Common eye conditions & their management in Primary care

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The common ophthalmic presentations in primary care are

- Red eye
- Watering
- Headaches
- Loss of Vision: Acute/Chronic
- Diplopia
- Lumps and Bumps
- others
Common eye conditions presenting to primary care

- Blepharitis
- Conjunctivitis
- Iritis
- Sub conjuctival haemorrhage
- Corneal Foreign body
- Conjuctival Foreign Body
- Internal Hordeolum
- Stye
- Chalazion

- Herpetic keratitis
- Flashes and floaters
- Retinal Detachment
- Diabetic retinopathy
- Giant cell arteritis
- Glaucoma
- Cataract
- Ptosis etc…….
Presentation 1

- Red eye
- Watering
- Headaches
- Loss of Vision: Acute/Chronic
- Diplopia
- Lumps and Bumps
- others
Red eye

The most common presenting symptom of patients presenting with ophthalmic problems /emergencies
Red Eye

Patients presenting with a red eye usually present in one of the following ways:

The red eye can be painful or is painless

Or

It is accompanied with or without discharge

Or

Accompanied by blurring of vision or not
What causes a red eye?

- Red eye is caused by either:
  - Dilatation of:
    - Conjunctival blood vessels e.g. conjunctivitis
    - Episcleral blood vessels e.g. episcleritis
    - Scleral blood vessels e.g. scleritis
  - Or
    - Accumulation of blood in the subconjunctival space i.e. subconjunctival haemorrhage
What causes a discharge in a red eye?

• Discharge in a red eye is caused by either
  • Exudation/transudation form conjunctival vessels
  • Due to over production of tears
  • Due to blockage of tear passages.
What causes pain in a red eye?

- Pain is caused by irritation of the:
  - Conjunctival nerves e.g. dull ache in conjunctivitis
  - Corneal nerves: pain in corneal ulcer
  - Ciliary nerves: pain in scleritis, uveitis and angle closure glaucoma

It is important to remember that the orbit is surrounded by air sinuses and inflammation of these is also an important cause of pain around the eyes.
What causes visual loss in a red eye?

- Corneal oedema/ulceration
- Hazy anterior chamber (Flare/cells)
- Dilated pupil
<table>
<thead>
<tr>
<th></th>
<th><strong>Conjunctivitis</strong></th>
<th><strong>Iritis</strong></th>
<th><strong>Acute Glaucoma</strong></th>
<th><strong>Keratitis (foreign body abrasion)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Discharge</strong></td>
<td>MARKED</td>
<td>None</td>
<td>None</td>
<td>Slight or none</td>
</tr>
<tr>
<td><strong>Photophobia</strong></td>
<td>None</td>
<td>MARKED</td>
<td>Slight</td>
<td>Slight /marked</td>
</tr>
<tr>
<td><strong>Pain</strong></td>
<td>None</td>
<td>Slight to marked</td>
<td>MARKED</td>
<td>MARKED</td>
</tr>
<tr>
<td><strong>Visual Acuity</strong></td>
<td>Normal</td>
<td>Reduced</td>
<td>Reduced</td>
<td>Varies with site of the lesion</td>
</tr>
<tr>
<td><strong>Pupil</strong></td>
<td>Same or SMALLER</td>
<td>Same or SMALLER</td>
<td>Same or SMALLER</td>
<td>Same or SMALLER</td>
</tr>
</tbody>
</table>
Causes of a painless red eye

- Sub conjunctival haemorrhage and
- Episcleritis are the two important causes of a painless red eye.
- The other causes of a localised redness are:
  - Pterygium and
  - Pigencula
- Please note that all of the above do not usually have accompanying discharge or epiphora.
Sub conjunctival haemorrhage

• Management: Masterly inactivity
Pigencula

• Presentation
  – It presents a yellow deposit in the palpebral aperture
  – Usually seen in the nasal quadrant but can be in temporal as well.
  – Has been linked to sun exposure and seen more in equatorial region

• Treatment:
  – Observation
Pterygium

It is fibrovascular proliferation of the conjunctival and sub-conjunctival tissues

Presentation: Fleshy lesion growing over the cornea

Management: If encroaching over visual axis then excision
Episcleritis

Inflammation of episcleral tissues.

Treatment: Usually self-limiting and need no treatment. Steroids help but can lead to dependence.
Causes of a watery red eye

- Blepharitis and secondary dry eye
- Conjunctivitis
- Keratitis
- Acute Dacryocystitis
Blepharitis

- Inflammation of the lid margins
- Anterior: Involves the eye lashes
- Posterior involves the meibomian glands
- Management: Lid hygiene, ocular lubricants, antibiotics

FIGURE 2 Posterior blepharitis results in thick, opaque meibomian gland secretions.
Conjunctivitis

Inflammation of the conjunctiva

Infective:
- Viral/Bacterial
- Allergic
Causes of a painful red eye

- Corneal abrasion
- Ocular foreign body: Conjunctival / Corneal
- Corneal ulcer
- Uveitis (Iritis)
- Angle closure glaucoma
- Endophthalmitis
- Scleritis
Conjunctival Foreign body
Traumatic corneal abrasion

Management:
Ocular lubricants+/-patching
Corneal foreign body

Management:
Removal and topical antibiotics (ointment)
Corneal ulcer

Management
Urgent referral
to the HES
Anterior uveitis

• **Suspect:**

• When patients present with a red eye with blurring of vision no discharge but a photophobia and dull ache

• **Management:**
Ref to HES
Angle closure glaucoma

Presentation: Painful red eye with blurring of vision, headache, vomiting.

Management: Urgent referral to HES

Acute rise in IOP due to blockage of the angle of the eye.
Scleritis

Inflammation of scleral tissues
Tender red eye but no discharge

Management:
HES
Endophthalmitis

Usually post operative or post traumatic

Management: Immediate referral to HES
Internal Hordeolum

Acute Infection of the meibomian glands

Treatment: Oral antibiotics
Chalazion

Chronic granulomatous inflammation of the mebomian glands

Treatment: Incision and curettage
Orbital Cellulitis

Pre septal
Post septal

Treatment: Urgent referral to the HES
In summary

- When confronted with a patient with a red eye
- Decide whether it is painless or painful
- Identify the structure of the eye which is involved
- Try to ascertain if the cause is infective/traumatic/allergic
- Always rule out trauma
- Check intraocular pressure
- And if in doubt ask for advice.
Presentation

- Red eye
- **Loss of Vision: Acute/Chronic**
  - Watering
  - Headaches
  - Watering
  - Headaches
  - Diplopia
  - Lumps and Bumps
  - others
Sudden loss of vision
Management:
Urgent referral to HES
Sudden loss of vision can be

• total
• partial,
• transient or
• permanent
• involving either one or both eyes.
Common causes of sudden loss of vision are

**Transient ischemic attacks**

- Cause sudden complete loss of vision in one eye, typically regaining full visual function within a few minutes to several hours.
- Are often associated with other neurological symptoms such as weakness in a limb or "pins-and-needles" sensations. If recurrent should be investigated as they may be early warning signs of an impending neurological disaster.
- A stroke involving your visual areas in the brain can cause permanent defects in the visual fields of both eyes, and the only treatment is prevention!
- Management: Assessment of the causes… Doppler etc.
Retinal detachment

A condition where the light-sensitive part of your inner eye detaches from its supporting structures and tends to fold up inside the eye, causing loss of vision.

Typical clinical picture starts with one or more of the following symptoms:

- Lightning flashes visible in your peripheral field, or
- A new "floater" or a shower of floaters appearing suddenly, and
- finally a sudden black "curtain" descending in your visual field.

Management: Urgent to HES
Retinal Detachment
Vascular occlusion

Sudden complete visual loss can also be caused by thrombosis or occlusion of the retinal blood vessels, usually in one eye only, due to a blood-clot or occlusion by pieces of atherosclerotic plaques from the heart valves or large vessels of the neck. People suffering with diabetes, high blood pressure or elevated cholesterol are particularly prone to these conditions.
Vein occlusions

Central retinal Vein Occlusion

Branch Retinal Vein Occlusion
Central retinal artery occlusion
Optic Neuritis

Inflammation of the Optic Nerve Head
Anterior Ischemic optic Neuropathy

Giant cell arteritis: Look for Jaw claudication /Temporal tenderness/loss of weight and then assess ESR and CRP
Vitreous haemorrhage

- Diabetics with diabetic eye disease (diabetic retinopathy) can also develop spontaneous hemorrhaging inside the eye due to rupturing of abnormal blood vessels, with resultant sudden blindness. The blood will sometimes absorb on its own, but can be removed by microsurgical means to restore vision.
- These patients usually have such advanced underlying retinal disease.
Age related Macular degeneration

• Hemorrhaging under the retina due to age-related macular degeneration (ARMD), is another common cause of sudden blindness.

• This is a condition where the central visual area of the retina becomes atrophic, with abnormal deposits, called "drusen". This could lead to ingrowth of abnormal blood vessels that may rupture and cause a so-called "disciform" hemorrhage.

• Macular degeneration, however, is usually a much more insidious and slowly progressing disease, and not all age-related macular degenerations have sudden visual loss, but rather a more gradual deterioration over a few years.
Presentation

• Red eye
• Loss of Vision: Acute/Chronic
• Watering
• Headaches
• Diplopia
• Lumps and Bumps
• others
Watering or Epiphora

• Increased production: FB/Corneal abrasion /ulcer

• Inadequate drainage
  – Improper lid position
    • Ectropion
  – Blocked drainage
    • Punctal stenosis
    • CCB
    • NLD
Management

- Look for causes of irritation
- Try lid hygiene and ocular lubricants
- If no improvement refer to HES
PRESENTATION

- Red eye
- Loss of Vision: Acute/Chronic
- Watering
  - Headaches
- Diplopia
- Lumps and Bumps
- others
Ocular causes of headache

• Asthenopia
• Angle closure glaucoma
• Pain on eye movement: optic neuritis
• Increased ICT ....
• Management: If refractive error send to optician or otherwise refer to HES
Other common presentations

- Red eye
- Loss of Vision: Acute/Chronic
- Watering
- Headaches
- Diplopia
- Lumps and Bumps
- others
Stye & Internal hordeolum

- Management: Antibiotics
Papilloma
Warts
Cysts of Ziess and Moll
Clinical scenario
Case 1

Problem

- 67 y/o male with hypertension, and poor compliance presents complaining of sudden decreased vision in Right eye.
Approach

- Age and medical background support an underlying vascular event having taken place. A careful fundus exam is required
A 21 y/o female states that over the last 2 days her vision has decreased in her right eye to counting fingers vision. Denies any pain or trauma.
Approach

• In this age group an otherwise healthy patient should be suspected of having an optic nerve lesion. Checking for a relative afferent pupillary defect would be a prudent test.
Case 3

- A 55 y/o female 12 h after coronary artery bypass surgery complains of being unable to see from her left eye.
- There is no pain and externally the eye appears normal.
Approach

• Post-op loss of vision tends to be vascular in nature. Either an embolic phenomena (very likely in this case) or compression of the eye during prolonged anaesthesia, precipitates a vascular compromise.
Case 4

- A 40 y/o male states he lost vision in his right eye after seeing flashing lights and "spider webs." He is a -10.00 myope.
Approach

- High myopia with associated flashes and floaters should make one think of a retinal detachment proven otherwise. A dilated fundus exam followed by an appropriate referral is advised.
A 77 y/o female is sent to you from geriatrics. She was initially being worked up for lethargy and weight loss. Complained of vision coming and going for several days and now states she cannot see anything at all out of both eyes.
Approach

- Elderly patients with sudden loss of vision associated with constitutional symptoms raises the specter of Giant Cell Arteritis. After careful history and examination a CRP/ESR should be ordered.
- This will not reverse the visual loss but will substantially reduce the risk of cardiac or CNS events.
Case 6

• A 38 y/o male with longstanding insulin-dependent diabetes presents with sudden loss of vision in his left eye. Has had only moderate control of his diabetes over the last several years stating he takes his insulin when he feels like it.
Approach

History of poorly controlled diabetes makes one suspicious of neovascularization of the retina. Vitreous hemorrhage is at the top of the list.
In summary

• All cases of sudden loss of vision should be taken very seriously as they usually have an underlying cause

• Look for causes form anterior to posterior
  Cornea  AC  Lens  Vitreous  retina  optic nerve  brain

Correlate with the underlying general health

Formulate a provisional diagnosis

If in doubt refer urgent/semi-urgent
Thank you