capsule lidocaine anesthesia on PRP treatment extent for PDR performed during the eye clinic visit.

This is an IRB-approved retrospective review of initial 12 eyes (9 subjects) with PDR undergoing PRP treatment involving Sub-T anesthesia in the eye clinic. Sub-T capsule lidocaine anesthesia was delivered and PRP was immediately performed. Primary end point was extent of treatment (number of PRP laser spots) delivered. Comparison was made to PRP in prior sessions without Sub-T anesthesia.

All subjects had active PDR and sometimes vitreous hemorrhage (VH) at time of treatment. Decision was made to offer Sub-T anesthesia due to intolerable pain from prior PRP treatments in all subjects. We observed all subjects were able to tolerate a significantly greater extent of PRP with Sub-T anesthesia even with presence of VH, oftentimes undergoing thousands of laser spots and capable to complete treatment in same clinic visit. By comparison, prior PRP treatments (without Sub-T anesthesia) were much less extensive sometimes involving only a few laser spots.

We conclude that Sub-T anesthesia allows a tier of pain control for those not able to tolerate traditional PRP without anesthesia performed in the eye clinic. This new information suggests that certain patients undergoing PRP can be offered Sub-T anesthesia, and it will be important to define algorithm for selection of such individuals.