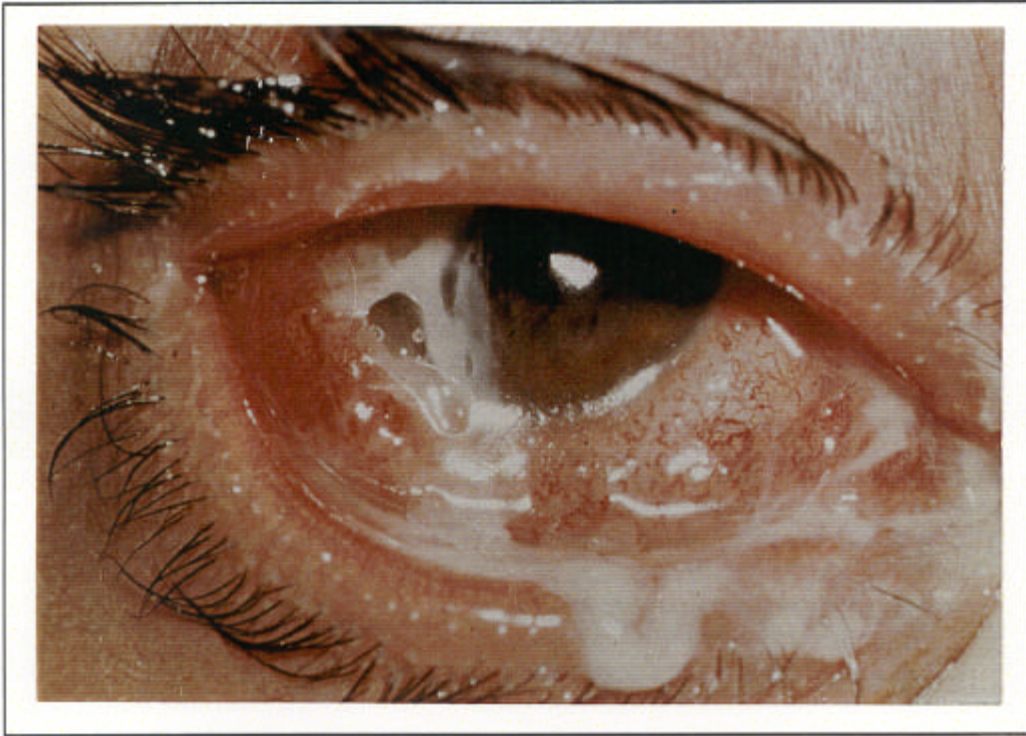


Integrative Medicine - Focal Problems

These problems are for educational value only, and are not a substitute for proper examination by qualified persons.

(Answers are on the last two pages)

Department of Ophthalmology - U.W.O.
Integrative Medicine II Focal Problem 1
PURULENT CONJUNCTIVITIS

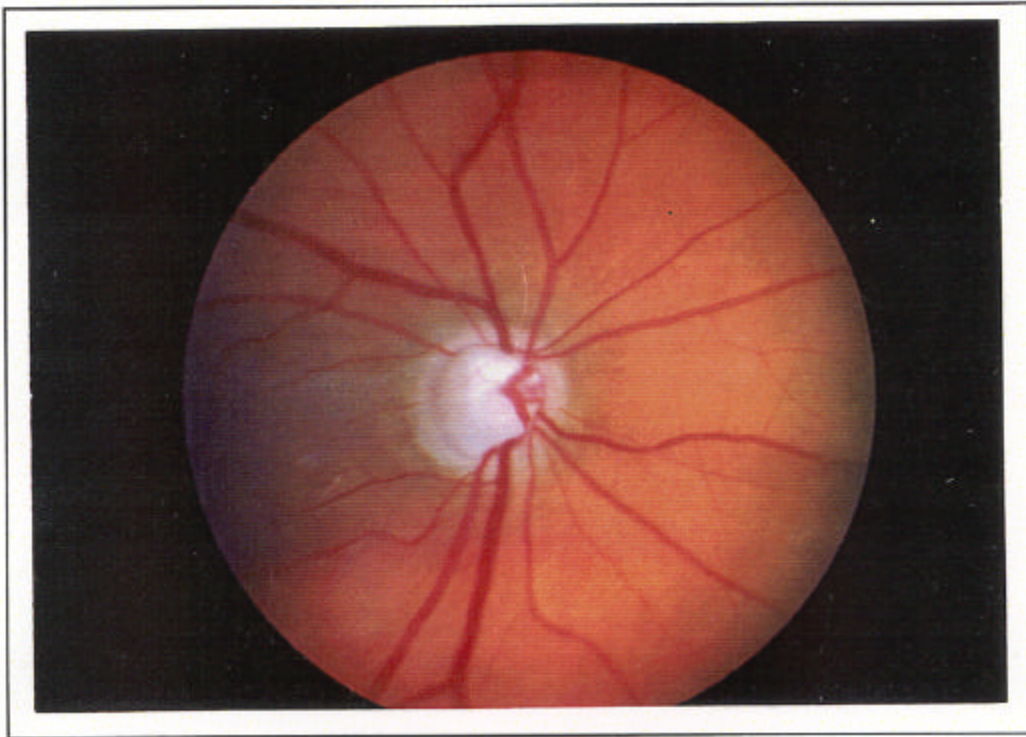


This 31 year-old man presents to you with a three-day history of ocular discomfort involving the right eye. This discomfort is characterized by a gritty sensation, puffiness of the eyelids, and copious sticky discharge which glues his eyelids shut in the morning.

1. What are the ocular findings shown above?
2. What question should be asked regarding this patient's history?
3. Are these findings more suggestive of bacterial, viral, or allergic conjunctivitis?
4. What are the more common causes of infectious conjunctivitis in adults?
5. What is the treatment (specific and non-specific) of the most probable diagnosis in this case?
6. Would you expect significant visual reduction in this case?
7. Would you expect raised intraocular pressure in this case?
8. When should topical corticosteroids be used in this type of case?

**Department of Ophthalmology - U.W.O.
Integrative Medicine II Focal Problem 2
GLAUCOMA**

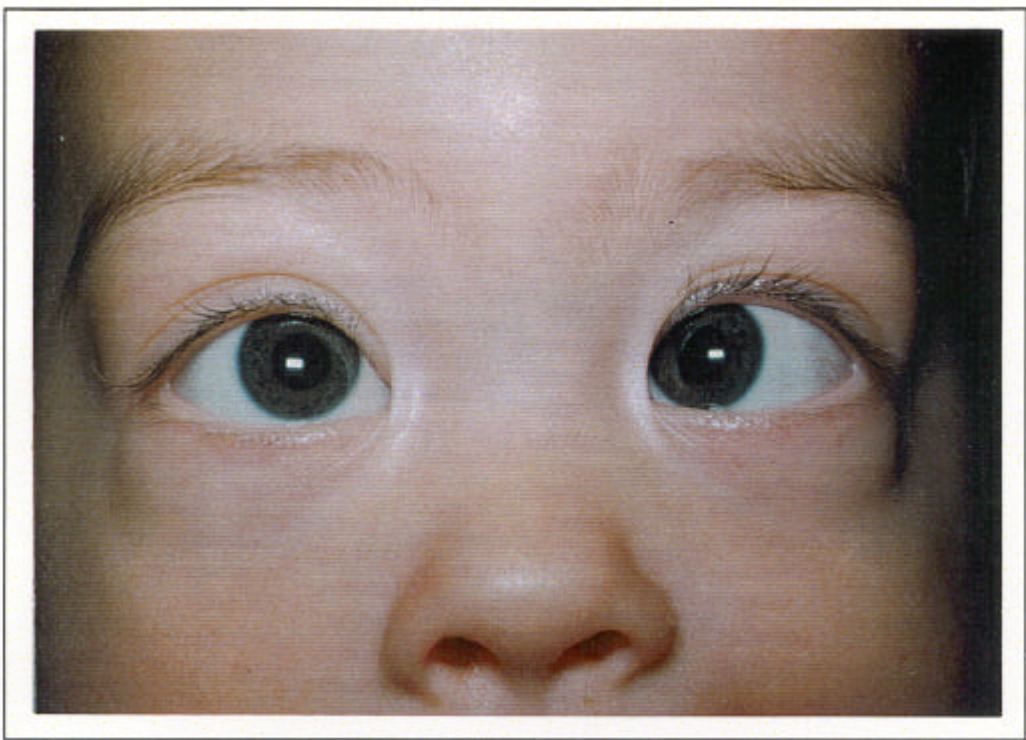
A 72 year-old woman arrives from the local nursing home no longer able to find her own way down the corridors. Ocular examination revealed optic nerve changes in both eyes as shown above.



1. Describe the abnormalities shown in the optic disc above.
2. What constitutes an abnormally high intraocular pressure?
3. Name three types of drugs used to reduce intraocular pressure.
4. List the principal systemic side effects of any two of these drug types.
5. List two other types of glaucoma.

**Department of Ophthalmology - U.W.O.
Integrative Medicine II Focal Problem 3
STRABISMUS**

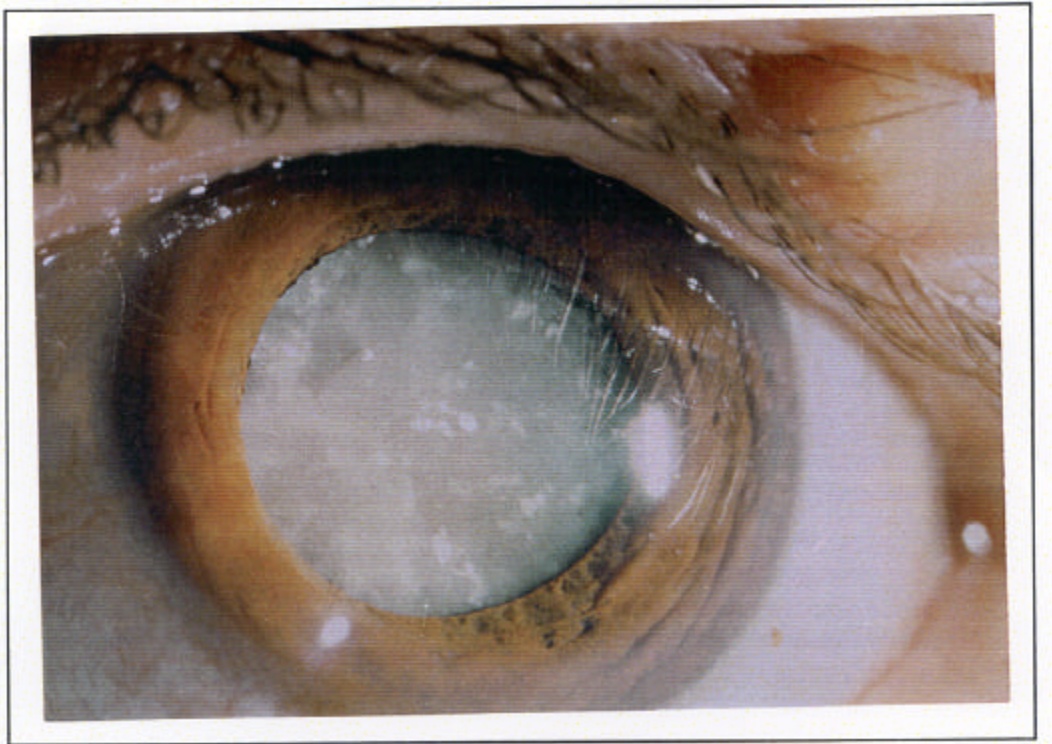
This three-month old girl was noted, shortly after birth, to have "crossed eyes" as shown.



1. What are some of the relevant questions that should be asked?
2. What is the danger of preferential fixation with one eye?
3. What physical signs are visible in this patient?
4. What should the primary care physician do and why? Name some causes of this condition.
5. What are possible treatments for this condition?

**Department of Ophthalmology - U.W.O.
Integrative Medicine II Focal Problem 4
CATARACT**

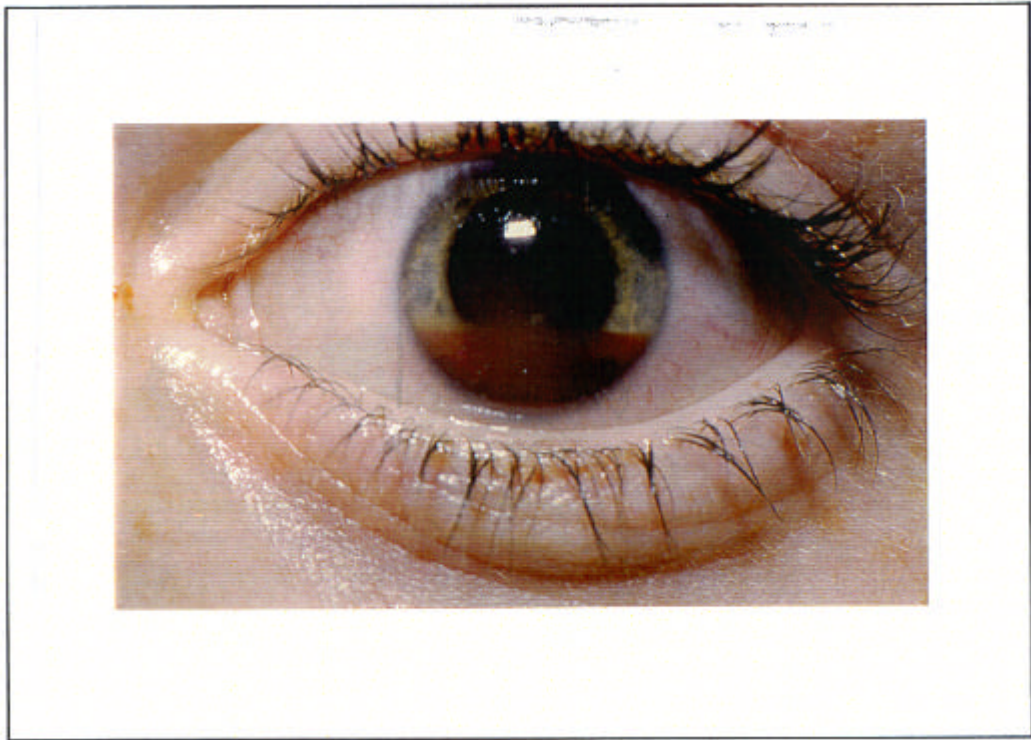
A 55 year-old man describes progressive painless loss of vision in the above eye over nine (9) months. A similar but lesser degree of visual loss has occurred in his fellow eye.



1. What is responsible for his impairment of vision?
2. How would this problem change vision in its early stages?
3. What part of the eye is affected by this process?
4. What can be done to improve vision for this patient?

**Department of Ophthalmology - U.W.O.
Integrative Medicine II Focal Problem 5
TRAUMATIC HYPHEMA**

A 6 year-old child has been hit in his right eye with a ball and complains of discomfort and blurred vision. The photo above shows the appearance of the eye upon presentation to the Emergency Department.



1. What is the likely diagnosis?
2. How would you manage this patient?
3. Are there any particular medications that you might avoid?
4. What are the possible early and late complications of such an injury?

**Department of Ophthalmology - U.W.O.
Integrative Medicine II Focal Problem 6
DIABETIC RETINOPATHY**

A 23 year-old man is referred by his optometrist to the family practice clinical with a 21 year history of diabetes and "abnormal fundi". The photograph above is representative of both eyes.



1. Describe the major ophthalmoscopic features seen above.
2. How may diabetic retinopathy result in visual loss?
3. What systemic complications would you anticipate in this patient?
4. How should this eye be treated?

Integrative Medicine II Focal Problem 1
PURULENT CONJUNCTIVITIS

1. Purulent discharge, Hyperemia
2. Sexual history. This case represents gonorrhoeal conjunctivitis
3. Bacterial
4. Bacterial and viral
5. Topical and systemic antibiotics, Warm compresses
6. No
7. No
8. Never

Questions 6 and 7 should give rise to full discussion of the differential of "the red eye".

Integrative Medicine II Focal Problem 2
GLAUCOMA

1. Optic Atrophy, Optic disc cupping, Nasal shift of disc vessels
2. Over 22 mmHg
3. Miotics, Beta-blockers, carbonic anhydrase inhibitors, osmotic agents
4. Miotics - respiratory arrest with use of depolarizing agents (during anaesthesia)
Beta blockers - respiratory obstruction in asthmatics
Carbonic anhydrase inhibitors - GI disturbances, electrolyte imbalance, cross-allergy with sulfa drugs
Osmotic agents - vascular overload and congestive heart failure and/or pulmonary edema, electrolyte imbalance, dehydration
5. Congenital glaucoma, acute angle closure glaucoma, secondary forms of glaucoma

Integrative Medicine II Focal Problem 3
STRABISMUS

1. Birth history, developmental problems, family history of strabismus ("crossed-eyes")
2. Constant fixation with one eye leads to amblyopia of the non-fixating eye
3. Esotropia, Epicanthal folds, Hirshberg Test (corneal light reflex test), Normal anterior ocular segments
4. Infantile esotropia, sixth nerve palsies
Restrictive disorders of extraocular muscles:
Medial orbital wall fracture
Congenital medial rectus fibrosis
Duane/Moebius syndrome
5. Optical correction (spectacles), Medical correction (patching), Surgical correction (eye muscle surgery)

Integrative Medicine II Focal Problem 4

CATARACT

1. Cataract
2. Blurred or distorted vision, increased glare, induced and progressive myopia
3. Opacification of the lens
4. Surgery to remove the clouded lens, intraocular implant

Integrative Medicine II Focal Problem 5

TRAUMATIC HYPHEMA

1. Traumatic Hyphema (hemorrhage into the anterior chamber)
2. Refer to ophthalmologist, shield eye, admit to hospital, bed rest
3. All ASA containing drugs and NSAIDs
4. A) Early
 - rebleed and resulting acute secondary glaucoma
 - dislocated lens
 - ruptured globeB) Late
 - cataract
 - glaucoma (chronic secondary)
 - contusion maculopathy
 - retinal detachment

Integrative Medicine II Focal Problem 6

DIABETIC RETINOPATHY

1. Neovascularization of the disc (NVD), retinal infarcts (cotton-wool spots), retinal hemorrhages, venous bleeding, intraretinal microvascular abnormalities (IRMA)
2. A) Diabetic maculopathy
 - ischemic (untreatable)
 - edematous (treatable)B) Complications of neovascularization
 - vitreous hemorrhage
 - retinal detachment (traction)
3. Diabetic nephropathy (renal failure), diabetic neuropathy
Both reflect microvascular disease in common with retinopathy
4. Laser photocoagulation
Focal laser reduces rate of visual loss in diabetic macular edema by 50%; pan retinal photocoagulation (PRP) reduces rate of visual loss from complications of neovascularization by greater than 50%