Common Pediatric Ophthalmologic Topics for the General Practitioner

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Faculty Disclosure

I have no financial interests to disclose.
Educational Need

There is often inadequate training in pediatric residencies concerning ophthalmologic issues. Since the pediatrician is often the first person a child with visual issues sees, it is imperative that pediatricians be able to recognize common pediatric ophthalmologic entities and treat or refer as appropriate.

Objectives

Upon completion of this educational activity, you will be able to diagnose common pediatric ophthalmologic problems.
Expected Outcome

As a result, you should be able to appropriately treat many common pediatric ophthalmologic problems. You should also be able to recognize problems which require referral and be able to make an appropriate, timely referral.

Photo Acknowledgment

All photos are derived from a variety of sources and are included solely for educational purposes.
Common Eye Problems in Children

- Strabismus
- Amblyopia
- The Red Eye
- Nasolacrimal duct disorders
- Chalazia

Strabismus

- Esotropia
  - Pseudoesotropia
  - Infantile
  - Accommodative
  - Acquired
- Exotropia
  - Constant
  - Intermittent
Esotropia

- Pseudoesotropia
  - Wide, flat nasal bridge
  - Prominent epicanthal folds

Fig. 2 Pseudostrabismus is the appearance of, but not truly misaligned eyes.

Pseudoesotropia

- Evaluation
  - Corneal light reflex
  - Cover test

http://pedcorkbsd.uchicago.edu

http://ars.els-cdn.com
Infantile Esotropia

- Onset prior to 6 months of age
- Usually neurologically normal
- Large deviation
- Usually surgical
- Prior to 24 months of age

Fig. 1 Large-angle infantile-onset esotropia. www.aapos.org

Neonatal alignment

Sondhi et al\textsuperscript{1}, 2271 newborns:
67\% exodeviations
30\% straight
2\% variable exo- and esodeviations
1\% esodeviation
By 2 months, all esodeviations resolved
By 6 months, 97\% exodeviations resolved

Accommodative Esotropia

- Usual onset 6 mths to 7 years
- Usually intermittent, becomes constant
- Associated with amblyopia
- Treat with spectacle correction +/- bifocal +/- surgery

http://www.pedseye.com/

Acquired Esotropia

- Onset after 6 months
- Not associated with accommodation
- Amblyopia treatment
- Prompt surgical correction

http://telemedicine.orbis.org
Red Flags for Esotropia

- Acute onset
- Diplopia
- Abduction deficit
- Neurologic signs

Exotropia

- Constant
- Intermittent
**Constant Exotropia**

- Congenital exotropia
  - Constant exotropia present before 6 months
  - Large angle
  - High association with neurologic or craniofacial abnormalities

**Intermittent exotropia**

- Onset usually before age 5
- Worse at distance
- Worse when tired or ill
- Squint one eye in bright light
- Treat with patch, glasses, surgery (often deferred)
When to refer

- **Congenital Esotropia/Exotropia**
  - 4 months
- **Other Esotropia/Exotropia**
  - Next available appt.
- **UNLESS**
  - Red flags are present
  - Sixth nerve palsy suspected

Amblyopia

- Decreased vision not attributable to eye or posterior visual pathway
- 2-4% in North America
- Visual acuity 20/400 at birth
- Cells in primary visual cortex lose ability to respond to stimulation from the eye

http://www.health.state.mn.us
Amblyopia

- Strabismus
- Unequal refractive errors
- Deprivation

Amblyopia Treatment

- Correct significant refractive errors
- Remove obstacle
- Patching
- Atropine sulfate drops
- Greatest response in children <7, but some older children have dramatic response

The Red Eye

- Conjunctivitis
  - Infectious
  - Allergic
- Uveitis
- Trauma
- Foreign body

Conjunctivitis

- Infectious
  - 80% bacterial
  - Self-limited
  - polymyxin B sulfate and trimethoprim ophthalmic solution
- Allergic
  - Watery discharge
  - Itching
  - OTC ocular antihistamine ketotifen fumarate

www.gp-training.net
http://www.theeyepractice.com
**Conjunctivitis – when to refer**

- Skin lesions
- Corneal involvement
- Lack of discharge
- Significant photophobia
- Does not resolve within 2 weeks

**Uveitis**

- Pain, redness, photophobia
- JIA – often asymptomatic
Trauma

- Subconjunctival hemorrhage
- Suspected abuse
- Hyphema

Corneal Abrasion

Stain with fluorescein
Observe with a blue light for fluorescein uptake
Treat with erythromycin or bacitracin ointment
Foreign body

- Red eye
- Irritation
- Unilateral
- Corneal abrasion

http://www.eyesurgeryinberkshire.co.uk

Nasolacrimal disorders

- Dacryocele
- Dacryocystitis
- Nasolacrimal duct obstruction

www.eyeplastics.com
Dacryocele

- Bluish swelling below medial canthus
- Present at birth
- Early referral and decompression

http://webeye.ophth.uiowa.edu

Dacryocystitis

- Infection of lacrimal sac
- Medical urgency – same day referral
- Admission, IV abx
- Surgical decompression

http://one.aao.org
Congenital Nasolacrimal Duct Obstruction

- 5% of full term newborns
- Epiphora, mucoid discharge
- Reflux of cloudy fluid with digital pressure
- 90% spontaneous resolution within 1 year

NLD obstruction

- Lacrimal sac massage
- Avoid long term abx use
Congenital Glaucoma

- Epiphora
- Photophobia
- Blepharospasm
- Corneal clouding
- Corneal enlargement


Chalazia

- Inflammatory, granulomatous lesions
- Meibomian gland obstruction

www.eyeconditions.cataract-surgery.info

www.revophth.com
Chalazia

- Warm compresses
- Massage
- Baby shampoo lid scrubs
- Can take weeks to months to resolve

Summary

- Variety of common pediatric eye disorders can be managed by primary care physicians
- Don't hesitate to refer
- When in doubt . . . call us!!
References

