

# Negative Dysphotopsia Secondary to Poor Wound Construction in Femtosecond Assisted Cataract Surgery

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I have no financial interest in any of the products or techniques discussed in this presentation

# Purpose

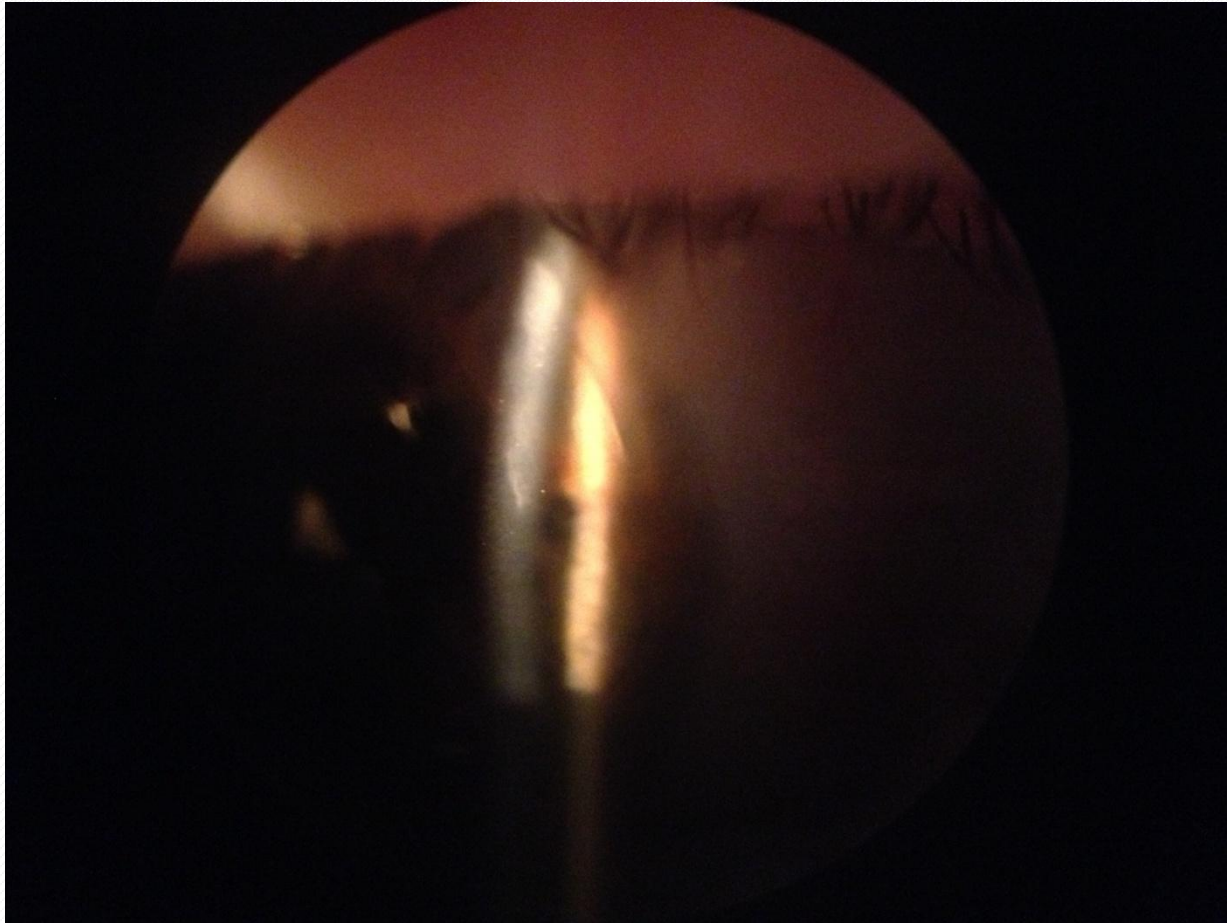
To evaluate the feasibility of avoiding negative dysphotopsias following cataract surgery by performing cataract surgery with a peripheral corneal incision and implanting a large diameter hydrophilic acrylic intraocular lens.

# Case Report

This case study is of a 64 year old man who presented with complaints of negative dysphotopsia following cataract surgery in his left eye (performed seven months prior). The patient was correctable to 20/20 with a -1.75 refraction. Examination showed a 2.75x1.5mm temporal clear corneal incision (CCI) that began 0.50 mm from the limbus (figure 1). Because of the atypical location of the incision, the patient was asked if his surgery had been performed “with the laser.” “Of course,” was his answer, “I had everything done the best way possible.” The patient had a small pupil (4mm scotopic) and a well positioned silicone accommodating IOL (Crystalens AO). The negative dysphotopsia was noted with a temporal light source but not with a nasal light source (tested with right head turn and left gaze in order to remove any impact from the patient’s nose), a finding that supported the incision as the symptom’s culprit.

# Figure 1

Anteriorly malpositioned femtosecond CCI (9 months postop)

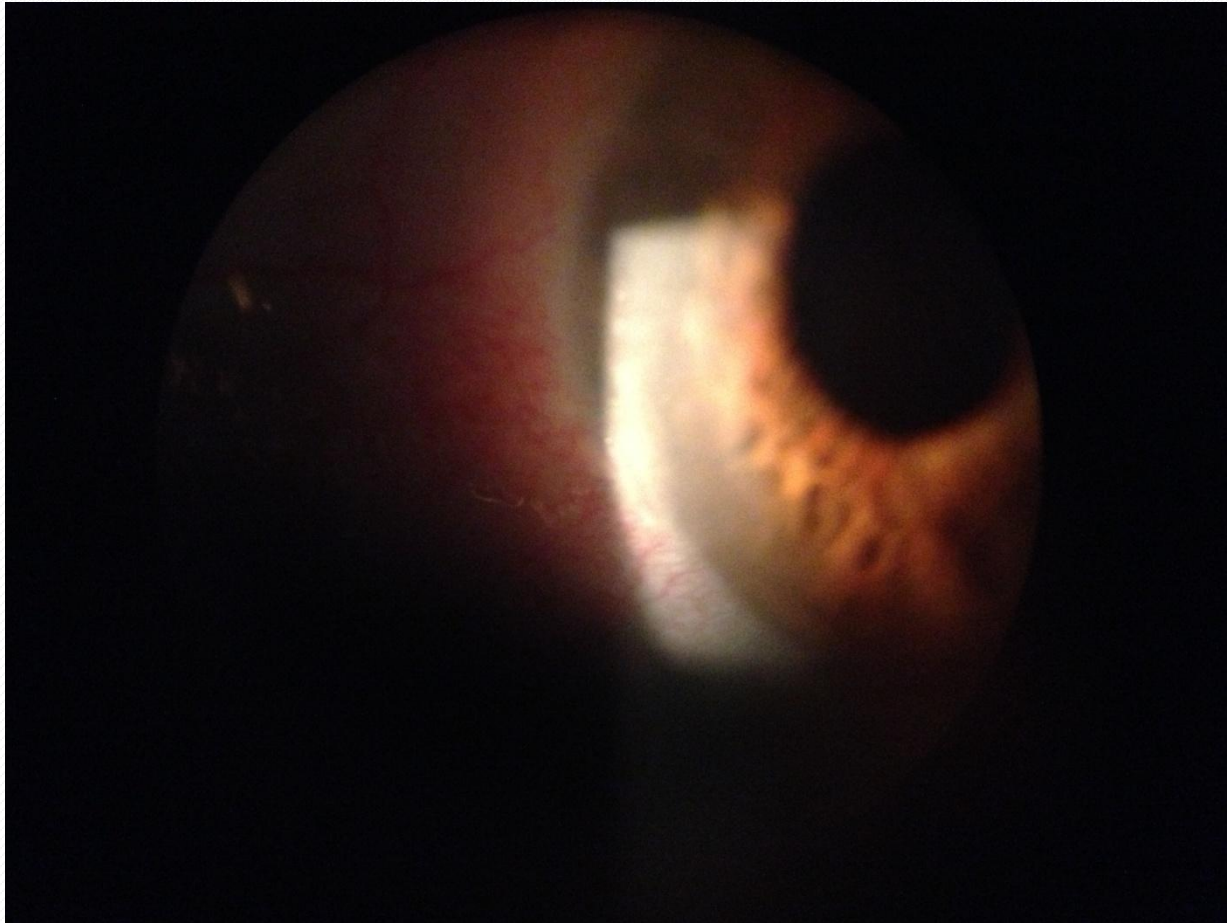


# Fellow Eye Treatment

The patient had a 2-3+ nuclear sclerotic cataract in his fellow eye with corrected vision of 20/30 (+0.75 refraction). After a lengthy discussion with the patient, cataract surgery (phacoemulsification) in the fellow eye was then performed with a manual, peripheral 2.4 mm incision (figure 2) and implantation of a hydrophilic acrylic IOL with a 6.5mm optic (horizontal meridian; SOFTEC HDO), targeting the eye for emmetropia.

# Figure 2

Standard manual limbal CCI (2 months postop)





# Results

By the first postoperative day the patient had 20/25 uncorrected distance vision OD and no dysphotopsias. He has remained stable (now 6 months postoperatively).



# Discussion

While it is possible that this patient's complaints of negative dysphotopsia were IOL related, the muscle light testing performed as stated above, combined with the patient's small pupil size, seemed to be rather convincing evidence that the centrally placed corneal incision was causing the symptoms.

Certainly, we could have implanted the same model IOL which would have provided us with better data in making the comparison. However, this was not an experiment, and we were looking to minimize, as much as possible, the patient's risk of negative dysphotopias in the second eye. For this reason, the larger diameter Softec HDO was used.

Placing a manual CCI at (or very near) the limbus is not generally considered a challenging step in cataract surgery. Avoiding a more centrally placed manual CCI should be attainable with a high degree of consistency, even for novice surgeons. This case suggests that a centrally malpositioned CCI may be a complication peculiar to femtosecond laser cataract surgery.

# Conclusions

Minimizing the incidence of negative dysphotopsias following cataract surgery may involve avoiding placing the incision too far centrally. This may be easier to accomplish with a manual incision rather than a femtosecond laser. This case is a reminder that new technologies can introduce new risks. Further study is warranted.



Thank you for your attention