Treatment of Ocular Graft-versus-Host Disease/Dry Eye Syndrome with the PROSE Device

Prathik M Philip¹ OD, MPH
New England College of Optometry, Boston, MA, Boston Sight, Needham, MA

Chirag Patel² OD, FAAO

Introduction

Graft-Versus-Host Disease (GvHD) is a complication that occurs after an allogeneic bone marrow, stem cell, or cord blood transplant in which the transplanted cells recognize the recipient as foreign. Approximately 50% patients have complications of GvHD and 60-80% of those patients have ocular involvement related to the condition. Ocular GvHD manifests in symptoms of blurry vision, foreign body sensation, burning, photophobia, chronic conjunctivitis, dry eye, and eye pain.

Case Description

R.G. is a 63 year old Caucasian male who reported for a Prosthetic Replacement of the Ocular Surface Ecosystem (PROSE) device consult at Boston Sight on August 17th, 2016. His chief complaint was severely dry, irritated eyes OU that had been constant for many years. His ocular history includes graft-versus-host disease (GvHD) with severe ocular surface disease (OSD) OS>OD, filamentary keratitis OU, corneal ulcer OS, keratoconjunctivitis sicca OS, cataract OS, PCIOL OD, and he is a glaucoma suspect.

His ocular health is being managed by an Ophthalmologist who referred the patient to Boston Sight. He has history of a corneal ulcer OS which resolved after treatment with Prokera biologic bandage device in June 2016. At time of the consult, the ophthalmologist managed the patient’s OSD with bandage soft contact lenses (BSCl) OU that were replaced every three weeks. Prior to use of the BSCl, R.G. never wore contact lenses. His ocular medications include prednisolone acetate 1% and Refresh Optive Advanced preservative free vials.

R.G.’s entering visual acuity was 20/20 OD and 20/80 OD, wearing glasses with Snellian letters. His prescription was +1.50x27 OD and +2.00-1.25x149 OS with a +2.75 add.

Slit lamp biomicroscopy revealed normal adnexae, sclera, and irides OU. The patient’s lids had 2+ Meibomian gland dysfunction (MGD) OU, and the reservoir within the device allows the cornea to be bathed in preservative free saline which keeps the eye lubricated thereby promoting healing. By using the PROSE device it is possible to not replace the Ocular Surface Ecosystem (PROSE) device to treat severe ocular surface disease (OSD). There are a number of treatment modalities which can be used for the treatment of OSD based on the severity of the condition. For minor cases of OSD, artificial tear drops and ointments can be used to keep the eye lubricated. At times bandage soft contact lenses may be necessary to protect the eye. Amniotic membranes have also proven to be useful in healing the cornea for more moderate to severe cases. When these modalities fail, the use of the PROSE device offers complete replacement of the ocular surface environment. Proper fitting of the devices ensures that the health of the eye is maintained while promoting healing. The size of the device allows the device to be comfortable in even new contact lens wearers. The surface of the device protects the cornea from the environment and from mechanical disruption caused by the eye lids.

References


