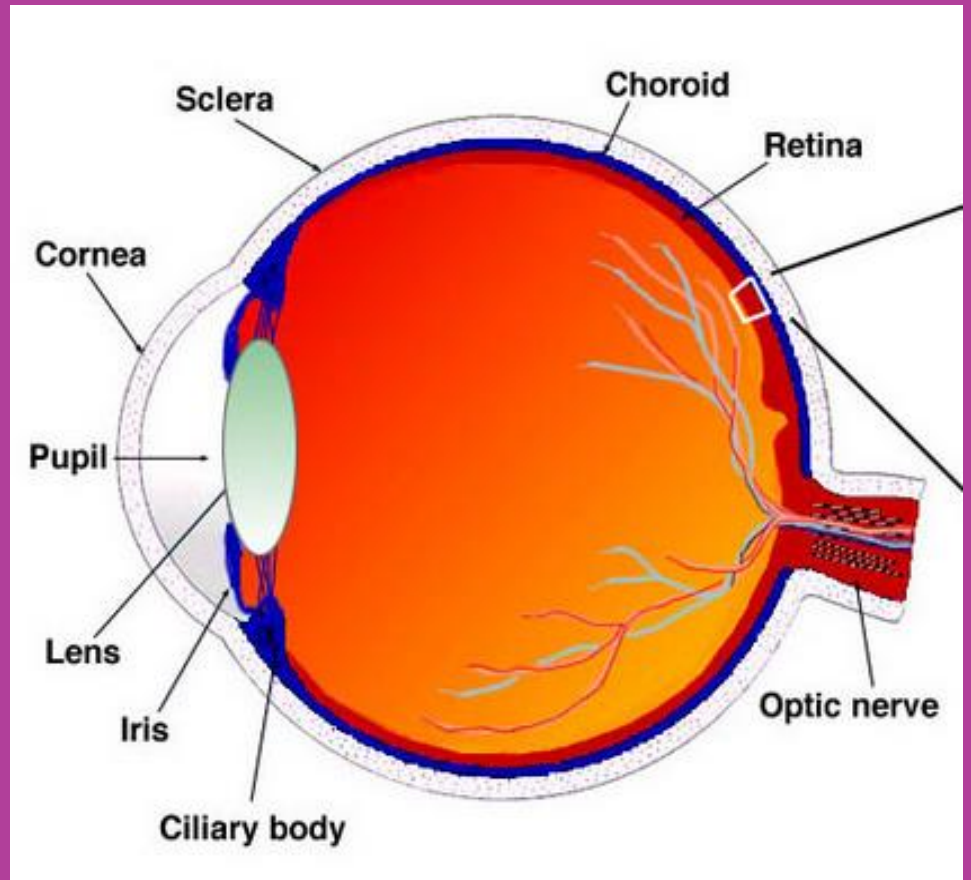
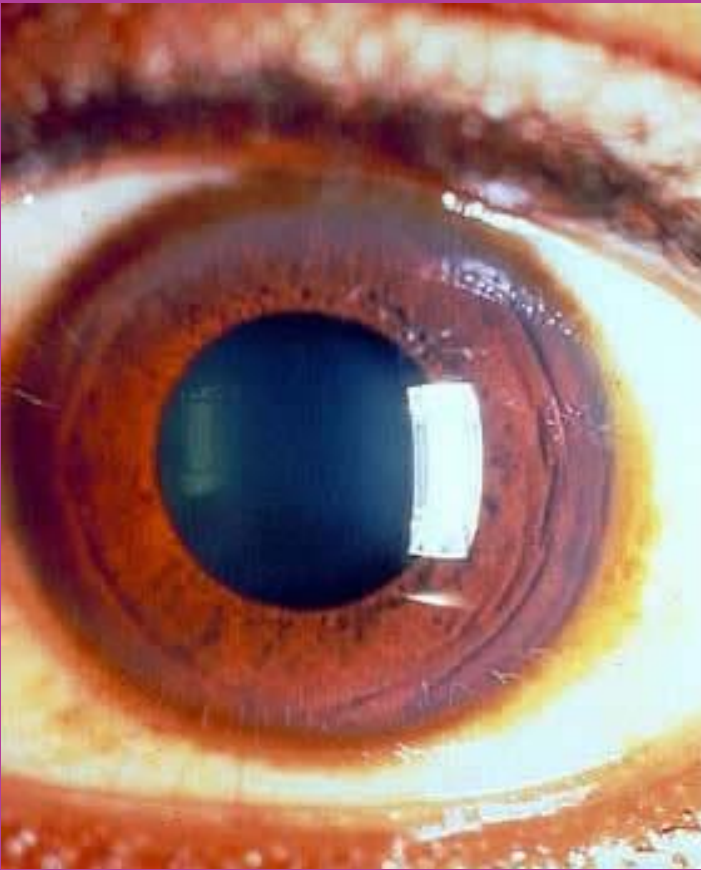


OVERVIEW OF PAEDIATRIC OPHTHALMOLOGY MBchB IV



Dr. Njambi Ombaba

The eye



Why children?

- 1.4 Million blind children, 75% in developing countries
- Total blind years = cataracts
- Blindness causes lifetime of emotional, psychological and developmental burden
- Blindness linked to child mortality rate
- Many causes are treatable or preventable
- Urgency needed to prevent/ treat amblyopia

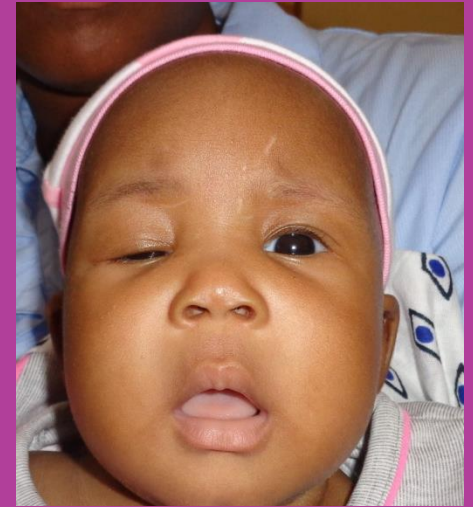
Common childhood eye conditions



Refractive Errors



Squint / strabismus



Ptosis- - drooping eyelids



Leukocoria- white reflex



conjunctivitis



Congenital glaucoma

Amblyopia- Lazy eye

Physiological central visual loss due to stimulus suppression

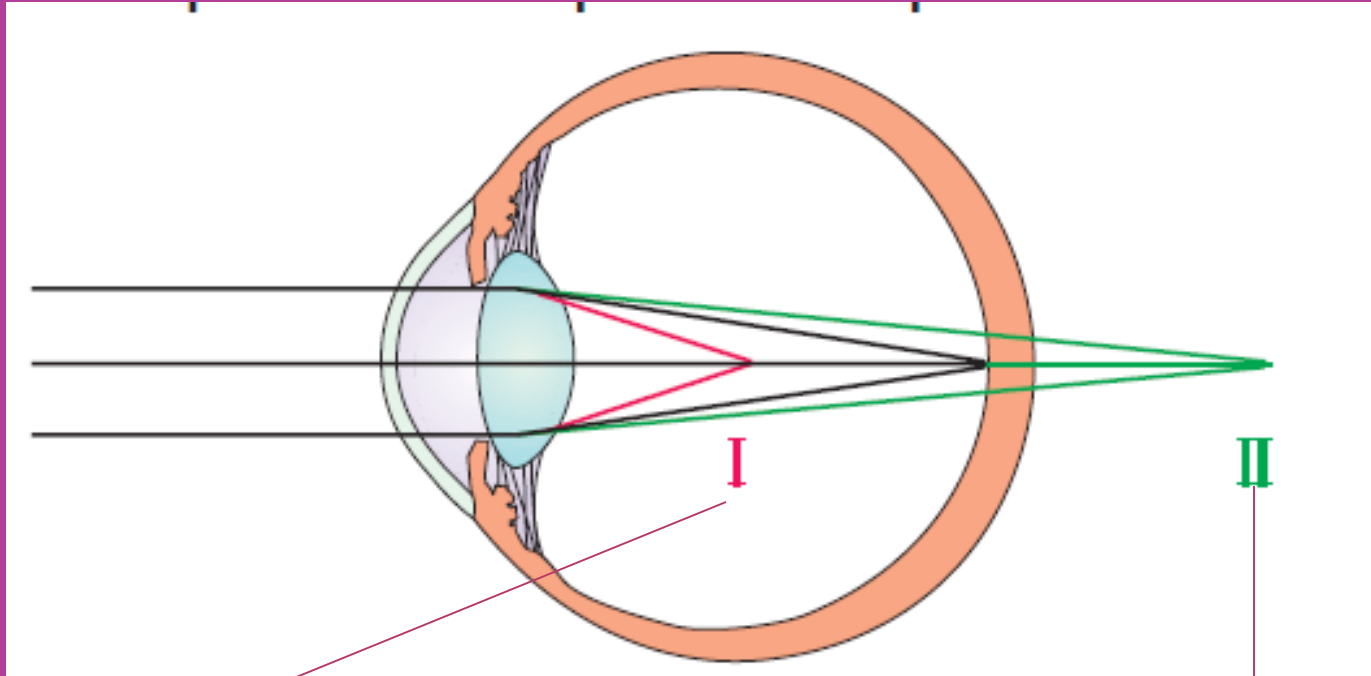
Forms of amblyopia	Cause	Treatment
Amblyopia with strabismus	Suppression of the deviating eye	Occlusion therapy
Deprivation amblyopia	Organic disease, such as ptosis or cataract	Early surgery and occlusion therapy in applicable cases
Refractive amblyopia	Different refractive errors	Correction with eyeglasses or contact lenses and occlusion therapy in applicable cases

Amblyopia treatment

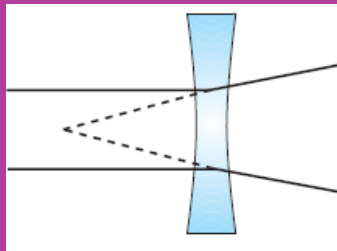
- Must be done within 'critical period'
- Treat the amblyogenic factor
- Penalize the better eye
 - Patch
 - Atropine
 - Fogging



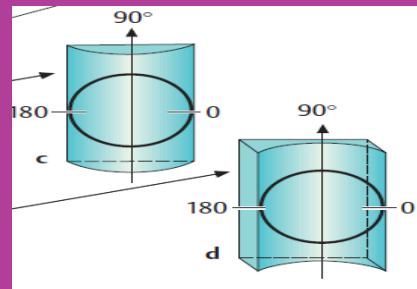
Refractive errors



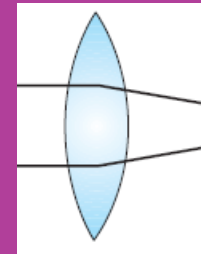
Myopia- concave lenses



Astigmatism



Hyperopia- convex lenses



Strabismus- crossed eyes



Normal ocular alignment



Esotropia – convergent squint



Exotropia- divergent squint



Hypertropia

Strabismus

Causes	Congenital – motor, sensory imbalance Sensory deprivation e.g cataracts Refractive errors- accommodative Traumatic Nerve palsies III, IV, VI Neuromuscular diseases Retinoblastoma
Consequences	Amblyopia Loss of depth perception Refractive errors Cosmetic and psychological effects
Treatment	Treat cause Amblyopia therapy- occlusion Spectacle correction Surgery

Red eye



Allergic conjunctivitis



Corneal ulcer (infections / trauma)



Uveitis with hyphema



Conjunctivitis (bacterial)

Corneal ulcers/ scars

Corneal ulcers



Other Causes

Infections (Bacterial ,Fungal,Viruses)
Trauma
Chemical burns
Traditional medicines

Treatment dependent on cause

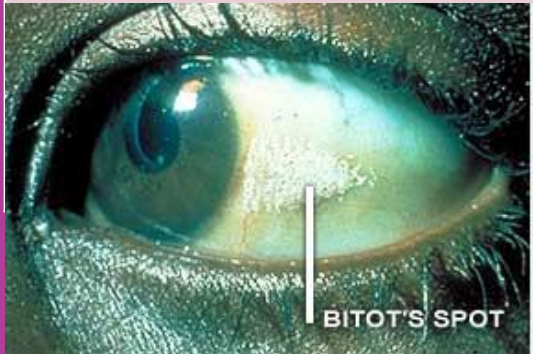
Corneal scars
Causes irreversible blindness



Requires corneal graft in in advanced cases

Xerophthalmia – Vit A deficiency


	Causes / risk factors	Treatment / prevention
<p>Xerophthalmia – dryness of conjunctiva and cornea</p> <p>Early: Night blindness</p> <p>Late: corneal ulcer, melting and later scarring</p>	<p>Vitamin A deficiency</p> <p>Risk factors</p> <ul style="list-style-type: none">MeaslesMalnutritionMal absorption	<p>Vitamin A supplements/ food rich in vitamin A</p> <p>Immunization</p> <p>Reversible in early stages</p>



Corneal scarring



Ophthalmia neonatorum

	Causes	Treatment
<p>Conjunctivitis of the newborn occurring within 30 days of life</p> <p>eye discharge +/- swollen eyelids</p>	<p>Neisseria gonorrhoea Chlamydia Viruses Traditional eye medicine</p>	<p>Frequent eye irrigation Antibiotic eye drops Systemic antibiotics</p>
	<p>Risk factors</p> <p>Untreated STDs in pregnancy Premature / prolonged labour Contamination at delivery</p>	<p>Prevention</p> <p>ANC screening Tetracycline eye ointment Good labour management</p>

Glaucoma in children

High pressure in the eye causing optic nerve damage and irreversible blindness

Treatment

Presentation in children

At birth or later

Triad: Photophobia

Tearing

Blepharospasms

Others: Bull's eye (large corneas/ eye)

Cornea haziness/ scarring

Myopia

Lens dislocation

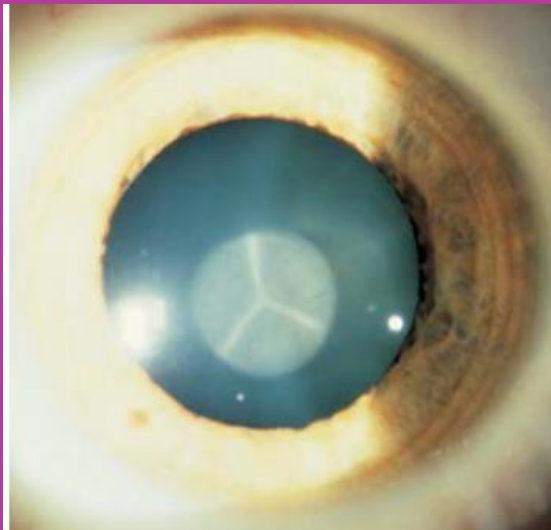
Ddx: Nasolacrimal duct obstruction

Urgent surgery to lower pressure and prevent visual loss



Leukocoria (white reflex)- Cataracts

	Causes	Treatment
Cataracts	Congenital/ Developmental Hereditary Infections (TORCHES) Metabolic disorders Trauma	Prompt surgery to prevent amblyopia Spectacle correction Amblyopia therapy



Leukocoria- Retinoblastoma

		Treatment
Retinoblastoma	Childhood eye cancer affecting retina One / two eyes Usually < 5yrs Family history Risk of second cancers	Prompt referral to save life Enucleation Chemotherapy/ radiotherapy Focal laser / cryotherapy Regular EUAs



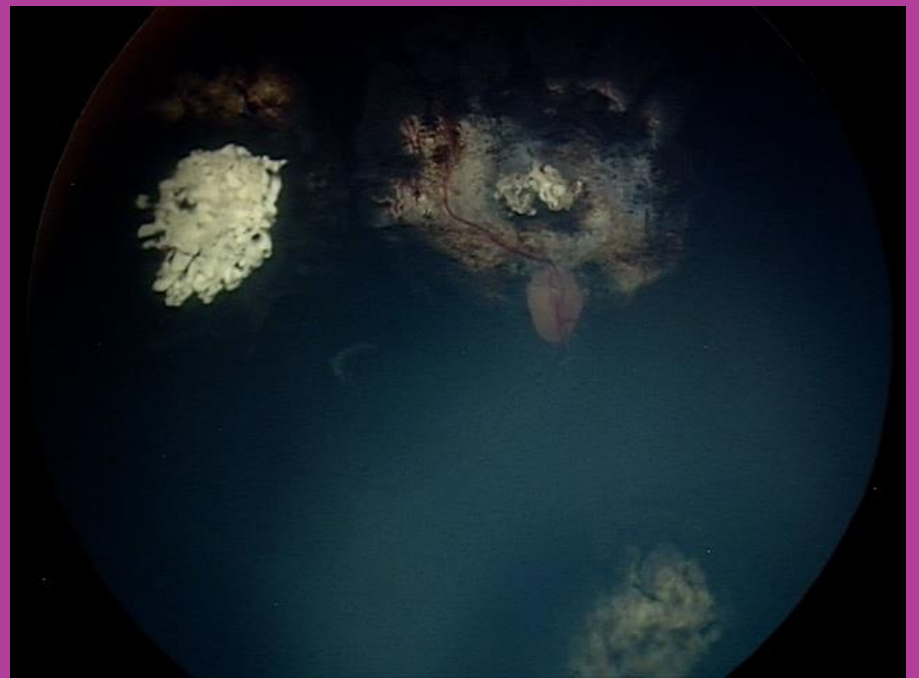
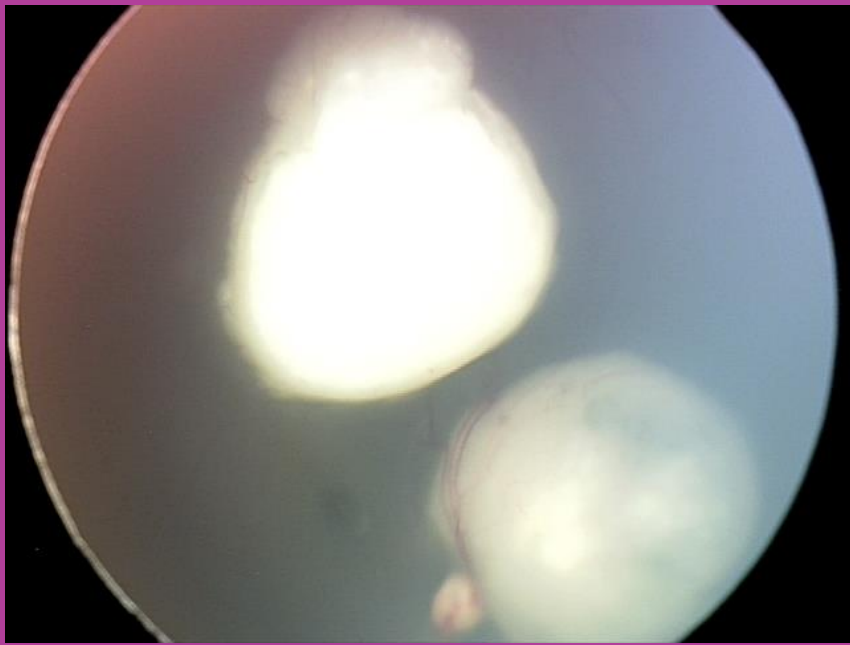
Leucokoria



Squint

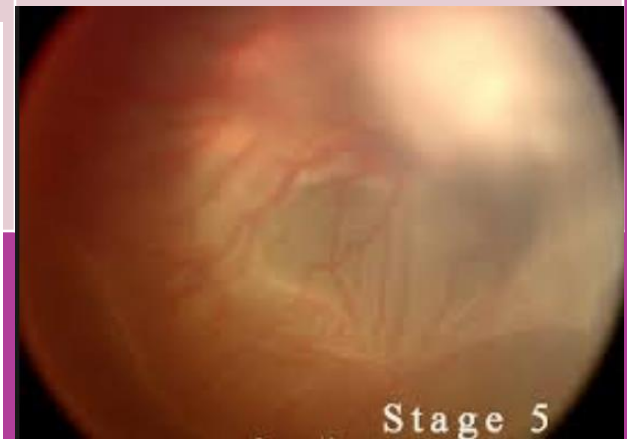
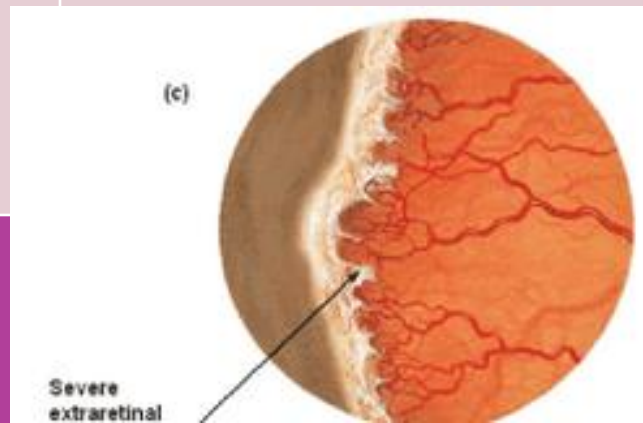


Proptosis



Leukocoria - ROP

	Cause	Prevention / treatment
<p>Retinopathy of prematurity</p> <p>Other ocular complications</p> <p>Strabismus</p> <p>Refractive errors</p> <p>Glaucoma</p> <p>Cataract</p> <p>Nystagmus</p>	<p>Abnormal retinal Vascularization in premature babies</p> <p>Risk factors</p> <p>Birth weight < 1500g</p> <p>GA < 32 weeks</p> <p>Supplemental oxygen</p> <p>Neonatal complications</p>	<p>Eye screening starting 3-4 weeks after birth</p> <p>Early stages</p> <p>Laser / cryotherapy</p> <p>Anti VEGF</p> <p>Late stage</p> <p>Retinal detachment</p> <p>Variable outcome</p>



Cerebral visual impairment

Definition	Causes
<p data-bbox="112 429 890 529">Visual loss resulting from organic brain damage</p> <p data-bbox="112 601 668 644">Other ocular complications</p> <p data-bbox="112 658 330 696">Strabismus</p> <p data-bbox="112 715 440 753">Refractive errors</p> <p data-bbox="112 772 330 811">Nystagmus</p>	<p data-bbox="981 429 1441 472">Hypoxia- birth asphyxia</p> <p data-bbox="981 486 1676 586">Infections- meningitis, encephalitis, neonatal sepsis/ jaundice</p> <p data-bbox="981 601 1734 644">Neurological disorders, hydrocephalus</p> <p data-bbox="981 658 1128 696">Trauma</p> <p data-bbox="981 715 1373 753">Metabolic disorders</p> <p data-bbox="981 829 1193 872">Treatment</p> <p data-bbox="981 886 1329 929">Underlying cause</p> <p data-bbox="981 943 1760 1043">Visual stimulation with bright / dazzling light and bright coloured toys</p>



MCH booklet

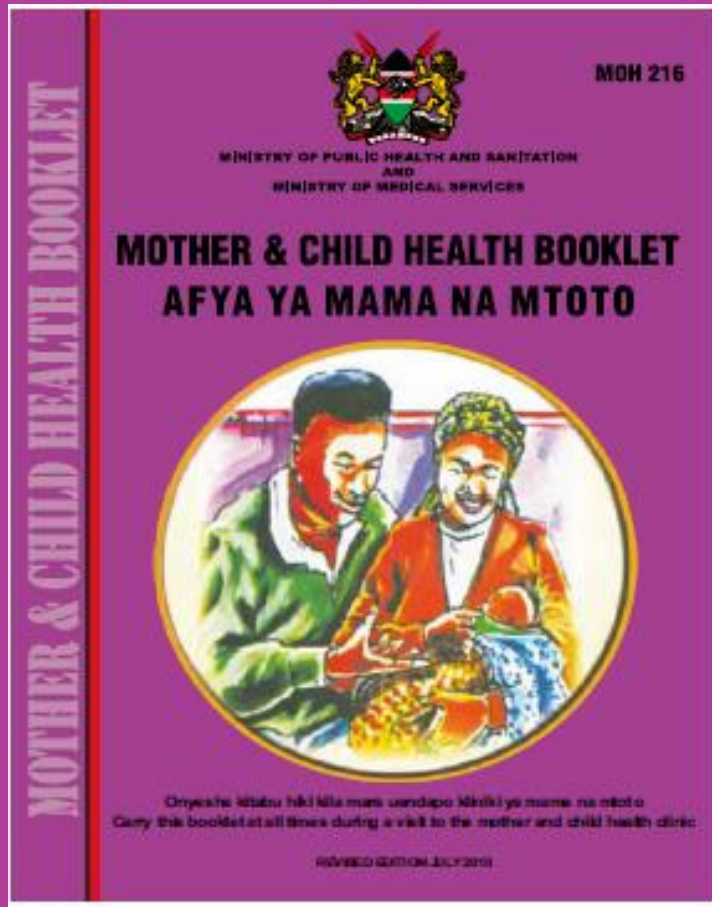

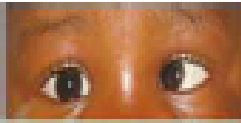


Table 1: Identification of Early Eye Problems in Infants

EYE CARE ASSESSMENT – Tick on the appropriate un-shaded box/es provided for age		AGE IN MONTHS		
		At Birth	At 6 Months	At 9 Months
TETRACYCLINE EYE OINTMENT (TEO) GIVEN?	Instituted to the new born baby/ Neonate both eyes only at birth			
PUPIL 	BLACK – Is normal like the appearance of the child's right eye in the picture			
	WHITE pupil - like the appearance of the child's left eye in the picture, refer the child to the eye clinic urgently			
SIGHT	Following objects – both eyes following objects is normal			
	Not following Objects - when one shines a torch directed to the eyes and the child is not following the direction of the source of the light, refer the child to eye clinic urgently			
SQUINT (CROSSED EYES) 	SQUINT – An eye which is not looking straight like the appearance of the child's left eye in the picture is said to have a squint. Refer to eye clinic urgently.			
	No Squint – is normal eyes			
ANY OTHER Problems	Yes – If there is any other eye problem, refer to eye clinic			
	No – means normal eyes			

Summary

