



DIAGNOSTIC & THERAPEUTIC APPROACHES IN OPHTHALMOLOGY

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Chapter 8

Skills 60-64

- Optic disk, optic nerve
- Visual pathway

TS 60 : Swollen optic disk

■ Causes

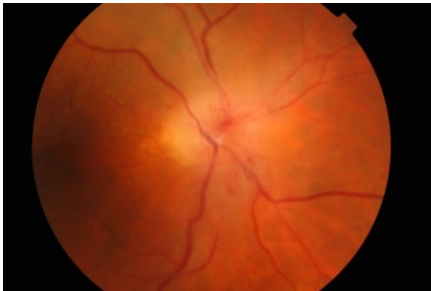
- I. Raised intracranial pressure
- II. Inflammation (local or systemic)
- III. Optic n. ischaemia



TS 60 : Swollen optic disk

Ischemic

- Capillary ischaemia
- Flat
- Pale
- Flame-shaped haemorrhages



True papilledema

- Rise in ICP
- Prominent
- Pinkish
- Vein congestion



TS 60 : Swollen optic disk

Ischaemic

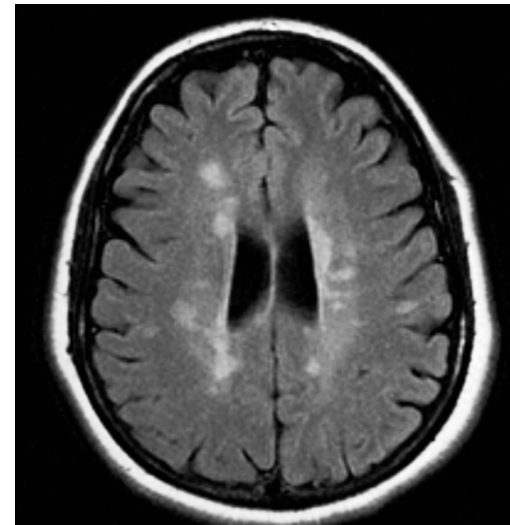
- Unilateral
- Reduced visual acuity (VA)
- Altitudinal field defect
- Later stage: Optic disk atrophy

True papilloedema

- Bilateral
- Vision unaffected (early stages)
- ...until optic nerve atrophy is established

TS 60 : Retrobulbar optic neuritis

- No findings on fundoscopy
- Severely reduced VA
- Deep pain during ocular movements
- MS-related in many patients
- Recurrences may lead to optic nerve atrophy



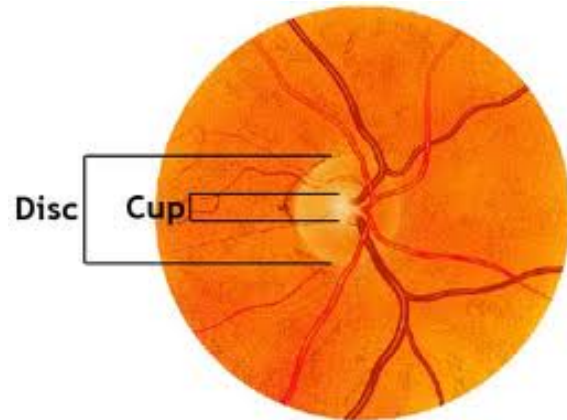
TS 61 : Optic nerve atrophy

- Pale disk
- Capillaries are rare
- Flat disk
- Well circumscribed
- Pathophysiology: damage within 1st order neuron, from ganglion cells to lateral geniculate body



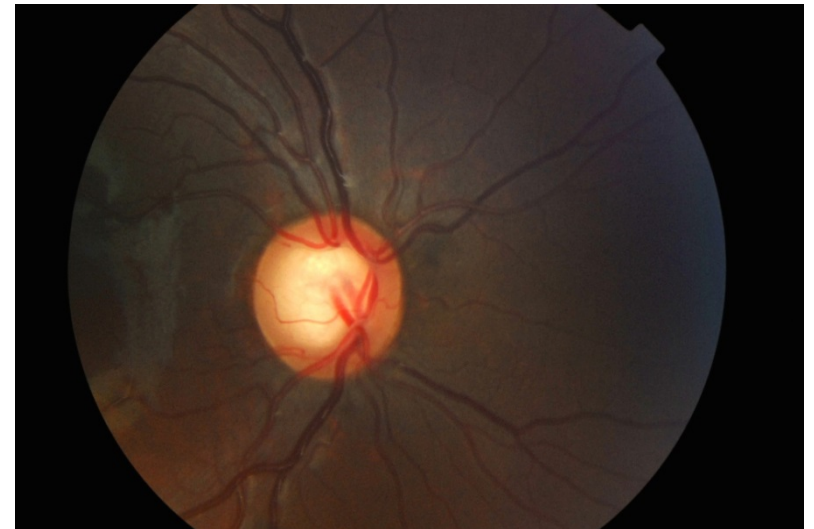
TS 61 : Normal OD cupping

- Central hollowness
- May extend to lamina cribrosa
- Normal variations
- Unchanged throughout life under normal conditions

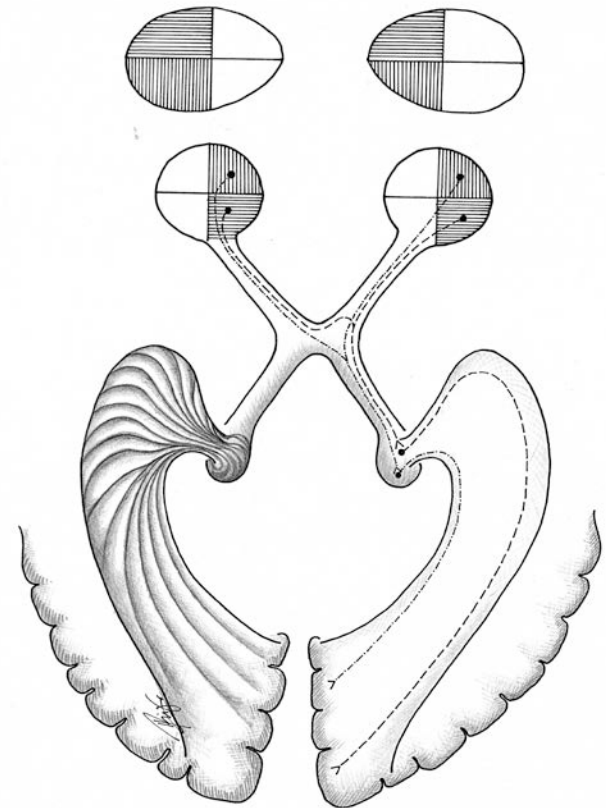
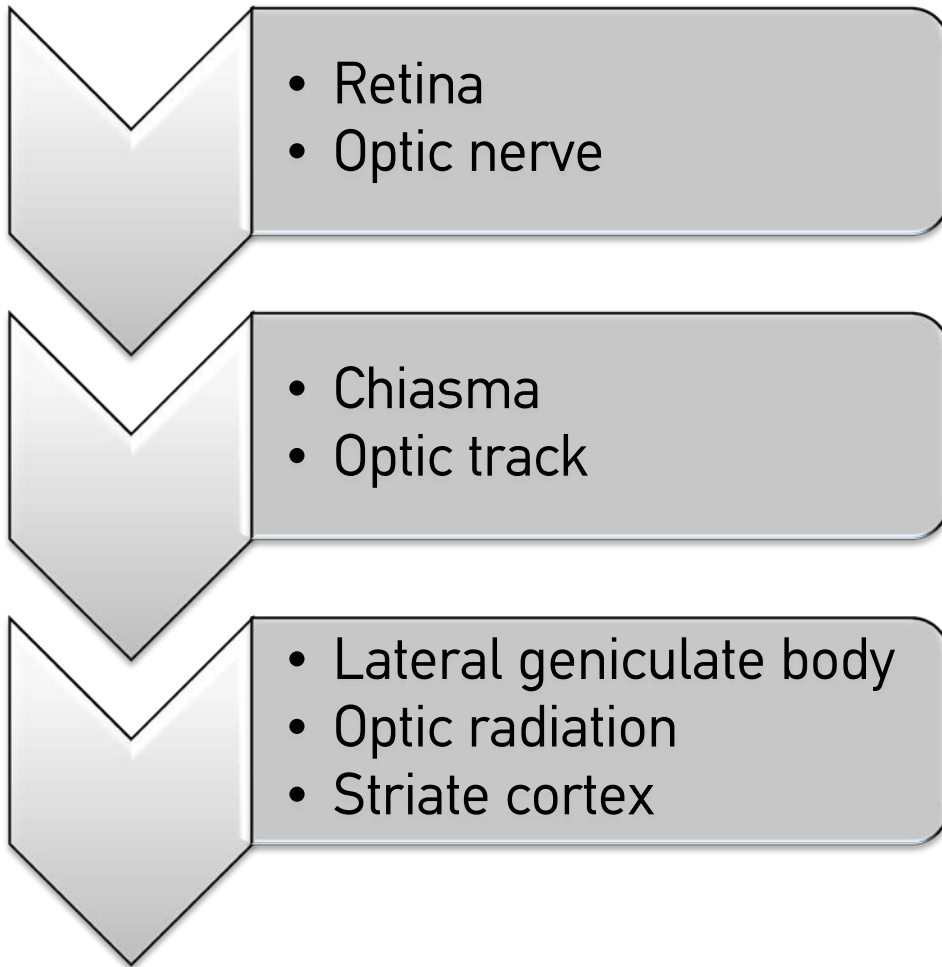


TS 61 : Glaucomatous OD cupping

- Due to progressive atrophy of optic n. fibres
- Irregular shape -notching
- Temporally-located
- Nasal dislocation of central vessels



TS 63 : Visual pathway



TS 63 : Horizontal vs vertical hemianopsia

Intraocular lesions

- Horizontal Hemianopsia
eg. Due to retinal dysfunction

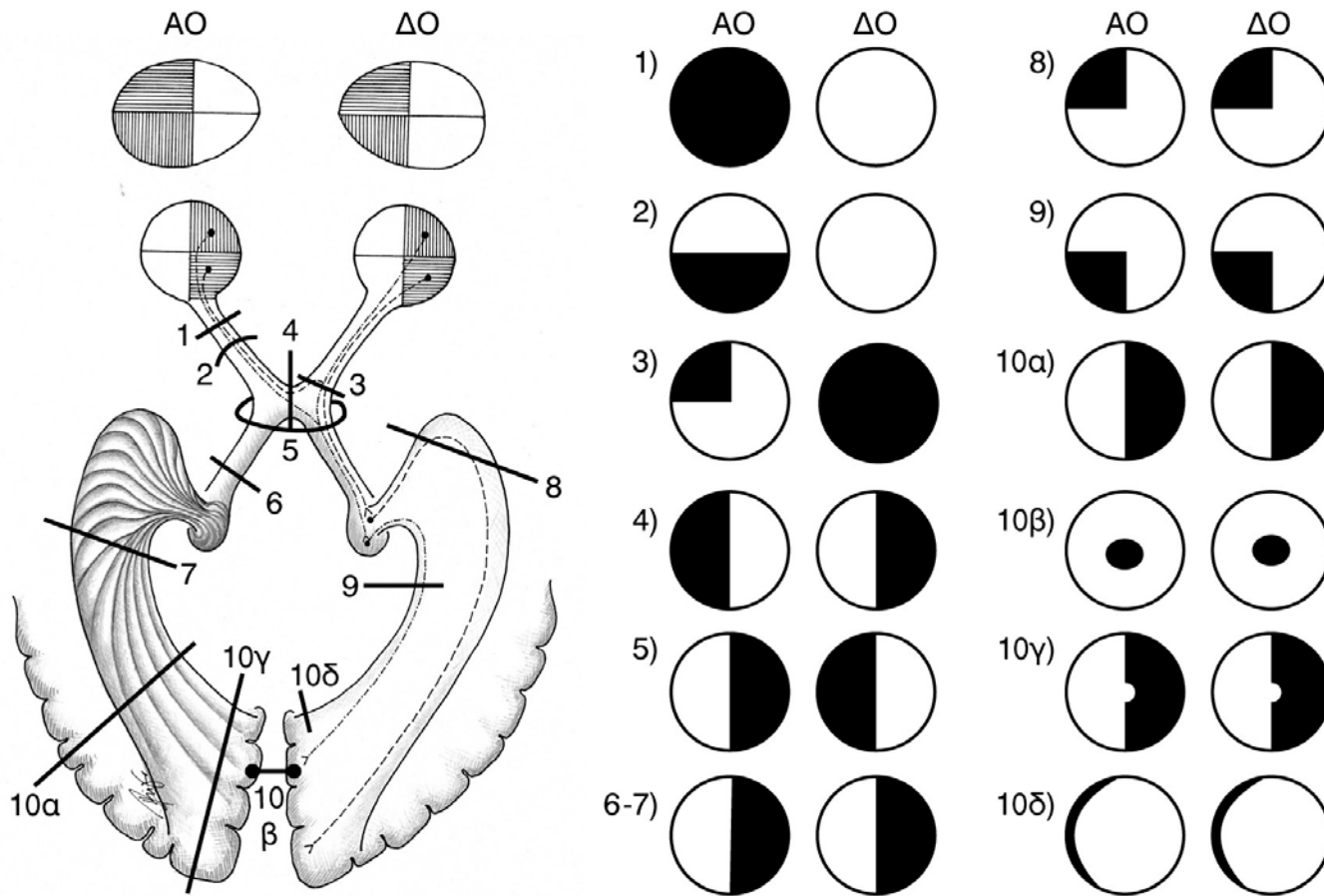


Chiasma or post-chiasma ON lesions

- Vertical Hemianopsia
eg. intracranial tumor, stroke



TS 64 : Scotoma – lesion detection



Electronic Referrals – 8th Chapter

1. [http://www.patient.co.uk/doctor/Optic-Disc-Swelling-\(including-Papilloedema\).htm](http://www.patient.co.uk/doctor/Optic-Disc-Swelling-(including-Papilloedema).htm)
2. <http://www.atlasophthalmology.com/atlas/folder.jsf?node=1151&locale=en>
3. <http://emedicine.medscape.com/article/1217204-overview>
4. <http://emedicine.medscape.com/article/1217760-overview>
5. <http://www.uptodate.com/contents/optic-neuritis-pathophysiology-clinical-features-and-diagnosis>
6. <http://content.lib.utah.edu/utis/getfile/collection/EHSL-NOVEL/id/1950/filename/1855.pdf>
7. <http://neuroscience.uth.tmc.edu/s2/chapter15.html>
8. <http://www.sumanasinc.com/webcontent/animations/content/visualpathways.html>
9. <http://www.ssc.education.ed.ac.uk/courses/vi&multi/vnov072i.html>
10. <http://flylib.com/books/en/3.283.1.15/1/>