Cataract Surgery in the BostonSight® PROSE Patient

It is not unusual for patients wearing BostonSight PROSE devices to require cataract surgery. Over the past decade we have had substantial experience with PROSE patients with ocular surface disease or ectasia/irregular astigmatism who require cataract surgery, and wish to resume wear of their prosthetic device immediately post-op for comfort, vision, or both.

**Underlying autoimmune disease or history of scleral or corneal melt**
If there is underlying auto-immune disease, or history of scleral or corneal melt, it may be wise to increase systemic immunosuppression for a couple of days pre-op and then taper in the second week post-op to avoid surgical activation of inflammatory problems in the eye and at the wound.

**Surgical Technique Recommendations**
Regarding surgical technique, we advise a scleral tunnel or “near-clear cornea” wound, rather than a true corneal wound, for more rapid and complete wound healing. We recommend suturing the wound, even if it appears “self-sealing.” If there is no evidence of endophthalmitis or wound problem at the one week post-op visit, then the patient may resume daily application and removal of his or her PROSE device. The suture should be left in. The suture can be removed if and when it loosens or in the event of vascular in-growth after one month has elapsed.

**For patients who cannot tolerate deferring post-op PROSE device wear**
There is an occasional Stevens-Johnson syndrome or cGvHD patient who cannot tolerate deferral of PROSE device wear for even one week. In those instances we advise that patient undertake a prosthetic device application and removal in the surgeon’s office, with slit lamp exam after prosthetic device removal, to confirm that the wound and anterior segment are not disrupted by application and removal.

**Use of topical NSAID’s post-op**
Unless there is specific indication we advise avoidance of topical NSAID post-op, because of potential adverse effects on the ocular surface.

**Desired post-op refractive error**
As far as desired post-op refractive error, the current PROSE device will have the appropriate power, if the achieved post-op spherical equivalent refractive error matches the pre-op spherical equivalent refractive error, in both cases WITHOUT the prosthetic device in place. K's for IOL power calculations can be measured immediately after prosthetic device removal. Patients do not
need to take a PROSE device holiday before measurements for IOL calculation, because unlike a conventional contact lens, the PROSE device does not touch the cornea. There is no molding.

If the patient desires a post-op uncorrected refractive error different from the pre-op uncorrected refractive error, then the pre-op PROSE device will require a “modified remake”, on the basis of power, in order to correct the eye post-op. Power change can be measured as spherical over-refraction of the pre-op PROSE device, typically at two-six weeks post-op, and that change communicated to us by FAX, to the attention of: BostonSight, Samantha Cohen, Device Administrator, at 781-726-7476. The PROSE doctor will review the refraction data, and then order a new prosthetic device for power change. This will typically eliminate the need for a patient’s trip to Massachusetts to assess prosthetic function on the eye.

Toric IOLS are ill-advised in PROSE patients. The PROSE device corrects all corneal (but no lenticular cylinder) and the compound effects of toric IOL for corneal cylinder and PROSE device will yield residual astigmatism.

Contact information
For any questions related to cataract surgery in a BostonSight PROSE patient, please feel free to contact our medical staff by telephone 781-726-7337 or 781-726-7438 or email: Deborah S. Jacobs, M.D., Medical Director, djacobs@bostonsight.org

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