



Cataracts

Monitor older patients for visual acuity

BY MARINO J. DISCEPOLA, MD

With our aging population, the incidence of cataracts — opacification of the lens of the eye — is increasing exponentially. Management consists of watchful waiting, followed by removal of the lens and replacement with an artificial one. This is the most commonly performed surgical procedure worldwide. Unfortunately, lack of operating room resources makes cataracts the most common cause of treatable blindness in the Third World. The last two decades have witnessed a revolution in cataract surgery that has made it the safest and most successful surgical procedure in medicine today.

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Signs and symptoms

- gradually decreasing visual acuity
- progressive clouding or fogging of vision
- monocular diplopia (seeing double)
- increasing myopia, frequent change in eyeglasses
- second sight — older patients no longer need their reading glasses — myopia from nuclear cataracts compensates for their farsightedness
- difficulty distinguishing dark colours, e.g. dark blue from black
- problems with driving in bright sunlight
- “white” pupil indicating hypermature cataract
- haloes around lights, similar to those seen with angle-closure glaucoma
- as the cataract increases in size, it predisposes susceptible individuals to angle-closure glaucoma

Differential diagnosis

Any cause of decreased visual acuity

- glaucoma
- retinal detachment
- macular degeneration
- vitreous hemorrhage
- retinal artery and vein occlusion
- ischemic optic neuropathy
- diabetic macular edema
- diabetic retinopathy

Risk factors

- age — everyone gets cataracts, you just have to live long enough
- prolonged exposure to ultraviolet B light, so sunglasses are important even in childhood
- smoking — increases nuclear sclerotic cataracts
- heavy alcohol intake
- steroid use — both systemic and topical — greatly raises the risk of posterior subcapsular cataracts
- ocular trauma
- metabolic — diabetes augments the likelihood of cortical cataracts

Screening and referral

- visual acuity chart — a necessity in every family physician's office
- visual acuity \leq 20/50
 - patient no longer has the legal ability to drive
 - immediate referral needed
- complaints by patient that his vision is “not what it used to be” — refer
- elderly individual states that he “sees well”
 - assess visual acuity regularly anyway — results may be very surprising
 - it's often only after the first cataract is removed that patients realize how poor their vision was
- immature cataract — still some clear areas in lens, i.e. not totally opacified yet
- cataract should be mature, or “ripe,” before proceeding to surgery, i.e. visually significant
- if the wait is prolonged, cataract becomes “over-ripe”
 - more energy required to remove the cataract
 - potentially more damage to the eye
 - higher complication rate

Cataract surgery

- the most commonly performed surgical procedure worldwide
- the most successful — 99% of patients have their vision improved
- phacoemulsification — the cataractous lens is removed via ultrasound
- artificial intraocular lens (IOL) is implanted to replace it
- not done by laser
- topical or retrobulbar anesthesia
- out-patient procedure
- wound is self-sealing, usually no sutures are required
- IOL
 - either soft or rigid
 - soft is preferable — smaller incision and less possibility of a secondary cataract developing
- prognosis
 - if cornea and retina are normal, visual acuity will be 20/20
 - patient can see clearly either far or near without glasses, but not both
 - will need bifocal eyeglasses for best clarity at all distances
 - glasses are prescribed 1 month post-op
- minimum wait for second eye — usually 2 weeks — some surgeons do both eyes simultaneously

Follow-up

Risks of procedure

- retinal detachment — approximately 1%
- permanent cystoid macular edema < 1%
- vitreous hemorrhage < 1%
- intraocular infection, i.e. endophthalmitis < 1/500
 - usually in first week post-op
 - treatment — intraocular injection of antibiotics — can only be given by an ophthalmologist
 - prognosis directly related to how quickly antibiotics are given

Follow-up

- check for endophthalmitis — beware of patient who develops a red, painful eye with decreased vision 2-6 days post-cataract surgery — emergency referral to ophthalmology is crucial!
- individual with diabetes — more likely to develop macular edema post-op

Future advances

- bifocal IOLs
 - clear image both at distance and near, instead of only 1 focal plane as is currently the case
 - some already have U.S. FDA approval and are in limited use
- toric IOLs
 - correct pre-existing astigmatism as well as spherical refractive error, making the patient less reliant on eyeglasses post-operatively
 - will soon be available in Canada