Low Vision Management of a Patient with Profound Visual Impairment

Abstract
38 year old male with NLP OD, 2/32 OS with significant overall visual field loss. Unique management due to profound vision loss with predominantly non-optical aids that are not as well known.

I. Case History
- Chief Complaint
  - 38 year old African American male complaining of difficulty seeing at all distance, difficulties with mobility, and severe glare accompanied with headaches.
- Personal Medical History
  - Multiple benign brain lesions, surgically removed, ongoing
  - Radiation therapy
  - No overt cognitive impairment
- Medications: none
- Personal Ocular History
  - Progressive vision loss OD then OS led health care team to find multiple benign brain lesions
- Other relative information
  - Patient is still undergoing surgery and radiation treatment, feels like vision gets worse with every additional procedure
  - Patient is depressed and under emotional strain as his vision loss was sudden

II. Pertinent findings
- Best Corrected Visual Acuity
  - Distance: OD NLP, OS 2m/32-2 with ETDRS chart
  - Near: OD NLP, OS 5M print at 10cm with Lighthouse Game card
- (+) APD OD
- Contrast
  - Severely reduced at 0.45 log units with Pelli Robson
- Visual field
  - Constricted 360 OS with finger counting fields
  - Goldmann Visual Field to be done at follow up
- Slit lamp
  - Unremarkable
- Fundus with undilated evaluation
  - 0.40 round cupping with optic nerve head pallor 360 OU
  - Remainder unremarkable

III. Differential diagnosis
- Primary: optic atrophy OU secondary to brain lesions and radiation
• Others conditions that cause severe vision loss in this age group: diabetic retinopathy, retinal detachment, trauma

IV. Diagnosis and Discussion
• Pending MRI/CT from patient to definitely know where lesions are
• Most likely area of lesions include optic nerve as patient reports no other symptoms except for vision loss
• Novel research in treatment of optic atrophy
  o Patients with optic atrophy that is generally considered irreversible are being treated with autologous bone marrow derived stem cells
  o Study to be completed in 2017

V. Treatment and Management
• Protect the good eye: full time spectacle wear with polycarbonate or trivex lenses
• Glare control
  o Even patients who are NLP OU have glare issues due to autonomic innervation
• Electronic aids: CCTV, iPhone/smartphone with zoom capability
  o Reverse contrast
• Mobility training important while patient still has some usable vision
• ADL training
• Talking devices (books, acrobat, phone tree)
• Counseling/support groups

VI. Conclusion
Patients with profound visual impairment have different visual needs than that of a typical low vision patient. Clinicians should be aware of options for non optical low vision aids and services for patients with profound visual impairment.

References:

