

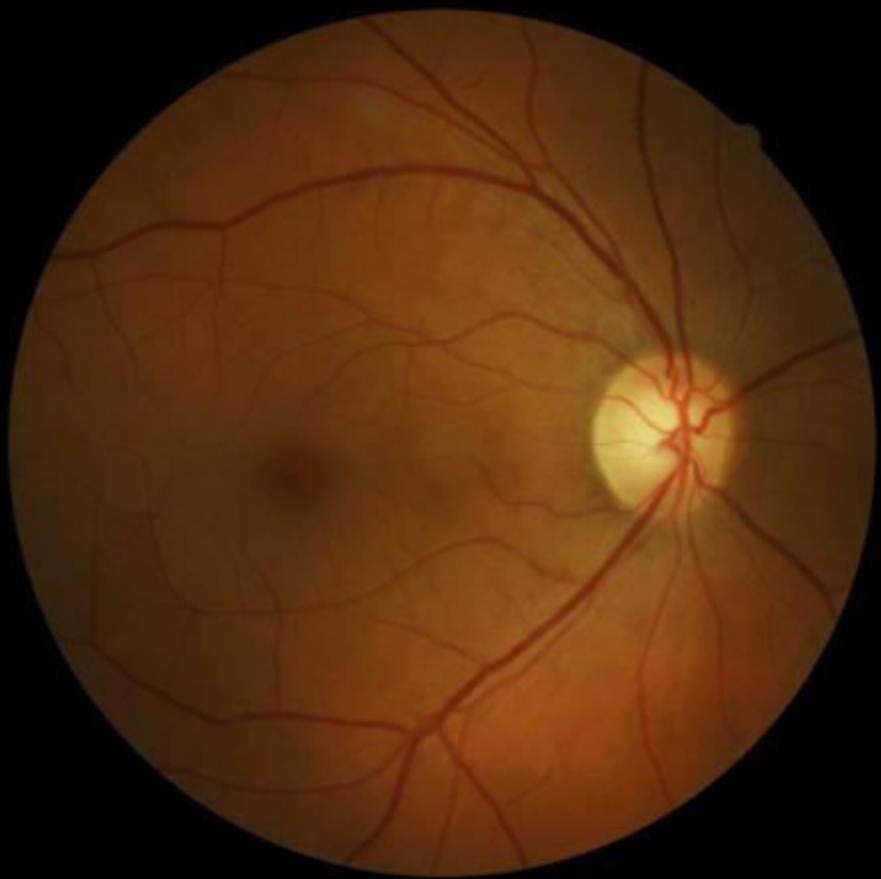
OPTIC DISC SWELLING/ PAPILLOEDEMA

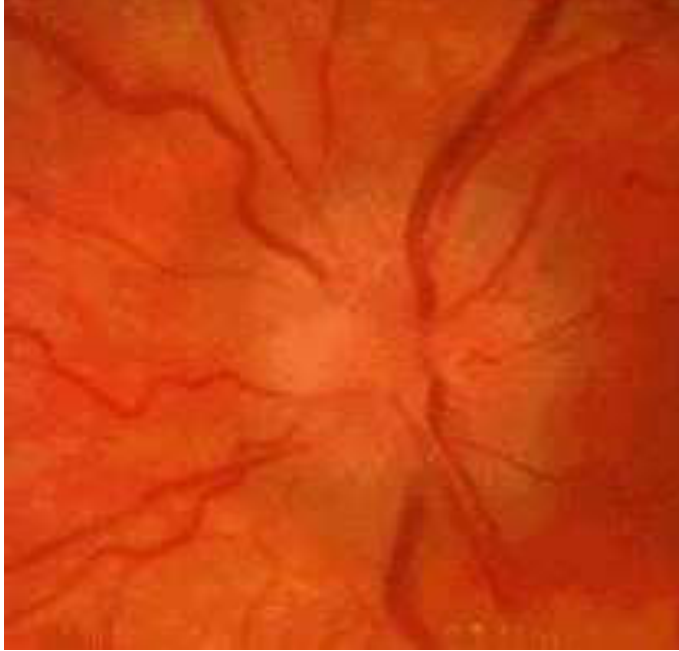
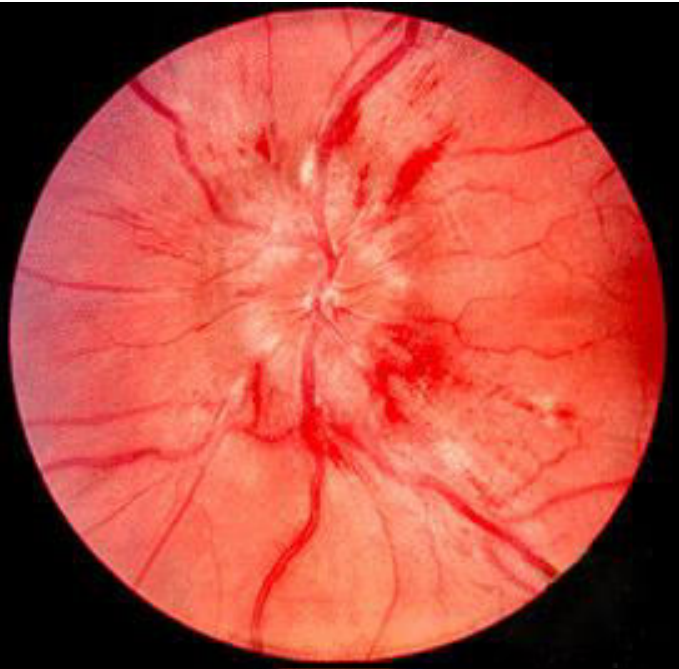
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- A 19- year- old woman has new- onset headaches and transient visual obscurations. She has severe acne and uses a topical medication prescribed by her dermatologist. She weighs 110 pounds and is 5 feet, 2 inches tall. Visual acuity is 20/20 OU with normal color vision. Static perimetry shows blind- spot enlargement bilaterally, and ductions are full. What ONH finding is expected to be seen on ophthalmoscopy?

1. mild hyperemia with telangiectatic vasculature
2. bilateral pallor
3. bilateral edema
4. normal architecture





- Passive hydrostatic non-inflammatory swelling of optic nerve head secondary to raised intracranial pressure.
- Usually bilateral ; may be unilateral.
- Optic disc swelling in the absence of raised intracranial pressure is referred to as optic disc edema.

True disc swelling	Papilledema	↑ICP	Tumors, etc. (Table 16.9)
	Local disc swelling	Inflammatory	Optic neuritis
			Uveitis
			Scleritis
		Granulomatous	Tuberculosis
			Sarcoid
		Infiltrative	Leukemia
			Lymphoma
Vascular	AION		
	CRVO		
	Diabetic papillitis		
Tumors	Of optic nerve (meningioma, glioma)		
	Of orbit		
Hereditary	LHON		

No true
disc
swelling

Pseudopapilledema

Structural

Disc drusen

Tilted discs

Hypermetropic discs

Myopic discs

Myelinated peripapillary
nerve fibers

Table 16.9 Causes of raised intracranial pressure

Mass effect	Tumor Hemorrhage Trauma (hematoma/edema)
Increased CSF production	Choroid plexus tumor
Reduced CSF drainage	Stenosis of foramen/aqueduct (congenital or secondary to tumor, cyst, infection, etc.) Damage to arachnoid granulations (meningitis, subarachnoid hemorrhage) Idiopathic intracranial hypertension
Other	Malignant hypertension

Drugs

Tetracycline

Corticosteroids

OCP

Vitamin A derivatives

Nalidixic acid

Endocrine

Hypoparathyroidism

Adrenal adenomas

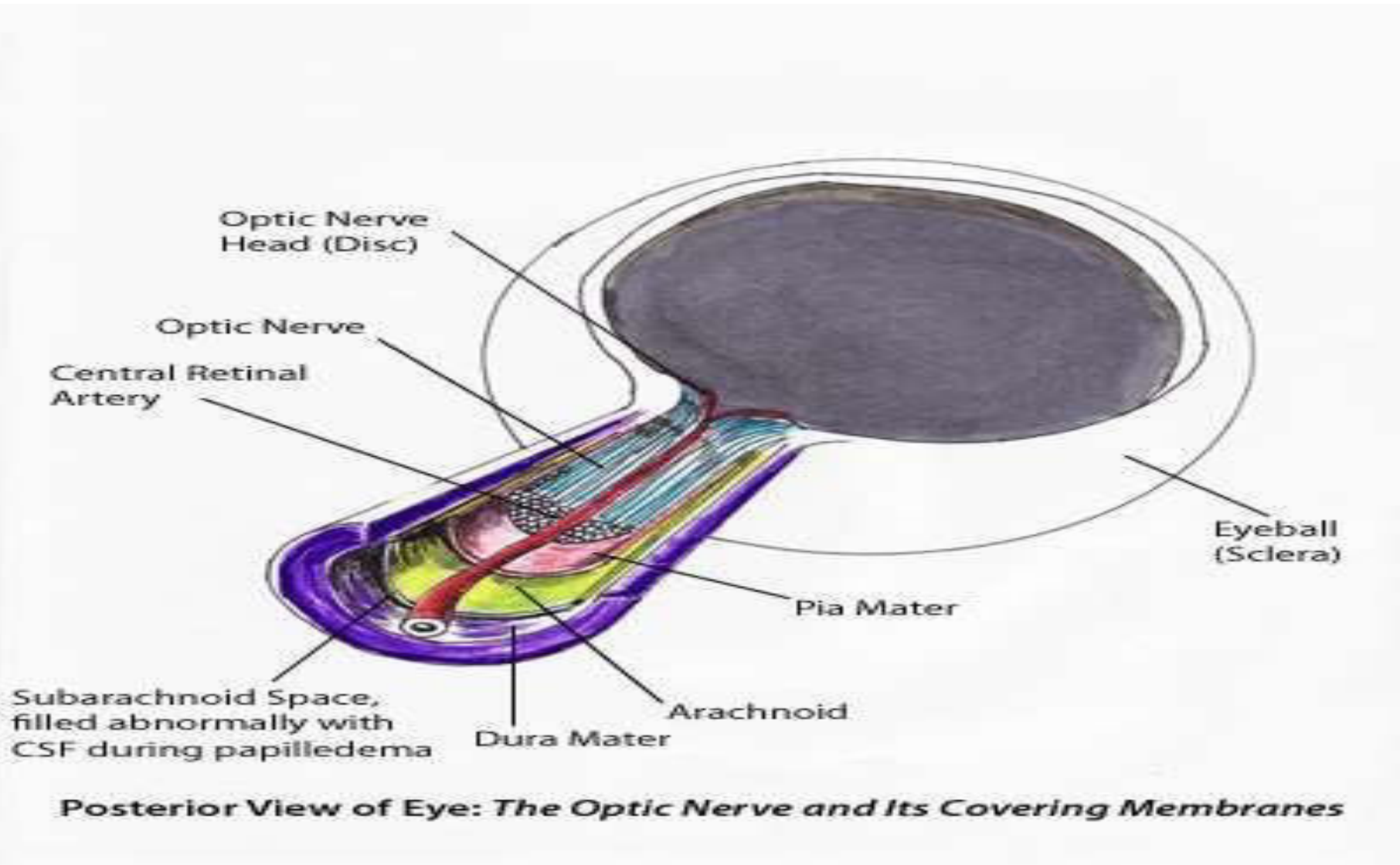
Habitus

Obesity

Obstructive sleep apnea syndrome

Hematological

Cerebral venous thrombosis



Symptoms(Ocular)



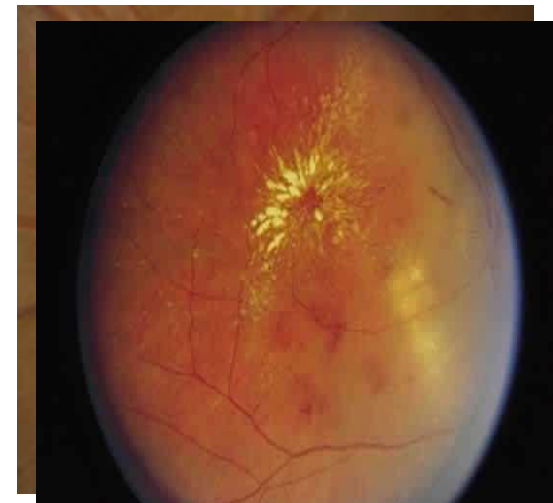
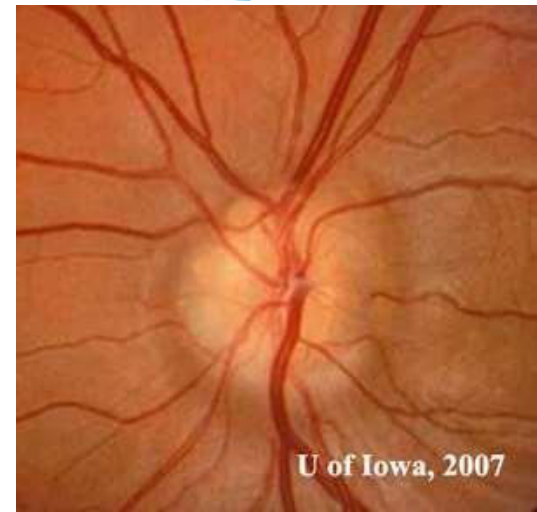
- Visual Acuity
- Transient obscuration of vision.
- Central vision affected late.
- Horizontal Diplopia.

Symptoms(General)

- Headache more in the morning, intensifies with head movement, coughing or straining.
- Projectile vomiting.
- Loss of consciousness/ generalized motor rigidity.

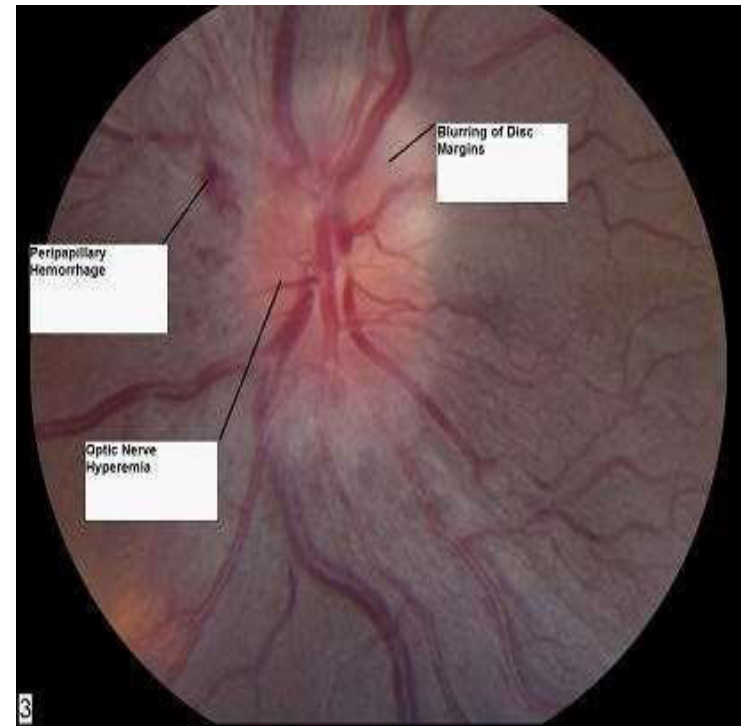
Signs(Mechanical)

- Elevation of the optic disc.
- Blurring of the optic disc margin.
- Filling in of the physiological cup.
- Edema of the peripapillary nerve fiber layer.
- Retinal or choroidal folds(Paton's lines)
- Macular fan.



Signs(Vascular)

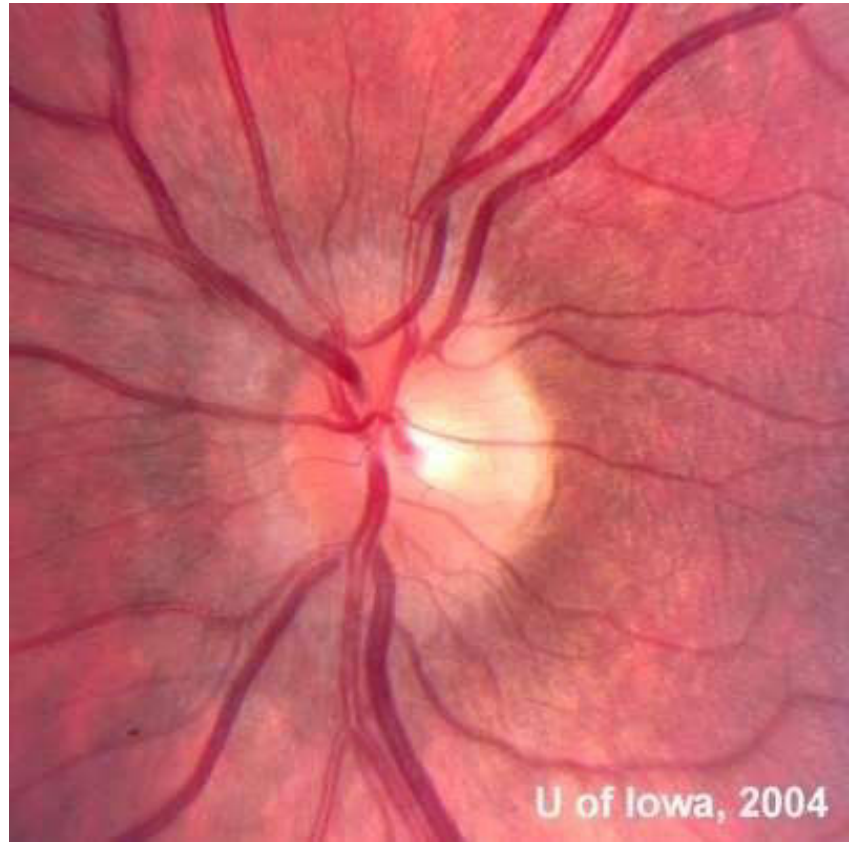
- Hyperemia of the optic disc.
- Vascular congestion.
- Peripapillary haemorrhage.
- Exudates in the disc or peripapillary area.
- Nerve fiber layer infarcts.



Grading of Papilledema

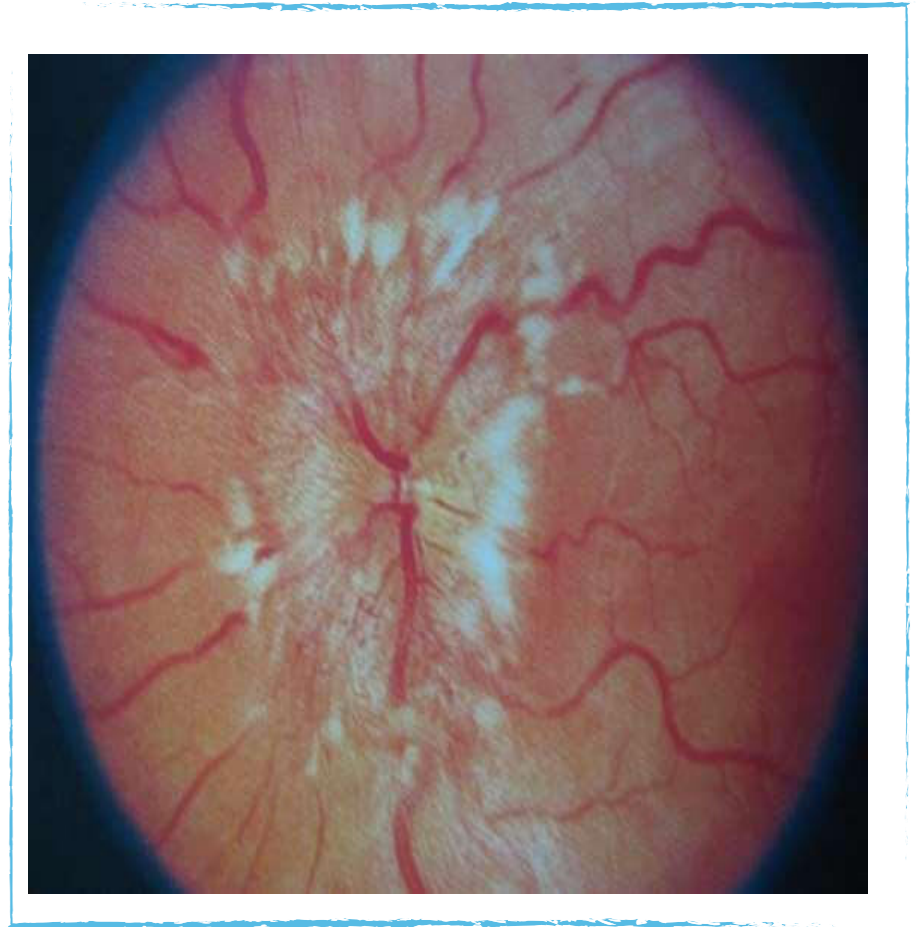
Early Papilledema

- Disc elevation.
- Venous distention and tortuosity.
- Obscuration of the normal disc margin and overlying retinal vessels.
- Absence of spontaneous venous pulsations



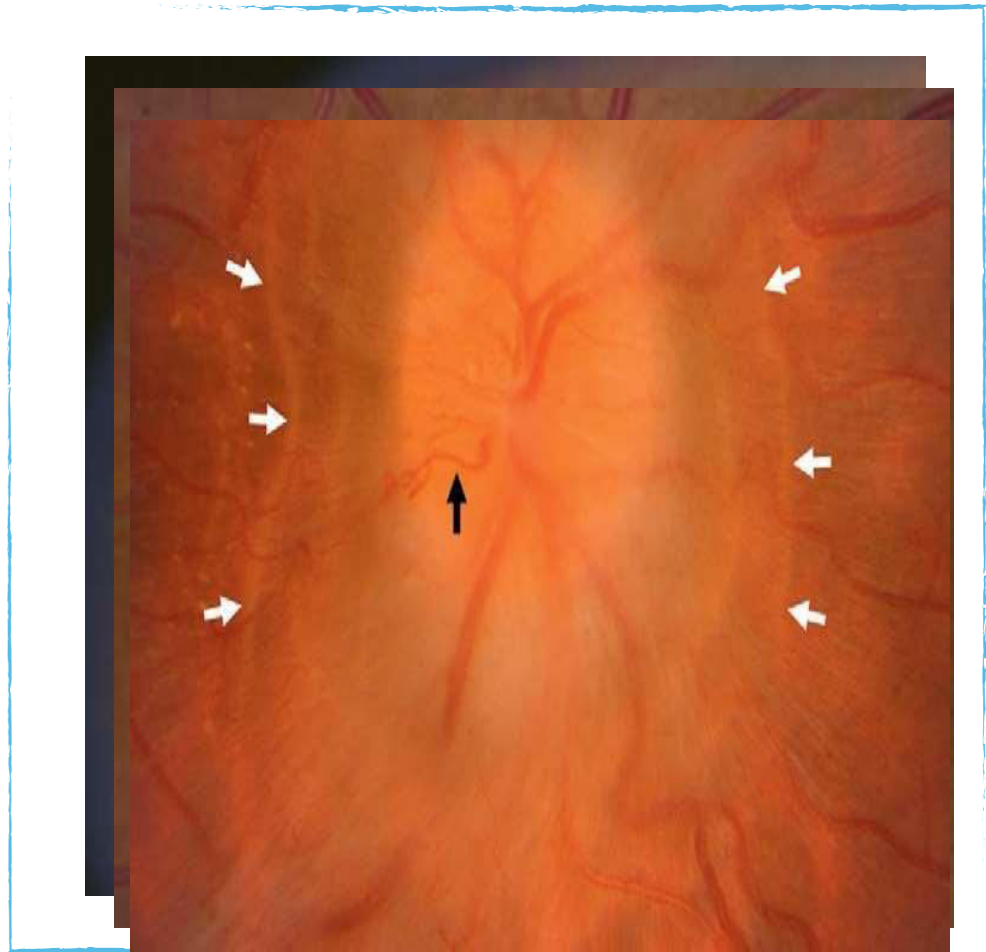
Established Papilledema

- Marked elevation of nerve head with blurring of margins.
- Engorged tortuous venules.
- Peripapillary splinter hemorrhages.
- Cotton wool spots.
- Hard exudates over the disc and macular area.



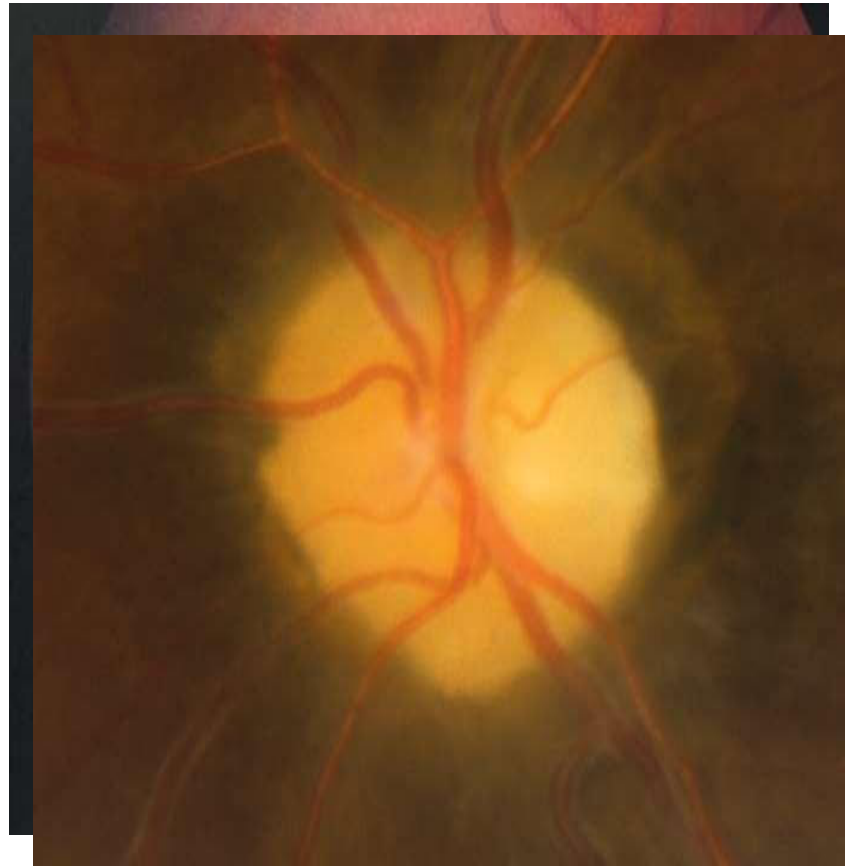
Chronic Papilledema

- disc hyperemia decreases and disc progressively appears pale in color.
- Opticociliary shunts and drusen like deposits may be present on the disc.
- High water mark.



Atropic Papilledema

- Onset of optic disc pallor (secondary optic atrophy) .
- Decrease in disc haemorrhage.
- Narrowing of blood vessels
- Optic disc appears dirty white and blurred



Investigations

- History and physical examination including blood pressure measurement.
- Ophthalmic examination - In addition to fundus examination, assessment of
 - visual acuity, pupillary examination, ocular motility & alignment, and visual fields.
- MRI with or without contrast is the best investigation of choice.

CT
Scan/
MRI



- To rule out
 - Intracranial lesions.
 - Obstructive hydrocephalus



- Can detect
 - Subarachnoid, epidural & subdural hemorrhages.
 - Acute infarctions.
 - Cerebral edema.



Lumbar puncture



- Therapeutic procedure
- Pseudotumor cerebri



- CSF for
microbial and
infectious
studies.



- Diagnostic
- Recording opening
pressure.

Treatment

- Treat the cause
 - Craniotomy to remove tumor.
 - Stop toxic drugs
 - Correct anemia , HTN
 - For BIH, weight reduction, acetazolamide, surgery (Shunts)

Thank You