A Recurring Crisis: Management of Posner-Schlossman Syndrome

Suzanne Kim OD
VA Connecticut 950 Campbell Ave, West Haven, CT

Matthew Beard, OD
VA Connecticut 950 Campbell Ave, West Haven, CT

Nancy Shenouda-Awad, OD, FAAO
VA Connecticut 950 Campbell Ave, West Haven, CT

Theresa Zerilli-Zavgorodini OD, FAAO
VA Connecticut 950 Campbell Ave, West Haven, CT

Abstract

Posner-Schlossman Syndrome is a rare syndrome characterized by recurring unilateral anterior uveitis with extreme elevations in intraocular pressure. With prompt anti-glaucoma/anti-inflammatory treatment, the condition can be subdued, however long term management can be difficult.

I. Case History

- 80 year old Caucasian male
- Chief Complaint:
  - No visual or ocular complaints
- Ocular History
  - Posner-Schlossman syndrome OD since 1999
  - Elevated OD intraocular pressure on anti-glaucoma medication therapy
  - Highest untreated documented IOP 62 mmHg
  - Anterior chamber reaction resolved
  - Gonioscopy: open to ciliary body band 360 degrees with no peripheral anterior synechiae
  - Treatment: Cosopt, Iopidine, Alphagan, Pred forte Acetate 1%, Diamox
  - Imaging: Humphrey Visual Field 24-2 sita standard
    - 1999: Reliable testing with no glaucomatous defects
    - 2012: Borderline reliability OU. Early nasal defect OD. No glaucomatous defect OS
  - Vasoproliferative tumor OS (benign)
  - Visually significant cataracts OD
- Cataract extraction with PCIOL implant OS (less than 1 week prior to exam)

- **Medical History**
  - Hypertension
  - Malignant melanoma of skin
  - Benign prostrate hypertrophy
  - Hyperlipidemia
  - Osteoarthritis of knees

- **Medications**
  - **Ocular medications:**
    - Cosopt oph soln 1gtt OD BID
    - Ketorolac Tromethamine 0.5% oph soln 1gtt OS QID
    - Moxifloxacin HCl 0.5% oph soln 1gtt OS QID
    - Prednisolone Acetate 1% oph sus 1gtt OS QID
  - **Systemic medications:**
    - Amlodipine Besylate 10mg po QD
    - Hydrochlorothiazide 25mg half tab po QAM
    - Meloxicam 15mg po QD
    - Simvastatin 20mg half tab po QHS
    - Vitamin D3 1000 IU po QHS

**II. Pertinent findings**

- **Clinical (Glaucoma specialty clinic visit)**
  - Best corrected distance acuity: 20/50 OD, 20/60- OS. OD stable from prior exam. OS reduced from 20/50 prior to CE
  - IOP goldmann: at 1:35 PM
    - OD: 28 mmHg
    - OS: 24 mmHg
  - Slit Lamp Examination
    - Cornea: 1+ scattered keratic precipitates inferior OD, diffuse 1+ microcystic edema OS
    - No cells/flare/uveitis/posterior synechiae/ OD, OS
    - Lens: Grade 3 Nuclear sclerosis cataract OD; PCIOL OS
    - Gonioscopy:
    - Ciliary body band visible in all quadrants with grade 2+ pigment OU, no peripheral anterior synechiae OD, OS
  - Dilated Fundus Exam:
    - Cup to disc ratio:
      - OD: 0.7H/0.75V distinct, pink, (-) edema/pallor
      - OS: 0.5H/0.55V distinct, pink, (-) edema/pallor
    - Benign vasoproliferative tumor inferior periphery OS (Stable in appearance from time documented)
• Imaging
  o Humphrey Visual Field 24-2 sita standard 2014: Unreliable. Early nasal defect OD with scattered sup and inferior defects. Inferior arcuate defects OS.
  o Physical
    o BP 120/65 Right arm sitting at 7:30 am on 6/6/14
  o Laboratory studies
    o None

III. Differential diagnosis
  • Primary/leading:
    o Possner-Schlossman syndrome with secondary glaucoma
  • Others
    o Fuch’s heterochromic iridocyclitis
    o Acute angle closure glaucoma
    o Chronic angle closure glaucoma
    o Herpetic uveitis

IV. Diagnosis and discussion
  • Posner-Schlossman syndrome with underlying secondary glaucoma
    o Two documented incidents of acute elevated IOPs in right eye (1999) with periods of normal IOP ranges (under 21 mmHg) in between. Acute attacks were successfully treated with IOP lowering medications (Cosopt, Iodipine, Alphagan, Diamox) and Predforte Acetate 1%
    o Absence of acute pain symptoms during episodes
    o Angles open to ciliary body band 360 degrees which rules out angle closure glaucoma
    o Mild anterior chamber reaction during episodes
    o No signs of posterior synechiae or peripheral anterior synechiae
    o Keratic precipitates in the right eye only which is a more typical presentation in Fuch’s heterochromic iridocyclitis however patient was responsive to steroid medication during acute episodes
    o Waxing and waning of IOPs since episodes. Initiation of Timolol gttst in 2012 failed to lower IOP effectively. Cosopt gttts then initiated, however did not effectively lower IOP as well
    o Impression of underlying secondary glaucoma from c/d and IOP asymmetry and progressing early nasal defects on HVF 24-2 of right eye

V. Treatment, management
  • Combined cataract extraction and trabeculectomy were recommended by the glaucoma specialist for this patient as conventional anti-glaucoma medication therapies were ineffective in lowering the intraocular pressure of the right eye. A
more aggressive approach was deemed necessary to stabilize the right eye’s intraocular pressure and prevent glaucomatous progression.

- Monitor for glaucoma progression

VI. Conclusion

- The etiology of Posner-Schlossman is poorly understood. Although acute episodes can be promptly treated with anti-glaucoma and steroid medications, long term evaluation of patients show that intraocular pressure continues to be elevated and underlying secondary glaucoma remains with the need for further treatment.
- A typical course of anti-glaucoma medication treatment was followed for this patient; however, it proved to be ineffective in stopping the patient from glaucomatous progression. Trabeculectomy, an invasive procedure, was indicated to stabilize the patient’s fluctuations in intraocular pressure and delay further glaucomatous damage.
- Close monitoring of Posner-Schlossman syndrome patients for the development of secondary glaucoma even long after acute episodes of elevated IOPs is critical.
- Wax and waning of IOPs make it difficult to treat secondary glaucoma in patients with Posner-Schlossman syndrome via conventional methods with drops. Further aggressive treatment methods such as trabeculectomy need to be considered as an effective treatment option where conventional treatment is unsuccessful.