Management of Cataract in primary care

Key learning points

- Whilst cataract is strictly defined as any opacity in the natural lens of the eye, we use it here to describe a lens opacity causing problems with vision.
- Cataract is common especially after age 60.
- Although not preventable - it is cured by surgery, which is typically low risk, high benefit and cost-effective (1).
- Although cataract usually affects older people, rarely it may be congenital or may be acquired at a younger age if risk factors are present.

Epidemiology

- According to WHO, blindness due to cataract affects 20 million people (51% of global blindness in 2010) and is increasing by 1m per year.
- In the industrialised world cataract is a rare cause of blindness, as surgery is readily accessible. Cataract surgery is the most frequently performed operation in the UK. The number of cataract operations in the UK increased from 247,847 in 2001/2 to 336,967 in 2011/12.
- Cataract is the commonest cause of gradual loss of vision in older people in the UK.
- The incidence of operable cataract is increasing. In high income countries, this is because an increasingly elderly population has higher expectations and lower threshold for surgery.

Risk factors

- Development of cataract is multifactorial. The vast majority of cataracts are age-related and inevitable.
- Cataracts tend to run in families, women are more affected than men, Environmental factors include ocular inflammation, ultraviolet light, trauma and radiation exposure.
Systemic and topical steroids have long been associated with increased cataract.
Diabetes is associated with earlier onset and increased progression of cortical cataract, with increased risk associated with poorer diabetic control.
Poor nutrition, low socio-economic status and education, dehydration, chronic disease, smoking, and some medical treatments (such as radiotherapy, psoralens, chlorpromazine, amiodarone, tamoxifen, tetracyclines) have all been linked to increased prevalence of cataract.
People with learning disabilities are at higher risk of developing cataract.

Cataract prevention

- There is no evidence to support a role for topical or systemic anti-oxidant vitamin supplements to prevent cataract (2).
- While the incidence of age-related cataract is associated with obesity, the effect of weight loss on cataract progression has not been established.
- Smoking has a dose-response effect on development of cataract, but little is known of how stopping smoking alters risk.

Symptoms of cataract

- Cataract characteristically causes gradual blurring of vision with dulling of colour and reduction in contrast perception. Dazzle and glare in bright light is characteristic of cataract.
- A nuclear cataract may temporarily improve unaided reading vision by making a patient more myopic or less long-sighted through an increase in the refractive index of the lens. Surgery may be delayed by updating spectacles at the discretion of the patient’s optometrist.

Diagnosis of cataract in primary care

- On testing, vision is usually better using a pinhole in front of the affected eye.
- The centre of the eye looks hazy if directly illuminated, and the retinal view with ophthalmoscope is obstructed.
- Most cataracts are diagnosed by an optometrist during a routine eye test.
- Neonatal cataract requires urgent referral to optimise visual outcome. In certain cases a white pupil (leukocoria) may be mistaken for a cataract. Leukocoria in a child may be caused by retinoblastoma and needs to be referred urgently. An infant or pre-verbal child with cataract may present with squint and should be referred urgently too.
Non-surgical supportive measures

Patients that are not suitable for surgery or choose not to have surgery may find the following advice useful:

- Reduce glare by wearing a hat, or/and sunglasses (with UV-B protection) in bright light.
- Update glasses if there is a change in refraction.
- Increase light levels when working or reading to improve perception of contrast.
- Check with low vision clinic for provision of vision and accessibility aids.
- Reassure the patient that delaying surgery should not affect the final outcome.

Decision to operate

- The risk – benefit discussion with the patient depends on symptoms, how lifestyle is impacted by visual problems, how carer responsibilities are impacted, and by ocular and systemic co-morbidity, whether the patient is driving or not, and whether the patient is prepared to accept the risks of surgery. The GP can usually have this conversation in straightforward cases, and this process is called cataract referral refinement. In some parts of the UK, optometrists undertake this refinement as part of a formal scheme.
- Cataract surgery can be considered in patients with age related macular degeneration to enhance mobility, rather than necessarily to improve visual acuity. Patients with dementia may benefit from cataract surgery as this may improve challenging behaviours.
- Before going ahead, it is important that the patient realises that intraocular surgery carries a risk of 0.1% of major eyesight complication (including blindness), 2% of delayed recovery due to less severe complication. Although cataract is usually bilateral, it is standard practice to operate on the worse-seeing eye first.
- Rationing of cataract surgery. On 13th August 2012, the Royal College of Ophthalmologists, College of Optometrists, Optical Confederation and Local Optical Committee Support Unit issued a joint statement: “we strongly advise that it is clinically unsound to determine access to cataract surgery on the basis of a blanket visual acuity criterion, surgery should be offered if the cataract is adversely affecting daily living”.

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Cataract Surgery

- The commonest techniques involve removing the lens protein from inside the natural lens capsule. The capsule is left behind to support an artificial lens implant that restores focus to the eye.
- Two rare major surgical risks are infection and intraocular haemorrhage. Both can result in loss of vision in the operated eye. However, the risks of these complications are considered very low.
- Post-operative complications – usually with less serious outcomes – are recurrent inflammation (uveitis), macular oedema and retinal detachment.
- The lens implant is made of inert plastic incorporating an ultra violet filter. The required lens power is calculated from pre-operative eye measurements and typically a single focus (monofocal) lens is used. Discussion of available options is part of the normal pre-operative assessment in the eye unit. Surgery using multifocal and toric (correction of astigmatism) intraocular lenses is available privately but not on the NHS at present.

Post-operative care

- Following surgery most patients are prescribed antibiotic and anti-inflammatory (usually steroid) drops, often in combination form, to use with tapering frequency over the first few weeks. In uncomplicated surgery all drops will be stopped by 6 weeks.
- It is normal to have itching, watery discharge and mild discomfort following surgery. This should disappear within a few days. Adverse reactions to the commonly used antibiotic (neomycin in Maxitrol ©) or to the preservative in the drops are relatively common.
- Pain or increasing redness or decreasing vision in the first week(s) may indicate infection and an urgent referral back to the eye unit is needed for investigation and treatment.
- The posterior lens capsule can develop opacification in 15 – 50% of post cataract surgical patients and may require referral back for outpatient laser photodisruption (YAG laser capsulotomy) even many years after surgery. It is recommended that adequate time for cataract wound healing (e.g. 4-6 weeks) is given before definitive update of glasses. Patients will need to be warned about the risks of driving until they have had their post-operative vision corrected.
- ‘Over the counter’ reading glasses may be used from day 1 if helpful.
Information for patients

2. RNIB information on cataracts available at http://www.rnib.org.uk/eye-health-eye-conditions-z-eye-conditions/cataracts accessed 22nd June 2014

e-Learning for Health
The RCGP and Department of Health have created an e-learning site for GPs.

Useful Resources

- Royal College of Ophthalmologists Cataract Surgery Guidelines 2010. PDF available to download at http://www.rcophth.ac.uk/page.asp?section=451&sectionTitle=Clinical+Guidelines
- Map of Medicine http://www.nhs.uk/Conditions/Cataract-surgery/Pages/MapofMedicinepage.aspx

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