Oxfordshire NHS
Primary Care Trust

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Approved by:

Enhanced Clinical Executive

REFERRAL GUIDELINES: OPHTHALMOLOGY

Document purpose

To put in place referral guidelines to support GPs in the management of a range of common eye problems in Primary Care.

Contents

Oxford Radcliffe Hospital: Ophthalmology Department / Oxford Eye Hospital

Medical Team on call – immediate (24hrs) for URGENT referrals	01865 231494
Medical Team on call – urgent fax for 2 week referrals	01865 234875
Oxford Eye Hospital reception	01865 234163
Email advice	N/A

Change control

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Notes			
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ARC EYE (Over-exposure to UV light - corneal flash/UV irradiation burns)

DIAGNOSIS

History of exposure to ultraviolet light (e.g. welders; reflection from sea, sand or snow; sunlamps; halogen desk lamp). Over-exposure to UV irradiation or a 'corneal flash burn' produces a superficial and painful keratitis.

The onset of symptoms generally occurs 3-8 hrs after exposure, and patients may present with the following clinical features:

- corneal redness
- pain
- intense bilateral lacrimation
- blepharospasm
- photophobia
- blurred vision / signs of reduced visual acuity
- sensation of a foreign body in the eye.

Impact is bilateral (although symptoms may be worse in the eye that received more ultraviolet radiation): corneal abrasion due to an injury will generally involve only one eye.

Cornea may show areas of gross opacification - Fluorescein staining shows punctate erosions of the cornea.

MANAGEMENT

Commonly, the injury resolves spontaneously within 36-48 hours.

- Reassure patient
- Prescribe: 1% cyclopentolate eye drops; oral analgesia; and eye pad (optional).
- Alternatively, prescribe antibacterial chloramphenicol ointment

REFER Email Advice

N/A

REFER ONLY

Refer to Ophthalmology if no improvement after 48 hours.

Routine
Cost O/P appt £134

Urgent
Cost urgent £134

Advise patient to attend A&E if no improvement and vision worsens; patient sees flashing spots or light; or has worsening eye pain or pain with eye movement.

ADDITIONAL INFORMATION

FURTHER INFORMATION ON CORNEAL PROBLEMS
http://www.patient.co.uk/doctor/Corneal-Problems-Acute.htm

BNF 11.5 *MYDRIATICS AND CYCLOPLEGICS*
http://bnf.org/bnf/bnf/current/5454.htm

BNF 11.3.1 *ANTIBACTERIALS – CHLORAMPHENICOL*
http://bnf.org/bnf/bnf/59/5375.htm

PATIENT INFORMATION ON THE PREVENTION OF EYE INJURIES – NHS CHOICES
http://www.nhs.uk/conditions/eye-injuries/pages/prevention.aspx

BLEPHARITIS (INFLAMMATION OF EYELID MARGINS)

DIAGNOSIS

Patients with chronic blepharitis (persistent inflammation of the margins of the eyelid) present with eyelids that are red, burn, itch, and stick together. The condition is often associated with seborrhoeic dermatitis or rosacea.

Common signs and symptoms include:
- Itching, irritation, burning, discomfort
- Foreign body sensation
- Crusting around the eye lashes
- Lid thickening
- Loss of lashes
- Abnormal thickening of meibomian secretions (oil capping)
- Frothy tear film.

Both eyes are usually affected. Symptoms are often intermittent, with exacerbations and remissions occurring over long periods, and - when present - worse in the mornings.

If keratitis is suspected, check for staining with fluorescein and refer the patient.

Chronic blepharitis can be classified according to the part of the eyelid margin affected, and also by cause:

By location:
- Anterior blepharitis — the bases of the eyelashes on anterior eyelid margin are inflamed
- Posterior blepharitis — the posteriorly located Meibomian glands on the eyelie margin are inflamed

By cause:
- Staphylococcal blepharitis
- Seborrhoeic blepharitis
- Meibomian blepharitis (*Meibomian gland dysfunction*)

These types can occur in any combination; it can be difficult to distinguish them.

MANAGEMENT

Patients should be advised that blepharitis is a chronic or intermittent condition: usually it cannot be cured but symptoms can be controlled with adequate self-care. Complications are rare.

Self Management

Advise the patient that eyelid hygiene is the mainstay of treatment and should be carried out twice daily initially, then reduced to once daily. NB: Eyelid hygiene should continue, even when the blepharitis is well controlled.

Eyelids should be cleaned as follows:

- Apply warm compresses to closed eyelids for 5–10 minutes. An alternative is an eyebag (available from http://www.eyebagcompany.com/)
- For *posterior blepharitis*, massage the eyelid to express Meibomian glands.
- Clean the eyelid — wet a cloth or cotton bud with cleanser (e.g. a sodium bicarbonate solution or baby shampoo diluted with warm water) and rub along the lid margins.
- Many optometrists sell wipes or cleaning solutions for blepharitis e.g. blephasol (available from Spectrum Thea)

Eye make-up should be avoided, especially eyeliner. If this is not considered an option, water-soluble make-up should be used.

Patients should be warned that improvement may not be seen for at least 2-3 weeks.

Prescribing

- Consider prescribing topical antibiotics (chloramphenicol or fusidic acid) or oral antibiotics (tetracyclines) if there are clear signs of staphylococcal infection or Meibomian gland dysfunction, respectively. [*NB Antibiotics should usually be reserved for second-line use, when eyelid hygiene alone has proved ineffective*].
- Blepharitis frequently causes dry eye: prescribe artificial tears or ocular lubricant to relieve symptoms

Primary Care review

If initial treatment and self management is not proving effective:

- Check compliance with eyelid hygiene.
- If this has been complied with, but is ineffective, consider antibiotic ointment (if not already tried):
- Topical antibiotics should be first line, especially if there is staphylococcal infection on the anterior lid margins. A 6-week trial course is usually adequate. Chloramphenicol eye ointment is a first-line option; fusidic acid eye drops are an alternative.
- If topical antibiotics have not resulted in adequate response, or if there are signs of Meibomian gland dysfunction or rosacea consider:
  - **Initial dose:** Oxytetracycline 500mg twice a day for 4 weeks **or** doxycycline 100mg daily for 4 weeks **THEN**
  - **Maintenance dose:** oxytetracycline 250mg twice a day for 8 weeks **or** Doxycycline 50mg capsules once a day for 8 weeks.

Repeated courses are often required intermittently.

Patients will only require review where a further flare up occurs.

REFER Email Advice

N/A

REFER ONLY

Routine

Cost O/P appt £134

Consider routine referral to secondary care if no improvement seen within 6 weeks. Insufficient improvement despite maximal treatment available in primary care (for secondary care treatment, e.g. corticosteroids).

If patient is staining with fluorescein and keratitis is suspected, refer the patient.

Urgent Cost urgent appt £134	Refer for same-day evaluation if there is rapid onset of visual loss or an acutely painful red eye. Refer with urgency appropriate to the problem if there is: • Evidence of corneal disease (pain, blurred vision) • Deterioration of vision • Associated disease, such as Sjögren's syndrome or eyelid deformities
Urgent 2 wk wait	To exclude sebaceous cell carcinoma of the eyelid margin, refer under 2-wk wait: unilateral, persistent/non-responsive blepharitis or marked eyelid asymmetry.
ADDITIONAL INFORMATION	CLINICAL KNOWLEDGE SUMMARIES http://www.cks.nhs.uk/blepharitis PATIENT INFORMATION • www.goodhope.org.uk • NHS Choices www.nhs.uk/conditions/blepharitis/Pages/Introduction.aspx • http://www.eyebagcompany.com/ • http://www.spectrum-thea.co.uk/

CATARACTS

DIAGNOSIS

About 1 in 3 people over the age of 65 in the UK has a cataract. Men and women are affected equally. Often cataracts develop in both eyes simultaneously but one eye may be worse than the other. Patients may complain of

- A dimming/blurring of vision
- Lights may appear too bright
- Glare from lamps or the sun
- Poor night vision
- Double vision or multiple images in one eye
- Dulled colour vision
- Nearsightedness, accompanied by frequent changes in eyeglass prescription

Patients with these symptoms should be referred to their optometrist for clinical diagnosis. Optometrists will report a diagnosis of cataract to GPs using the GOS 18 form.

Cataracts usually develop gradually, and are not generally associated with pain, eye redness or other acute symptoms unless they are extremely advanced. Rapid and/or painful changes in vision are suspicious for other eye diseases and should be referred for specialist opinion.

MANAGEMENT

Surgical management
Surgery is the only way of treating cataracts. It is a very common operation that involves removing the cloudy lens and replacing it with an intraocular implant under local anaesthetic. The operation takes about 20 minutes and most patients are treated as day cases.

In Oxfordshire, cataract surgery in patients who have a visual acuity **of 6/9 or better in the cataract affected eye is a LOW PRIORITY treatment**. These patients should be reassured that their condition will be monitored; that surgery will be provided when greater benefit is likely to be derived; and that the outcome of surgery will not be affected by postponement.

Cataract surgery solely for the purpose of correcting longstanding pre-existing myopia or hypermetropia will not be funded.

The benefits of surgery include

- Improved visual acuity. 85–90% of people will have 6/12 best corrected vision (This meets the driving requirements in the UK). However, reading glasses are usually needed after cataract surgery, and some people may require glasses for distance vision who did not previously require them
- Improved clarity of vision
- Improved colour vision.

Non surgical management
For patients not suitable for surgery, or who do not wish to have it, symptoms may be managed by

- reducing glare by wearing a hat or sunglasses in bright light
- correcting refractive problems with spectacles or contact lenses
- increasing light levels when working or reading to improve contrast
- referral for generic management of visual impairment (which may involve social services and provision of accessibility aids)

REFER Email Advice	N/A
REFER ONLY **Routine** Cost of OP appt £134 Cost of surgery £741	Patients diagnosed with a visual acuity of 6/12 or worse in their cataract affected eye **after correction** (e.g. with glasses). Patients who have a visual acuity of 6/9 or better (after correction) but who are considered to be at particular and significant risk as a result of cataract-related poor vision OR who are experiencing significant quality of life impacts, may be referred for surgery. However, **information about these impacts must be provided in the referral information** sent to the Ophthalmic Surgeons to avoid the referral being returned. For patients with a visual acuity of 6/9 or better (after correction) who do not fall into the above category, but who, nevertheless, request cataract surgery, their managing clinician must submit a **prior approval funding request** to NHS Oxfordshire's secure email address: priorities.oxfordshirepct@nhs.net. The Lavender statement (*local commissioning policy*) for cataract surgery is available here: http://www.oxfordshirepct.nhs.uk/professional-resources/search/lavender-statements-search.aspx?q=cataract
ADDITIONAL INFORMATION	**Clinical Knowledge Summaries** http://www.cks.nhs.uk/cataracts Map of Medicine **Cataract Surgery Specialist Care Pathway** http://mom.sou.ncrs.nhs.uk/mom/2/login_page.html?next=http%3A%2F%2Fmom.sou.ncrs.nhs.uk%2Fmom%2F2%2Findex.html Royal College of Ophthalmologists (2004) **Cataract Surgery Guidelines** www.rcophth.ac.uk

CONJUNCTIVITIS

DIAGNOSIS

Patients present with sticky red eyes, normal visual acuity and normal cornea i.e. no stain.

Irritant conjunctivitis is likely when an identifiable mechanical/irritant cause can be identified, e.g. a displaced contact lens; foreign body; eye lashes rubbing against the surface of the eye; a chemical splashing, etc.

Allergic conjunctivitis is responsible for 15% of all eye-related problems seen by GPs. Half of all cases of allergic conjunctivitis are seasonal allergic conjunctivitis. Giant papillary conjunctivitis is experienced by 1-5% of people using soft contact lenses and 1% of people using hard contact lenses. Signs and symptoms include:

- Bilateral itchy eyes
- Oedema – 'cobblestone' appearance on upper eyelids when inflammation is chronic
- Patient also suffers from eczema, allergic rhinitis, or asthma

Infective conjunctivitis may be

- **bacterial** (*Staphylococcus* species, *Streptococcus pneumoniae*, *Haemophilus influenzae*, *Moraxella catarrhalis)*
- **viral** (commonly, adenovirus that may occur in isolation or as an epidemic). Common strains cause a mild conjunctivitis associated with pharyngitis and fever. Other strains may cause a severe conjunctivitis with corneal involvement causing keratitis.
- **Chlamydia** presents as chronic conjunctivitis in newborns and people who are sexually active

Infective conjunctivitis is common (responsible for 35% of all eye-related problems seen by GPs (13-14 cases /1,000 pa)), especially in elderly and children.

	Bacterial	**Viral**	**Chlamydial**	**Allergic**
Symptoms	Sore, swollen sticky/matted eye on waking, photophobic	Feels unwell. Watery, sticky, gritty, sometimes subconjunctival haemorrhage H/O upper respiratory tract infection	Sore and slightly itchy	Very itchy and sore H/O upper respiratory tract infection
Unilateral/ bilateral	Can be both	Bilateral	Bilateral or unilateral	Bilateral
Discharge	Acute – purulent (yellow) Mild – mucopurulent (sticky yellow)	Serous (watery)	Mucoid (stringy white)	Mucoid
Papillae/ follicles	Papillae	Follicles and papillae	Large follicles in the fornices	Papillae Thickened lids
Pre-auricular nodes	Palpable	Palpable and tender	Palpable and non-tender	Sometimes present
Timing	Acute or chronic	Acute	Chronic	Acute

MANAGEMENT

Irritant conjunctivitis
Patient advised not to rub the eyes; reassure that conjunctivitis will settle once the irritant is removed.

Allergic conjunctivitis
For seasonal allergic conjunctivitis symptoms will usually resolve with treatment of underlying condition.

- First line prescribing: either oral antihistamines or topical treatment with mast cell stabilisers, sodium cromoglycate QDS for 1/12. Review after 1/52 & oral antihistamines.
- Second line: opatanol.

Contact dermatoconjunctivitis and giant papillary conjunctivitis are usually caused by eye drops or contact lenses: once the cause is identified and avoided, the symptoms usually clear

Infective conjunctivitis
Infective conjunctivitis rarely requires medical treatment: if not caused by an STI, infection will normally clear within 1-2 weeks. For most people, use of a topical ocular antibiotic make little difference to recovery from infective conjunctivitis. But up to 10% of people treated with topical ocular antibiotics complain of adverse reactions to treatment. The risk of a serious complication from untreated infective conjunctivitis is low.

It is not necessary to swab all patients with infective conjunctivitis as most are self-limiting and will not alter management.

Self care

Patients should be advised to:
- avoid contact lens use until infection has resolved / wear glasses instead
- use OTC lubricant eye drops to ease soreness / stickiness
- gently clean away sticky substances, e.g. using water and cotton wool
- wash hands regularly to avoid re-infection / passing on the infection

If condition persists for more than 2 weeks, or infective conjunctivitis is particularly severe, antibiotics may be prescribed. Chloramphenical 0.5% eye drops is recommended first line; fusidic acid 1% gel can be prescribed as an alternative (fusidic acid has less gram-negative activity). Treatment should be continued for 48 hours after resolution.

If the infective conjunctivitis is caused by an STI, the condition may last several months, rather than weeks. The STI may also require separate treatment.

- Bacterial
  - occ. chloramphenicol
  - to return if there is no improvement after 3-4 days
  - then stop occ. Chloramphenicol for 48 hours and swab
    - **A positive bacterial culture** — prescribe a topical ocular antibiotic directed by sensitivity results if they are still symptomatic.
    - **Positive chlamydial cultures** — refer to GUM for testing of sexual contacts and systemic treatment.
    - **A negative bacterial and chlamydial culture —** consider repeating the test if symptoms persist for longer than 3 weeks
  - review in 1/52 if no better

- Viral
  - reassurance
  - gel tears or viscotears or nothing
  - can give topical antibiotic cover for 1/52 to prevent secondary bacterial infection

- Chlamydial conjunctivitis: ask patient about sexual activity and urethritis symptoms, ***and refer to GUM***.

If the patient is a contact lens wearer, refer to an optometrist to check the cornea for keratitis.

REFER **Email Advice**	N/A
REFER ONLY	If patient experiences reduced vision or is not responding to treatment refer to secondary care, particularly if severely atopic patient.
Routine Cost O/P appt £134	Adult suspected **Chlamydial conjunctivitis** (ask patient about sexual activity and urethritis symptoms) If **allergic conjunctivitis** and cornea is involved, refer to secondary care.
Urgent Cost urgent appt £134	If **irritant conjunctivitis,** e.g. a penetrating injury of the eye from high speed sharp particles may have occurred, refer for same-day assessment by a specialist. **Neonatal conjunctivitis -** Babies under 4 weeks with neonatal conjunctivitis should be referred to secondary care. Neonatal conjunctivitis may be caused by infection or be a toxic response to toxical eye treatments. The most important causes are: gonorrhoea (can result in a serious localized infection) and chlamydia (can be associated with the development of pneumonia).
ADDITIONAL INFORMATION	http://www.cks.nhs.uk/conjunctivitis_infective/management/quick_answers/scenario_acute_infective_conjunctivitis#-304634 Oxfordshire Prescribing Guidelines for the Use of Antimicrobial Agents in Primary Care; http://nww.oxfordshirepct.nhs.uk/GeneralPractice/Document%20Library/Forms/AllItems.aspx?RootFolder=%2fGeneralPractice%2fDocument%20Library%2fPrescribing%2fPrescribing%20Guidelines%2fAntimicrobial%20Primary%20Care%20Guidelines&FolderCTID=0x010100EB6836F8635848DF8674F745B1BF76970045E19A37A6D17A4FAE39CB3D628C0EFC&View=%7bBA0679C7%2dE8CE%2d464A%2d80A1%2d8ADEAA4B3237%7d Hazel A Everitt, Paul S Little, Peter W F Smith **A randomised controlled trial of management strategies for acute infective conjunctivitis in general practice** *BMJ*, doi:10.1136/bmj.38891.551088.7C (published 17 July 2006) PATIENT INFORMATION: NHS CHOICES http://www.nhs.uk/conditions/Conjunctivitis-infective/Pages/Introduction.aspx

CORNEAL ABRASION / ULCERS

DIAGNOSIS

Superficial **corneal abrasions** are usually caused by a foreign object, e.g. grit, finger nail, foreign body or by a contact lens, injuring the epithelial tissue. Wearing contact lenses incorrectly can also cause injury (e.g. if not clean; if dirt/dust becomes trapped behind a lens; if do not fit properly or are worn for excessively long periods of time). An injury / scratch to the cornea may give rise to:

- Severe eye pain
- eye redness
- photophobia
- increased tears
- blurred / distorted vision
- squinting caused by eye muscle spasm
- sensation of foreign body in the eye, even if it has been removed.

Fluorescein can aid diagnosis.

MANAGEMENT

- Antibiotic ointment [chloramphenicol four times a day for 7 days to prevent secondary infection]
- if patient has significant pain, suggest oral analgesics
- lubricants at night: occ Lacri-Lube
- for significant corneal erosion occ Lacri-Lube used at night every night for 3 months will resolve 80% and will also help prevent recurrence of erosion

There is no evidence of effectiveness for the use of eye pads.

REFER Email Advice

N/A

REFER ONLY

Routine
Cost of O/P appt £134

Only refer if:

- Pain does not resolve after use of antibiotic ointment
- Patient continues to experience blurred vision or a reduction in visual acuity
- Patient continues to experience considerable pain, despite analgesics
- Injury/abrasion penetrates beyond the Bowman's membrane into the corneal stroma
- Symptoms of recurrent erosion persist despite using regular ointment at night.

ADDITIONAL INFORMATION

PATIENT INFORMATION
http://www.nhs.uk/conditions/eye-injuries/Pages/Introduction.aspx

EVIDENCE

S K Thyagarajan, V Sharma, S Austin, et al. **An audit of corneal abrasion management following the introduction of local guidelines in an accident and emergency department** *Emerg Med J* 2006 23: 526-529

Turner A, Rabiu M. Patching for corneal abrasion. *Cochrane Database of Systematic Reviews* 2006, Issue 2. Art. No.: CD004764. DOI: 10.1002/14651858.CD004764.pub2.

The College of Optometrists (2009) ***Corneal Abrasion (Acute): Clinical Management Guidelines*** Version 9

DRY EYE SYNDROME (KERATOCONJUNCTIVITIS SICCA)

DIAGNOSIS

Dry eye syndrome - the outcome of a number of different conditions which affect the tear film - is common. Prevalence increases with age (15–33% in people 65+ years); 50% more common in women than in men; a frequent complaint in post menopausal women and rheumatoid patients.

Patients typically present with
- feelings of dryness, grittiness, foreign body sensation, red eyes, staining of cornea, or soreness in both eyes, which get worse throughout the day
- eyes water, particularly when exposed to wind, and reflex tearing or blurring whilst reading or driving
- eyelids stuck together on waking

No abnormalities on examination.

Causes include:
- Decreased tear production: blepharitis (most common cause); adverse effect of systemic drugs (e.g.: antihistamines, tricyclic antidepressants, SSRIs; preservatives in topical eye medications); allergic conjunctivitis; dehydration (e.g. secondary to diabetes)
- Increased evaporation of tears - environmental factors at home / work (less commonly, caused by Lagophthalmos)
- Abnormal ocular surface / disruption of the afferent sensory nerves
- Decreased lipid production by Meibomian glands

Underlying conditions associated with dry eye syndrome include:
- allergic conjunctivitis
- Sjögren's syndrome (ask about dry mouth)
- Rheumathoid arthritis
- rosacea
- facial or trigeminal neuropathy
- herpes zoster affecting the eye
- chronic dermatoses of eyelids
- previous ocular or eyelid surgery, trauma, radiation therapy, burns

Treatment may resolve dry eye syndrome.

Less commonly, people present with a complication of dry eye syndrome, e.g.:
- Conjunctivitis
- Ulceration of the cornea, suggested by severe pain, photophobia, marked redness, and loss of visual acuity

MANAGEMENT	**Reassure** - when there is no underlying medical condition, most people with dry eyes have only discomfort and no loss of vision. Rarely, the cornea develops ulcers. **Treatment – lubrication**
Self management	For **mild or moderate symptoms** artificial tears alone are usually sufficient. *Patient to buy artificial tear drops to use during the day. These are cheaper bought without prescription.* ▪ First line treatment – hypromellose 0.3% QDS 1/12. Patients will need to continue to use these drops. ▪ If patient has known allergy to preservative – hypromellose single use preservative free, liquifilm single use preservative free QDS 1/12 or celluvisc 0.5%. *Products that do not contain preservatives are packed as single doses and are more expensive than multi-dose preparations.* ▪ If patient has difficulty administering drops due to reduced manual dexterity – carbomer gel (e.g Gel Tears, Vicotears) QDS 1/12 ▪ Preservative drops are not compatible with contact lenses – contact lens wearers should get advice from their optometrist ▪ If treatment with artificial tears does not completely resolve the irritation, the patient may additionally wish to use liquid paraffin based eye ointment before sleeping - Lacri-Lube or Lubri Tears eye ointment (available over the counter). NB *Eye ointments containing paraffin may be uncomfortable and blur vision - should only be used at night, and never with contact lenses.* Products containing carbomers or polyvinyl alcohol are longer acting. Sodium chloride is short acting and suitable as 'comfort drops' or for use with contact lenses. **Visible strands of mucus** ▪ Consider prescribing acetylcysteine drops (Ilube) (they may sting briefly). **Eye hygiene** ▪ If meibomian gland dysfunction is present, hot compresses (e.g. clean flannel rinsed in hot water) may benefit. ▪ Eyelid hygiene will also help to control the blepharitis that most people with dry eye syndrome have **Environment and other measures** Advise patients to minimise environmental and other factors that aggravate dry eye syndrome: ▪ if smokers, try to stop as it exacerbates symptoms ▪ avoid air conditioning ▪ take regular breaks if use computer for long periods / avoid staring at the screen for long periods ▪ wear wrap-around glasses outside.
REFER Email Advice	N/A

REFER ONLY **Routine** Cost O/P appt £134	Patient only to be referred with: ▪ Reduced vision; ▪ Photophobia; ▪ Considerable staining; ▪ Requirement to use drops more than every two hours; ▪ Excessive pain. **Refer or obtain specialist advice if:** Symptoms are uncontrolled despite appropriate treatment for about 4 weeks. Diagnosis requires specialist assessment (apply a lower threshold for obtaining specialist advice for younger people). Vision deteriorates. Ulcers or other signs of corneal damage occur. Associated disease requires specialist management (e.g. Sjögren's syndrome or eyelid deformities).
Urgent Cost urgent appt £134	**Refer for same-day specialist assessment** if acute glaucoma, keratitis, or iritis is suspected because of: ▪ Moderate-to-severe eye pain or photophobia ▪ Marked redness of the eye in one eye ▪ Reduced visual acuity.
ADDITIONAL INFORMATION	CLINICAL KNOWLEDGE SUMMARIES http://www.cks.nhs.uk/dry_eye_syndrome#-320107

GLAUCOMA

DIAGNOSIS

Glaucoma affects 2 out of every 100 of the over 40s in the UK.

Patients may present to GP with

- **Acute angle closure glaucoma (acute glaucoma)** – rapid development, severe symptoms which may come and go:
  - intense pain
  - eye redness
  - headache
  - sore, tender eye area
  - seeing halos around lights
  - misty vision

GPs should refer pts with these symptoms urgently for triage by eye casualty 01865 231494

- **Secondary glaucoma** - caused by other conditions/eye injuries - may cause misty vision, and rings/halos around light sources

GPs should refer pts for triage by eye casualty 01865 231494

- **Developmental glaucoma (congenital glaucoma)** - can be difficult to identify in baby/young child, but symptoms include:
  - having large eyes (pressure causes eye to expand)
  - photophobia
  - cloudy and/or watery eyes,
  - jerky eye movement
  - a squint

GPs should refer pts with acute symptoms urgently for triage by eye casualty 01865 231 494 or to Ophthalmology paediatric clinic

The most common type of glaucoma - age-related - **open angle glaucoma (chronic glaucoma)** usually has no symptoms – picked up by optometrists, and reported on GOS18 as suspected glaucoma due to:

- Raised intraocular pressure (IOP);
- Optic disc change;
- Visual field defect consistent with glaucoma;
- Narrow drainage angle on van Herrick with significant risk of closure;
- Signs often associated with glaucoma e.g. pigment dispersion or pseudoexfoliation.

See below for management

Patients with presumed Ocular hypertensives

Since 2009 Optometrist should refer patients according to NICE guidelines when IOP is found to be above a certain level

- Raised intra ocular pressure for age
- With healthy optic discs,
- Absence of field loss characteristic of glaucoma
- Open angles
- No other signs associated with glaucoma such as pigment dispersion or pseudoexfoliation

See below for management.

MANAGEMENT

Ocular hypertensives *see criteria in 'diagnosis' section above*

Further testing
Where an optometrist referral (GOS18) states that a patient's IOP in one eye is greater than:

- 21mmHg for patients younger than 65 years;
- 24mmHg for patients age 65-80 years;
- 25mmHg for patients over 80 years

AND

- the measurement has not been taken with applanation tonometry (Goldmann i.e. GAT or Perkins tonometer)

the GP ***may wish to refer*** the patient to a participating optometrist for a more accurate IOP reading prior to referral **as the non contact tonometer may give an artificially elevated reading.** A list of participating, accredited optometrists can be found in the referral guidelines section of the General Practice pages of the intranet under the ophthalmology folder.

Refer any suspect ocular hypertensive patient when applanation pressure is consistently found to be elevated to levels above. Refer via Rapid Access glaucoma. Note accredited optometrist will refer direct to this clinic after refinement.

Watchful waiting
Where a patient's IOP **measured by applanation tonometry** in both eyes is less than or equal to:

- 21mmHg for patients younger than 65 years
- 24mmHg for patients age 65-80 years
- 25mmHg for patients over 80 years.

the patient should be advised to continue attending their community optometrist for annual eye examinations.

REFER Email Advice

Not available

REFER ONLY

Routine
Cost of OP appt £134

Patients should be referred if any of the following is identified:

1. The IOP by applanation tonometry in either eye exceeds:
   - 21mmHg for patients younger than 65 years;
   - 24mmHg for patients age 65-80 years;
   - 25mmHg for patients over 80 years;
2. There is optic disc change consistent with glaucoma in either eye;
3. Visual field defect is found consistent with glaucoma in either eye;
4. Narrow drainage angle on van Herrick with significant risk of closure;
5. Signs often associated with glaucoma e.g. pigment dispersion or pseudoexfoliation.

ADDITIONAL INFORMATION	Optometrists who have carried out an IOP measurement with applanation tonometry, (Goldman or Perkins) will state this in GOS 18 referral form. Currently, only optometrists in the City, South East and the Vale have been offered a Local Enhanced Service to provide these additional tests. The LES will be rolled out countywide if evaluation suggests improved pathway for patients. NICE Clinical Guideline No 85, April 2009: Diagnosis and management of chronic open angle glaucoma and ocular hypertension http://www.nice.org.uk/nicemedia/live/12145/43839/43839.pdf Prescribing guidelines for glaucoma are currently in development.

HORDEOLA (STYES)

DIAGNOSIS

A stye (hordeolum) is an acute, localized abscess situated on the eyelid, usually caused by staphylococcal infection. Patients typically present with a painful, tender, localized eyelid swelling that has developed over several days.

- Swelling generally affects only one eyelid (although both eyes could be affected)
- More than one stye may be present
- If there is associated periorbital cellulitis (causing the eyelid to become very oedematous), the localized swelling may not be obvious
- Vision is unaffected

If the stye is external (*along the edge of the eyelid - caused by infection of eyelash follicle or associated sebaceous or apocrine gland*), the swelling:

- Is located at the eyelid margin (upper or lower)
- Is usually localized around an eyelash follicle
- Points anteriorly through the skin. A small, yellow, pus-filled spot may be visible
- Is painful on palpation

If the stye is internal (*meibomian stye - on the conjunctival surface of the eyelid - caused by infection of a meibomian gland*):

- The onset / course of the infection is usually more prolonged/more painful than an external stye
- There is a localized, red swelling on the external eyelid (although the whole eyelid can be affected), tender to touch. An internal stye is usually further from the lid margin compared with an external stye.
- Everting the eyelid (can be extremely painful), shows localized swelling within the tarsal plate.
- Stye usually points toward the conjunctiva (although it can point anteriorly through the skin).

An internal stye can be differentiated from a Meibomian cyst/chalazion, although initial management is the same:

- Meibomian cyst is a chronic inflammatory granuloma, caused by obstruction of a meibomian gland, situated on the posterior eyelid
- Palpitation of meibomian cyst generally produces no pain/tenderness

MANAGEMENT

- Reassure – styes are self-limiting and rarely cause complications
- Epilate eyelash from the infected follicle (to facilitate drainage)
- If very painful, or obstructing vision, for appropriate patients consider incising and draining. This should only be undertaken by suitably experienced healthcare professionals.
- Topical antibiotics should not be prescribed for styes unless there is evidence of conjunctivitis
- If there are signs of conjunctivitis refer to the section for management
- Manage any blepharitis to reduce the risk of future episodes of styes.

Self-management

Most styes can be self-managed. Advise patient to:

- apply a warm compress (e.g. clean flannel rinsed in hot water) to the affected eye for 5–10 minutes, repeating 3-4 times daily until the stye drains or resolves
- avoid excessively hot compresses (to avoid scalding, particularly in children)
- take paracetamol or ibuprofen to relieve pain, if required
- patient should not attempt to puncture an external stye themselves
- maintain lid hygiene once the stye resolves

REFER Email Advice	If query preseptal cellulitis, seek advice from ophthalmologist with regards to the use of systemic medication.
REFER ONLY **Routine** Cost of O/P appt £134	If the stye does not improve or resolve with conservative treatment, or if an internal stye is particularly large and painful (rare for external styes), refer to an ophthalmologist for incision and drainage:
Urgent Cost of urgent appt £134	**Refer urgently** ▪ if there is significant preseptal cellulitis ▪ if the patient presents with signs or symptoms of orbital cellulitis (rare) Red flags for hospital admission include: ▪ Lid (periorbital) swelling. ▪ Protrusion of the eyeball (proptosis). ▪ Double vision (diplopia) or impairment of eye movement (ophthalmoplegia). ▪ Reduced visual acuity. ▪ Reduced light reflexes or abnormal swinging light test. ▪ Systemically unwell. ▪ Central nervous system signs or symptoms (for example drowsiness, vomiting, headache, seizure, or cranial nerve lesion). ▪ When a full eye examination is not possible.
Urgent 2 week	Refer urgently if cancer is suspected — e.g. if stye has an atypical appearance or reoccurs in the same location.
ADDITIONAL INFORMATION	Clinical Knowledge Summaries: differential diagnoses http://www.cks.nhs.uk/styes_hordeola#-449070 BNF: Chloramphenical http://bnf.org/bnf/bnf/59/5375.htm

MEIBOMIAN CYST / CHALAZION

DIAGNOSIS

A Meibomian cyst (MC) (also known as a chalazion) is a sterile, chronic, inflammatory granuloma caused by the obstruction of a Meibomian gland, that manifests as a swelling on the inside of an eyelid. MCs can occur spontaneously or may develop from an internal stye (hordeolum) or due to dysfunction of the Meibomian glands.

Other causes/predispositions for MCs are:

- poor eyelid hygiene
- seborrhoea
- acne rosacea
- chronic blepharitis
- hyperlipidaemia
- leishmaniasis
- tuberculosis
- immune deficiencies
- viral infections
- rarely, carcinoma

MCs are characterized by a nodule that is:

- hard, painless, palpable (*but may cause pain, e.g. pressure on the eyeball, and larger MCs may be tender secondary to their size - may grow up to 8mm*)
- non-erythematous and non-fluctuant
- develop over several weeks
- usually 2-8 mm in diameter
- are often with associated conjunctival injection
- more common on the upper eyelid
- one or both eyes can be affected and more than one MC may be present
- MCs can occur at any age

Patients commonly present with

- a history of recent eyelid discomfort sometimes followed by acute inflammation (e.g. redness, tenderness, swelling) but normally settling / painless and non-tender
- a history of previous episodes (*MCs recur in predisposed individuals*)
- MC may have been present for weeks / months.
- Rarely, MC may become secondarily infected; the infection can spread or cause preseptal cellulitis.

To diagnose:

Eversion of the eyelid shows

- a discrete, immobile, round, yellowish lump (lipogranuloma) which may appear inflamed, tender, and erythematous in the acute phase
- normal, freely mobile skin over the cyst, while the MC is adherent to the tarsal plate
- no associated ulceration, bleeding, telangiectasia, tenderness, or discharge.

Vision should be normal unless MC is excessively large - the latter can cause astigmatism and visual disturbance (including vision loss) and ptosis.

MANAGEMENT

Limited evidence indicates that 25–50% of MCs resolve spontaneously or with conservative treatment. (Some resolve within 1–2 months while others take up to 6 months or longer).

Conservative management

Advise pt to:

- apply a warm compress (clean flannel rinsed in hot water) for 15-30 minutes twice a day to the affected eye (to help liquefy the lipid content of the MC, thus encouraging drainage)
- massage eye lid as follows: After a bath or shower, warm hand under hot water and work up a lather using a drop of baby shampoo. Place the index finger over the closed lids at the lid margin and vigorously (but carefully) massage the lid back and forth for a total of 10 times. Repeat procedure using the middle, ring and little finger.
- Clean affected eyelid/lashes twice daily (to clear debris and oily secretions).

Inform pt that MC will take 6-12 weeks to resolve and that, although perhaps cosmetically unattractive, MCs rarely cause serious complications.

Do not prescribe

- an antibiotic (topical or oral)
- oral tetracycline (e.g. doxycycline; an off-label indication) on the basis of lack of evidence and information on dosage and duration of treatment

If conservative measures are unsuccessful, refer to locality GP specialist for review and/or treatment.

REFER Email Advice

Not applicable.

REFER ONLY

Routine GP specialist Cost £87.08

Secondary care Cost £153

If pt experiences one of the following and is 16 years old or over, **refer to the trained GP within your locality:**

- MC has not responded to conservative management and is present for more than three months;
- MC interferes with vision;
- MC is source of regular infection (2 or more episodes within three-month period) requiring medical treatment; or
- Excessive pain.

A list of trained GPs will be available on the intranet in the referral guidelines section of the General Practice pages under the ophthalmology folder.

A patient should be referred to secondary care for **routine** treatment **ONLY** if:

- S/he is 15 years old or under
- Pt unsuitable for local anaesthetic
- Pt is on anti-coagulants
- MC is located too close to the punctum / the site of the lesion or lashes means specialist intervention necessary

Treatment by GP specialist or secondary care may include:

- Watchful waiting
- Incision / curettage
- Intralesional corticosteroid injection

Discuss with specialist if:

- the diagnosis is uncertain
- pt has recurrent MCs and prophylactic drug treatment is being considered
- there are signs or symptoms of preseptal cellulitis
- there are signs or symptoms of orbital cellulitis (rare)

Urgent 2 week	If the MC has **an atypical appearance,** or **recurs in the same location, REFER URGENTLY under the 2 week rule to exclude cancer**
ADDITIONAL INFORMATION	

PINGUECULA

DIAGNOSIS

Pinguecula are relatively common, non-malignant, slow-growing proliferations of conjunctival connective tissue in the eye, associated with high exposure to UV/sunlight. Pinguecula can be distinguished from pterygia which extend over the cornea. A pingueculum may develop into a pterygium. *[Pterygia are conjunctival thickenings that may have blood vessels associated with them; often have a triangular-shaped appearance; and may grow over the cornea and affect vision].*

Signs and symptoms

Pinguecula

- manifest as fleshy lumps on the conjunctiva
- may be yellow, gray, white or colourless
- are almost always to one side of the iris (not above or below), usually on the side closest to the nose.
- are common in adults (incidence increases with age) and those who have been exposed to high levels of sunlight
- are normally asymptomatic

Patient:

- has normal visual acuity
- has normal corneal appearance
- may report 'dry eyes' and feeling that there is a foreign body in their eye

MANAGEMENT

- Reassure patient: pinguecula grow slowly and almost never cause significant damage.
- Suggest wearing sunglasses in sunny conditions to prevent further development of pinguecula and pterygia
- Suggest using artificial tears to lubricate the eye, to protect against dryness and relieve the sensation of a foreign body in the eye.
- In severe cases, non-steroidal eye drops may be used to reduce any swelling or inflammation.

REFER Email Advice

N/A

REFER ONLY

Routine

Cost of O/P appt £134

Refer only:

- if pingueculm has become infected (pingueculitis) - very painful, inflamed, sore, and causing irritation
- pingueculum not settling.

ADDITIONAL INFORMATION

N/A

SUBCONJUNCTIVAL HAEMORRHAGE

DIAGNOSIS

Subconjunctival haemorrhage can be traumatic, spontaneous, or related to systemic illness. Signs include:

- Asymptomatic
- Deep red patch on the globe
- Sudden onset
- Normal vision.

Causes may be:

- Idiopathic
- Valsalva (e.g. coughing, straining, vomiting) – particularly in children
- Traumatic – including remote injury and surgery
- Hypertension/arteriosclerosis
- Blood dyscrasias (if recurrent or in young patients without history of trauma or infection)
- Antibiotics, drugs/chemicals.

MANAGEMENT

If onset is spontaneous, check patient's blood pressure and reassure patient that it will resolve in 2/52.

See Eye casualty advice sheet for more information.

Self-care

- OTC artificial tears can be used 4 times per day for mild irritation
- Discourage use of aspirin products or NSAIDs until subcon haemorrhage resolved

REFER Email Advice

N/A

REFER ONLY

Urgent

Cost of urgent appt £134

If patient has any history of trauma – refer to secondary care as an urgent referral.

ADDITIONAL INFORMATION

http://emedicine.medscape.com/article/1192122-overview

SUMMARY – EYE SIGNS AND SYMPTOMS THAT REQUIRE URGENT REFERRAL	
AGE-RELATED MACULAR DEGENERATION	**Age-related macular degeneration (AMD) may be suspected** in people 50 years of age or older who present with either of the following symptoms, usually affecting one eye at a time: - distortion of vision, where straight lines appear crooked or wavy. - painless loss or blurring of central or near-central vision (pt may describe a black or grey patch affecting their central field of vision (scotoma). **Other symptoms less commonly associated with AMD** include: difficulty reading, driving, seeing fine detail; light glare; loss/decreased contrast sensitivity; size or colour of objects appearing different with each eye; showers of floaters or clouding of the visual field caused by vitreous haemorrhage; photopsias; visual hallucinations. NB These can occur with severe visual loss of any cause, including advanced AMD. Refer **urgently for further assessment** using rapid access referral form if pt has a less than 3 month history of visual loss, spontaneously reported distortion and/or onset missing patch/blurring in central vision. Ideally, pt should be seen within 1 week but if delay is likely, pt should attend A&E for urgent specialist assessment.
ARC EYE	Advise pt to attend A&E if no improvement and vision worsens; pt sees flashing spots or light; or has worsening eye pain or pain with eye movement.
BLEPHARITIS	Refer for same-day evaluation if there is rapid onset of visual loss or an acutely painful red eye. Refer with urgency appropriate to the problem if there is: • Evidence of corneal disease (pain, blurred vision) • Deterioration of vision • Associated disease, such as Sjögren's syndrome or eyelid deformities **Urgent 2 week wait** To exclude sebaceous cell carcinoma of the eyelid margin, refer under 2-wk wait: unilateral, persistent/non-responsive blepharitis or marked eyelid asymmetry.
CONJUNCTIVITIS	If **irritant conjunctivitis,** e.g. a penetrating injury of the eye from high speed sharp particles may have occurred, refer for same-day assessment by a specialist. **Neonatal conjunctivitis** Babies under 4 weeks with neonatal conjunctivitis should be referred to secondary care. Neonatal conjunctivitis may be caused by infection or be a toxic response to topical eye treatments. The most important causes are: gonorrhoea (can result in a serious localized infection) and Chlamydia (can be associated with the development of pneumonia).
DIABETIC RETINOPATHY	Refer for emergency ophthalmological assessment if a diabetic pt presents with any of the following symptoms or signs (*which may indicate such conditions as rubeosis iridis, pre-retinal or vitreous haemorrhage, or retinal detachment*): sudden loss of vision; sudden change in visual acuity; diffuse reddening of the iris; irregular pupil; corneal haze; painful eye.
DRY EYE SYNDROME	Refer for same-day specialist assessment if acute glaucoma, keratitis, or iritis is suspected because of: moderate-to-severe eye pain or photophobia; marked redness of the eye in one eye; reduced visual acuity.

GLAUCOMA	**Acute angle closure glaucoma (acute glaucoma)** GPs should refer pts with the following symptoms urgently for triage by eye casualty 01865 231494: Rapid development, severe symptoms which may come and go: intense pain; eye redness; headache; sore, tender eye area; seeing halos around lights; misty vision. **Secondary glaucoma** Caused by other conditions/eye injuries - may cause misty vision, and rings/halos around light sources. GPs should refer patients for triage by eye casualty 01865 231494 **Developmental glaucoma (congenital glaucoma)** Can be difficult to identify in baby/young child, but symptoms include: having large eyes (pressure causes eye to expand); photophobia; cloudy and/or watery eyes; jerky eye movement; a squint. GPs should refer pts with acute symptoms urgently for triage by eye casualty 01865 231 494 or to Ophthalmology paediatric clinic.
HORDEOLA	**Refer urgently** if there is significant preseptal cellulitis; if pt presents with signs or symptoms of orbital cellulitis (rare). **Red flags** for hospital admission include: Periorbital swelling; protrusion of the eyeball; diplopia / impaired eye movement (ophthalmoplegia); Reduced visual acuity; reduced light reflexes or abnormal swinging light test; systemically unwell; central nervous system signs or symptoms; when a full eye examination is not possible. **Urgent 2 week wait** Refer urgently if cancer is suspected e.g., if stye has an atypical appearance or reoccurs in the same location.
SUBCONJUNCTIVAL HAEMORRHAGE	If pt has any history of trauma, refer to secondary care as an urgent referral.