Idiopathic Recurrent Anterior Uveitis in a Patient with Multi-systemic Disorders

Abstract: Recurrent anterior uveitis presents with multiple systemic symptoms suggesting auto-immune diseases, but with few supporting blood work results. Case describes complexity of managing multi-systemic conditions within the context of anterior uveitis.

I. Case History
   a. Demographics
      i. 63 year old Asian male
   b. Chief Complaint
      i. Red eye OS for the past 5 days
   c. Ocular History
      i. Recurrent iridocyclitis OD
   d. Medical History
      i. High cholesterol, degenerative lumbar spine, oral ulcers, malignant tumor of large intestine, Diverticular disease, solid lesions on liver CT, solid lesions on lung CT, arthritis, seasonal allergies
   e. Medication
      i. Systemic: Zyrtec, Crestor
   f. Other salient info
      i. Surgical history
         1. Laparoscopic low anterior resection of rectosigmoid colon (8/28/2014)
         2. Left submaxillary gland resection (1/2014)
      ii. Medication allergies
         1. Aspirin

II. Pertinent findings of initial encounter
   a. Clinical
      i. BCVA: 20/20-1 NIPH OD, 20/50+1, NIPH OS
      ii. Pupils: minimum constriction OU
      iii. IOP: 18 mmHg OD; 18 mmHg OS @ 13:01 via Goldmann
      iv. Anterior Segment:
         1. OD: Mild corneal striae, anterior chamber deep and quiet, (-) iris transillumination defects, pigment clumping on anterior lens capsule from previous synechia
         2. OS: 2+ diffuse bulbary injection, 2+ corneal edema, 2+ endothelial folds, trace fine keratic precipitates, anterior chamber 3+ cells with plasmoid aqueous, posterior synechia from 7:00-3:00, (-) iris transillumination defects

III. Differential Diagnosis
   a. Primary/leading
i. Idiopathic Recurrent Anterior Uveitis

b. Others
   i. Rheumatoid Arthritis associated Anterior Uveitis
   ii. Behcet’s Disease associated Anterior Uveitis
   iii. Ankylosing Spondylitis associated Anterior Uveitis
   iv. Sarcoidosis associated Anterior Uveitis
   v. Crohn’s disease/Irritable Bowel Syndrome associated Anterior Uveitis
   vi. Herpes Simplex Virus associated Anterior Uveitis

IV. Diagnosis and discussion
   a. Idiopathic recurrent anterior uveitis OS
   b. Uveitis has more than 85 difference causes, and can be associated with autoimmune disorders, infections, malignancy, toxin exposure, or may be idiopathic. It is believed that approximately 50% of uveitis are due to idiopathic conditions with about 20% having an underlying systemic cause.
   c. Due to patient history of multi-systemic inflammatory disorders, inflammatory causes for recurrent anterior uveitis were explored via blood work.
      i. With history of arthritis and family history of rheumatoid arthritis we ordered the following tests: Antinuclear antibody, Rheumatoid factor, Anti-cyclic citrullinated peptide, Erythrocyte sedimentation rate, C-reactive protein, Anti-mutated citrullinated vimentin, Anti-SSA, and Anti-SSB. All of these tests came back negative except for the ANA which is not specific for rheumatoid arthritis.
      ii. With a history of lower back pain and degeneration of patient’s lumbar spine, we wanted to rule out ankylosing spondylitis with the following blood work: HLA-B27, Erythrocyte sedimentation rate, and C-reactive protein. Again, all the results were negative except the HLA-B27 which was borderline.
      iii. With his history of lesions on his lung CT, sarcoidosis was on our list of differentials. An angiotensin converting enzyme test was completed and found to be negative.
      iv. Due to a history of oral ulcers, Behcet’s disease was to be ruled out with an HLA-B51 blood test. At this time, we are still waiting on results of this testing.
   d. Although the patient denies having any cold sores associated with his oral ulcers, Herpes Simplex associated anterior uveitis is to be considered. This patient did not have any iris atrophy, often associated with HSV but he did have an acute intraocular pressure spike which is suggestive but not pathognomonic of herpetic disease. Due to the patients adequate response to topical steroid treatment without the addition of an antiviral, Herpes Simplex associated anterior uveitis is not at the top of the differential list.

V. Treatment, management
   a. Educated patient on condition and complications associated with recurrent inflammatory events. At first visit, synechia was broken in office with 1 drop tropicamide 1%, 1 drop homatropine 5%, and 1 drop Phenylephrine 10%. Patient was to begin Pred Forte 1% q1h OS and homatropine 5% BID OS. One day later, patient presents with PHVA of 20/70 OS and IOP of 39 mmHg OS @ 8:47 am via Goldmann. Anterior chamber reaction was improving with 2+ cells and 1+ flare. Patient was given 1 drop Combigan OS and 500 mg oral acetazolamide in office. IOP was re-measured at 25
mmHg OS @ 9:20 am via Goldmann. Patient was to continue previous drop regimen and add Combigan BID OS. This treatment regimen continued for the next 8 days (4 office visits). At these four visits, the patient had stable PHVA of 20/70 OS and IOP OS was 21, 18, 22, and 21 mmHg via Goldmann, respectively. The anterior chamber reaction improved from 2+ cells, 1+ flare to trace cells and no flare by the fourth visit. At this time, the Pred Forte 1% was decreased to QID and the homatropine 5% was discontinued. For the next 11 days (2 office visits) the treatment regimen stayed the same. The vision and anterior chamber reaction continued to improve with PHVA OS of 20/30 and 20/25 and trace cells to no cells over this time. The patient was to continue the Combigan BID OS and begin to taper the Pred Forte 1% with 1 drop TID OS x 3 days, then BID X 1 week and QD X 1 week. Patient is to follow-up in 2 weeks.

b. During this follow-up time, blood work was ordered to rule out systemic causes for the recurrent anterior uveitis. The blood work ordered and the results are as follows:

i. Complete blood count with Differential – Within normal limits
ii. Angiotensin converting enzyme - Negative
iii. Antinuclear antibody - Positive
iv. Erythrocyte sedimentation rate - Negative
v. C-reactive protein - Negative
vi. Rheumatoid factor - Negative
vii. Anti-cyclic citrullinated peptide - Negative
viii. Anti-mutated citrullinated vimentin – Negative
ix. HLA-B27 – borderline
x. HLA-B51 – waiting on results
xi. Anti-dsDNA – negative
xii. Anti-SSA – negative
xiii. Anti-SSB – negative

c. The patient will need to be chronically managed for recurrences of his idiopathic anterior uveitis. If a systemic cause is found, treatment of that disorder will be initiated.

VI. Conclusion

a. Recurrent anterior uveitis can have several possible underlying causes, especially in a patient with a history of multi-systemic disorders. It is important to conduct blood work to rule out possible systemic etiologies to help in the treatment and management of these recurrent inflammatory events. However, even in patients with a multitude of possible systemic conditions, idiopathic anterior uveitis is still the most common cause. Being able to manage a patient’s ocular inflammation becomes the main goal in these cases.