AION

Dr.Harinikrishna
Aravind eye hospital ,
Madurai

- ION
  - Anterior
    - Arteritic
    - Non-arteritic
  - Posterior

NAION

Non-arteritic AION is caused by occlusion of short posterior ciliary arteries resulting in infarction of the optic nerve head.

Etiology :-

- Hypertension
- Diabetes
- Small crowded disc

- Hyperlipidemia
- Collagen vascular diseases.
- Nocturnal hypotension.
- Sleep apnea syndrome.
- Hyperhomocystinemia.

Presentation :-

Most common in 6th - 7th decades.

Symptoms :-

Sudden, Painless, unilateral loss of vision.

Signs :-

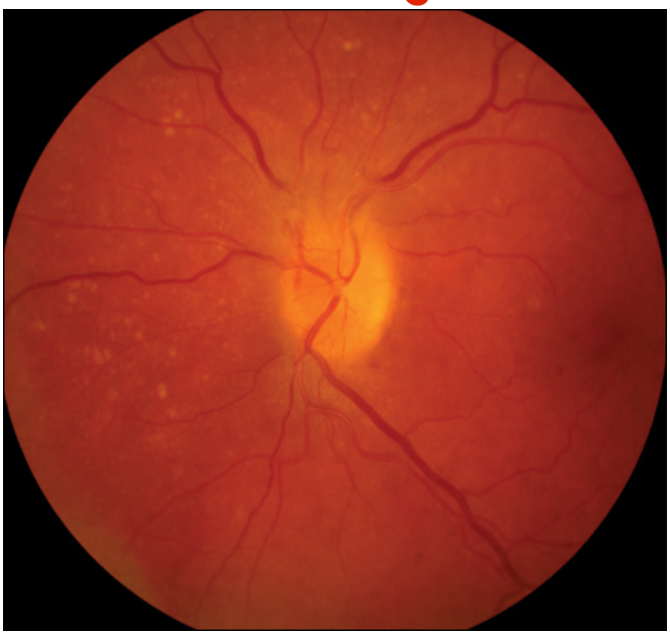
- Moderate to severe visual impairment.
- Colour vision is defective.

- Visual field defects.

Most common - Inferior altitudinal field defects.

- Fundus examination reveals

SECTORAL | DIFFUSE DISC EDEMA with peripapillary disc hemorrhages.



- Dirty white pallor of optic disc sets in after 3-6 weeks.

Investigations :-

- BP
- Blood sugar
- Lipid profile.
- I/s to rule out
- Serum homocystiene.

Treatment :-

- Control of systemic conditions
- Aspirin, antiplatelets have been tried.
- Oral prednisolone in tapering doses.

Prognosis :-

- Recurrence can occur in 6% of patients
- Involvement of other eye can occur in 10-15% of patient.
- Strict control of systemic conditions is warranted.

ARTERITIC AION

AAION is caused by giant cell arteritis are affected.

- Elderly (>60 years)

GIANT CELL ARTERITIS

- granulomatous, necrotizing affecting medium and large sized arteries.
- Superficial temporal A, ophthalmic artery, posterior ciliary artery commonly involved.

Clinical features of GCA :-

- Scalp tenderness
- Temporal | occipital headache
- Jaw claudication - due to ischemia of masseter muscle.
- Pain and stiffness in the

proximal muscle groups called

Polymyalgia rheumatica

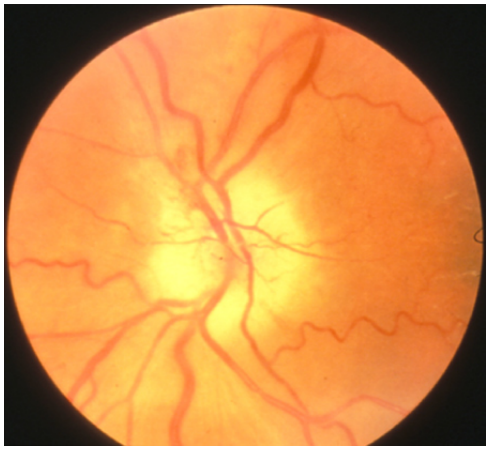
- Thickened tender inflammed nodular superficial temporal arteries — Cannot be flattened against the skull.
- Non pulsatile superficial temporal artery.

- Aortic incompetence, dissecting aneurysms, myocardial infarctions are rare complications.

Ophthalmic manifestations of GCA

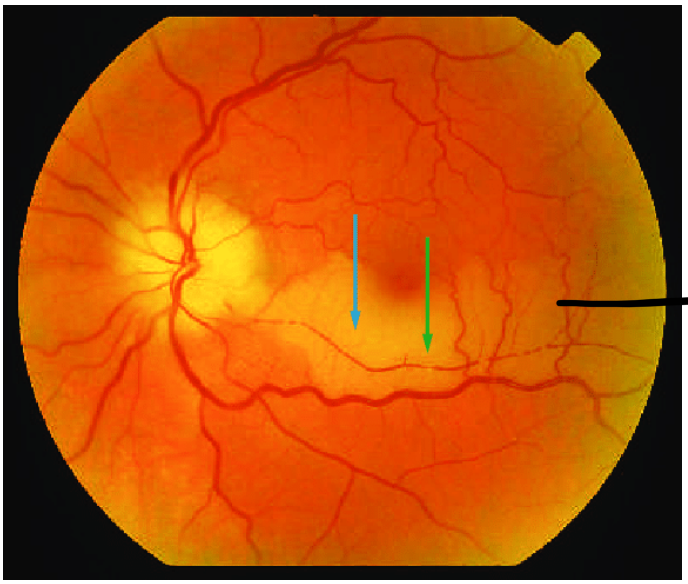
30-50% of untreated patients develop AAION.

- U/L, sudden, profound loss of vision with periocular pain.
- Vision loss is severe usually only perception of light (PL+)
- Fundus examination reveals chalky white edematous disc.



Can also be associated with

- Central retinal artery occlusion (CRAO)
- Chorioretinal artery occlusion.



AAION with chorioretinal artery occlusion

Investigations :-

Diagnostic criteria	
If a patient possesses ≥3 criteria, GCA is diagnosed:	1. Patient age >50 years
	2. New-onset headache
	3. Temporal artery abnormality (tenderness to palpation or decreased pulsation, unrelated to atherosclerosis of cervical arteries)
	4. Elevated ESR ≥50 mm/h
	5. Abnormal TAB

- ESR - very high > 50 mm/hr
- CRP
- Complete blood count

- Temporal artery biopsy - should be done within 3 days of starting steroids.
  - Temple is the best location for biopsy.
  - At least 2.5 cm of artery should be taken to avoid skip lesions.

- Color doppler - hyperechoic halo around superficial temporal artery.

- Extracranial large vessel imaging to rule out any aneurysms / dissections.

Treatment :-

- iv methyl prednisolone 1g / day for 3 days
  - ↓
  - oral prednisolone (60 mg)
    - ↓
    - tapered by 5mg weekly.
- Enteric coated prednisolone
- Antiplatelet - T. aspirin (150mg/day)
- Immunosupressives used in steroid resistant cases.

Prognosis :-

Very poor prognosis as optic atrophy sets in with permanent profound visual loss.

PION

- Due to ischemia of retrolaminar portion of nerve supplied by pial plexus.

Operative PION - Due to hypovolemic hypotension following long surgical procedures.

Arteritic PION - Due to giant cell arteritis

Non-arteritic PION - Due to diabetes, hypertension, nocturnal hypotension