Case 7

History of Present Illness

A 61-year-old man complained of new, gradual-onset, left-sided eye pain for 2 days. It is annoying, aching pain that feels like a bruise. The left lower eyelid is tender. The pain is rated as a 2/10. The eye and eyelid does not look red or swollen. There is no effect on vision or double vision. The patient denies ptosis. He has a history of physiologic anisocoria, discovered 15 years prior on routine examination. There is no tearing, proptosis, nasal symptoms, or migraine symptoms. The pain seems like it is perhaps worse with eye movement and it is gradually getting worse. He denies trauma.

Past medical and ocular history Hypertension Hypercholesterolemia History of soft contact lenses Occasional migraine headaches Seasonal allergies History of traumatic iritis RE 10 years ago	*Past surgical history* Wisdom teeth removed as a teen
Medications Atorvastatin Metoprolol Multivitamin Nasal steroid spray Krill oil	*Family history* Father—High cholesterol, diabetes, hypertension Mother—High cholesterol, glaucoma suspect Brother—High cholesterol, diabetes
Social history Married, never smoked, 1–2 drinks a day, 3–4 days a week	*Review of systems* Mild, chronic neck and shoulder pain Dermatographism Difficulty sleeping No fever, chills

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Examination
Acuity with correction Right eye: 20/15 Left eye: 20/15
Pupils Normal
Intraocular pressure Right eye: 14 mmHg Left eye: 15 mmHg
External exam Dermatochalasis
Eye alignment and motility Normal
Slit lamp examination No injection, chemosis, uveitis
Visual field Normal
Fundus examination Normal
Neurologic examination Normal

Discussion

Ophthalmic Perspective: Dr. Lee

This is not apt to represent a headache syndrome. This patient has mild localized tenderness of the left eye and more focused on the left lower eyelid. However, the external examination appears fairly unremarkable. It has only been a day or two, and it is possible that this represents forme fruste preseptal cellulitis or stye. I would palpate over the lacrimal gland (superotemporal eyelid) and the trochlea (superonasal eyelid). I would also look at the lacrimal gland to see if it is enlarged. We are told that he does not have uveitis, but in some cases, iritis can present with mild tenderness. I would also consider a foreign body. The patient wears contact lenses and occasionally contact lenses become "lost" under the upper eyelid. I would evert the eyelids, and if no cause is found, then I would double evert the eyelid with a Desmarres lid retractor. I would also sweep the upper fornix to make sure that no foreign bodies have hidden there.

If we cannot find a cause, then I would recommend hot compresses and artificial tears and observation…basically ordering the test of time. Time will tell whether this represents something more sinister. I do not have anything to push me toward a scan or blood work. I would not order a CBC or give antibiotics.

Neurologic Perspective: Dr. Digre

Palpation around the eye is always a great idea in eye pain like this. A few things I do would be to palpate the trochlea since trochleitis can cause pain and it is easy to palpate. I would also gently palpate the lid of the left eye to see if I could find some focal tenderness. Also, to rule out a vascular or migraine cause I frequently compress the superficial temporal arteries or superior and inferior orbital arteries to see if this improves the pain. If it does, my experience suggests that this is migrainous or vascular. While this man has migraine, he is not complaining of any migraine features like light and sound sensitivity or nausea. This does not sound like any trigeminal autonomic cephalgias—it is a new pain for him. I would keep looking at the eye!

This sure sounds like a foreign body in the eye. And I agree with lid eversion. I would also check for dry eyes since sometimes individuals complain about this type of pain with dry eyes.

Non-ophthalmic/Non-neurologic Perspective

With such a normal looking eye and lack of other findings, I would recommend flipping the eyelid. To flip the upper eyelid, you have the patient look down, then you grab the eyelashes with your hand. The patient continues to look down, while you push down on the eyelid crease and pull up on the eyelashes. A video of this can be seen at this link: https://www.youtube.com/watch?v=XU-hZ4ryx48. To sweep the upper fornix, you can put a numbing drop in the eye, have the patient look down, and sweep a proparacaine covered cotton tip under the upper eyelid. If you are comfortable looking for uveitis, then I would use a slit lamp. If not, then consider sending the patient for an eye exam. This is not an emergency!

Follow Up

The patient's lower eyelid was everted and there was a localized area of redness with a white spot in the center. This was sitting along the conjunctiva running on the inside of the eyelid (Fig. 7.1). This is consistent with an early chalazion. The eyelid was not swollen (yet) and there was no localized, erythematous external bump (yet). After proparacaine was given, the patient had the chalazion "popped" using two cotton tips. The pain resolved after a day or two.

The eyelid contains a firm, rubbery tissue called the tarsus. Meibomian glands in the tarsus can become occluded and swell. Initially, the swelling appears on the conjunctival surface of the eyelid and later become visible externally. They can be painful acutely and painless, if they become chronic. Normally, these drain on their

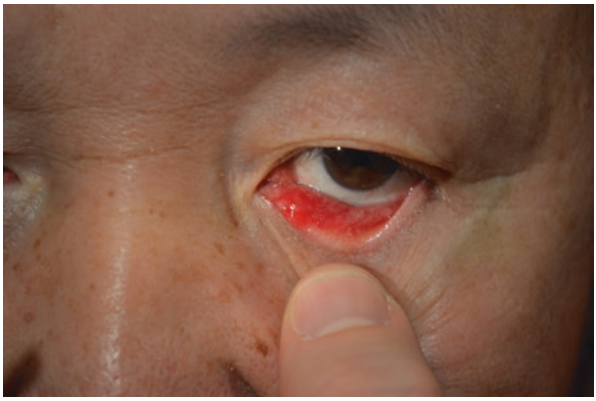

Fig. 7.1 The lower eyelid is everted and shows a focal area of redness and elevation nasally along the conjunctival side of the eyelid consistent with an acute stye (Courtesy Ali Mokhtarzadeh, MD)

own, while some persist and may require an incision and drainage. Local injection of corticosteroids is another option. If they are recurrent in the same location or not located along the tarsus, then it may require biopsy to rule out other causes. *Final diagnosis: chalazion*.

Digre's last thought: Interestingly, chalazion contrary to a lot of people's belief can and do cause eye pain. We recently reviewed eye pain in two large eye centers and it was definitely in the top 5 causes of eye pain going to ophthalmology. There is not a lot of literature about pain in this disorder.

For Further Study

1. Bowen RC, Koeppel J, Christensen C, Snow KB Ma J, Katz BJ Krauss H, Landau K, Warner JEA, Crum AV, Straumann D, Digre K. The most common causes of eye pain at two tertiary ophthalmology and neurology clinics JNO in press.
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