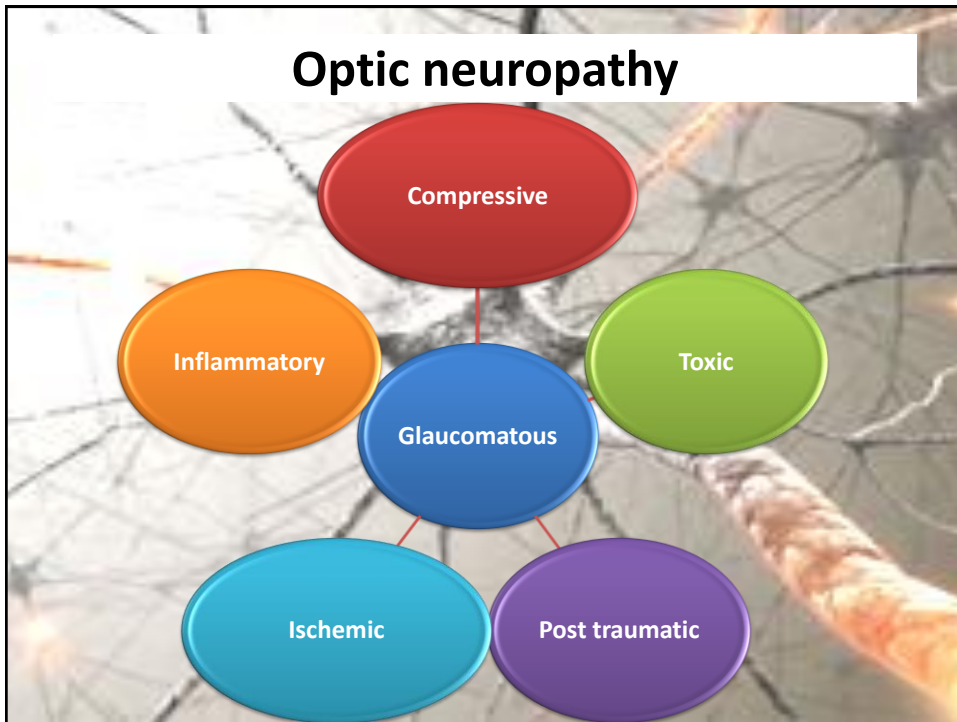


Optic Red Herrings



Mohammed Samy Abdel Aziz
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Menofia Faculty of Medicine

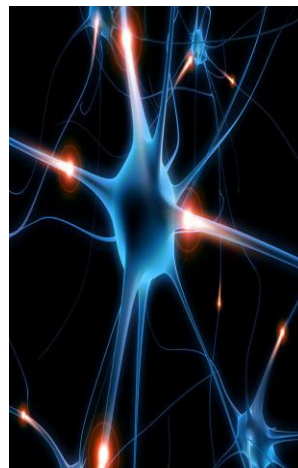


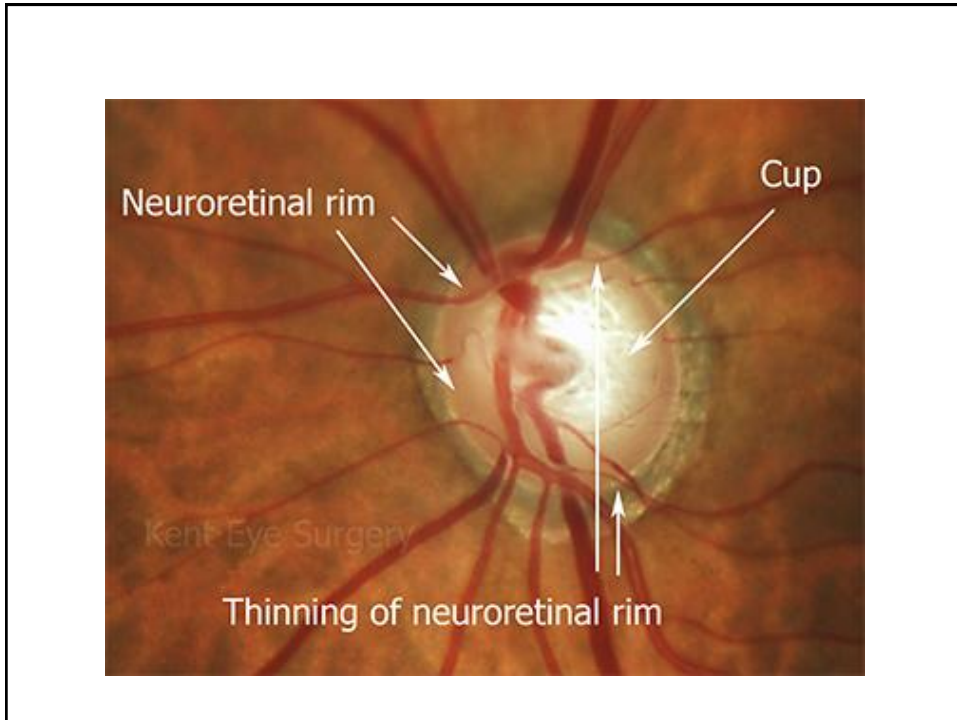


GLAUCOMATOUS OPTIC NEUROPATHY

Glaucoma:

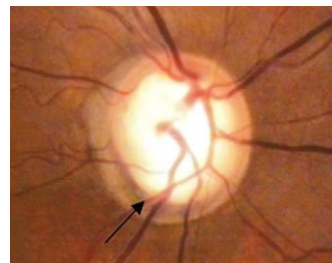
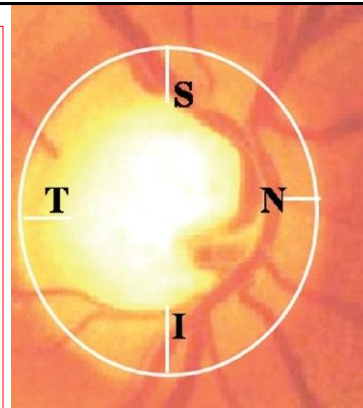
Traditionally defined as a **progressive** optic neuropathy with accompanying characteristic **optic nerve** and **visual field** changes.





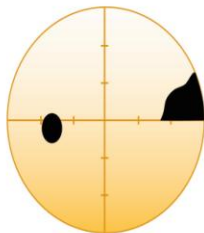
Characteristics often noted when observing the glaucomatous optic disc include:

- Neuroretinal rim tissue that does not respect the **“ISNT”** rule.
- Notching of the rim.
- Verticalization of the optic cup.
- An acquired optic pit.



Characteristics often noted when observing the glaucomatous optic disc include:

- Baring of a circumlinear vessel.
- Vessel bayoneting at the optic rim.
- Nasalization of vessels.
- Disc hemorrhage .
- peripapillary atrophy (beta zone atrophy).
- Nerve **not exhibiting** rim pallor.



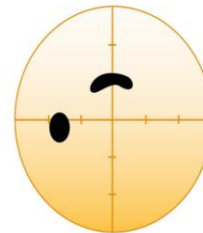
(a) nasal step



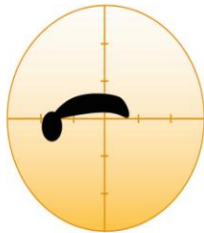
(b) temporal wedge



(c) established superior arcuate defect



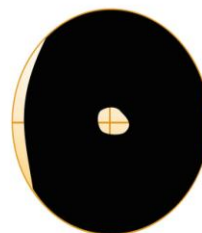
(d) early superior paracentral defect at 10°



(e) superior, fixation-threatening paracentral defect



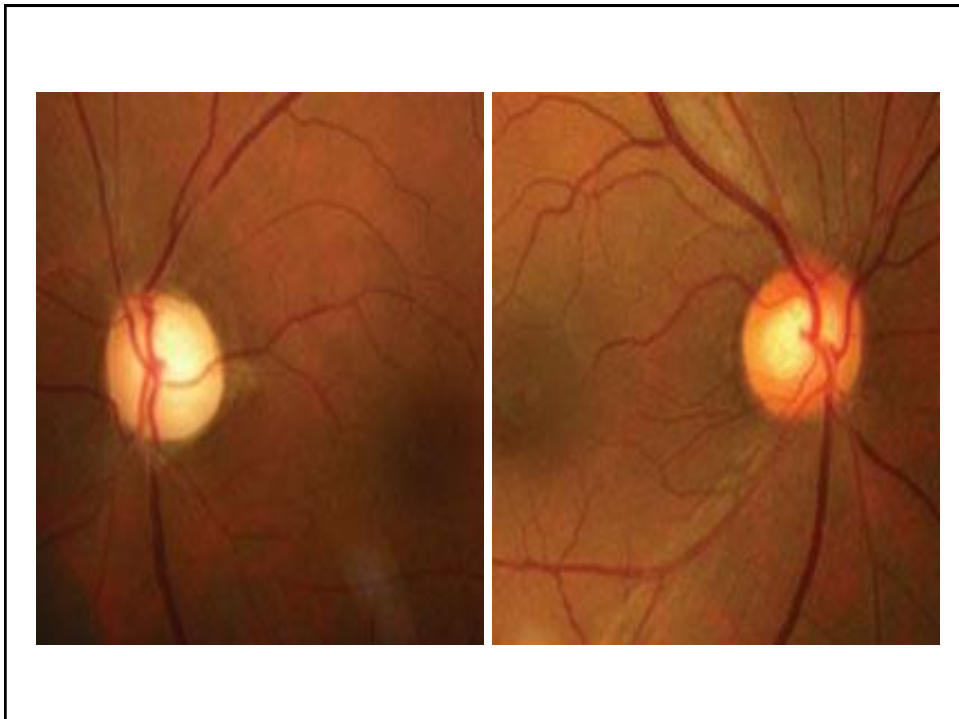
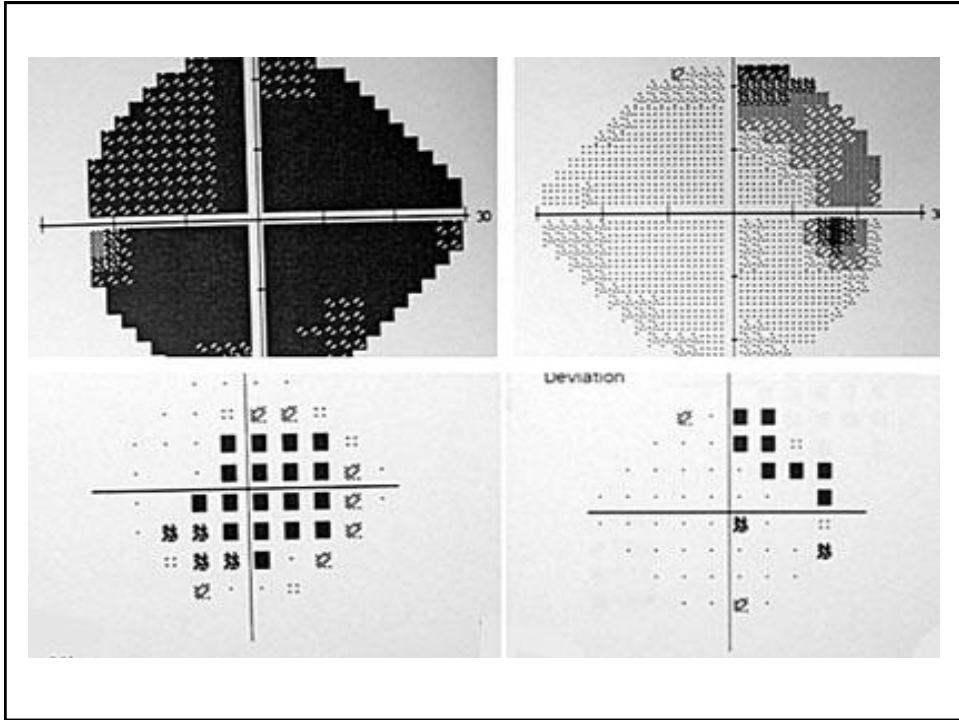
(f) superior arcuate with peripheral breakthrough and early inferior defect

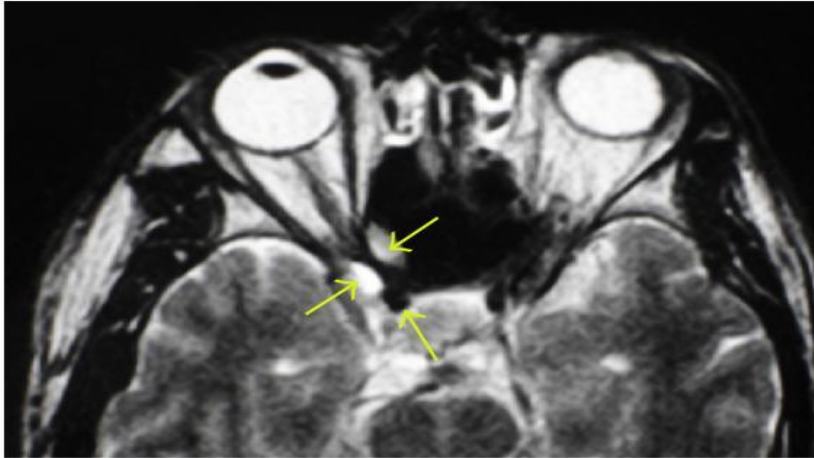


(g) tunnel vision defect with temporal crescent sparing



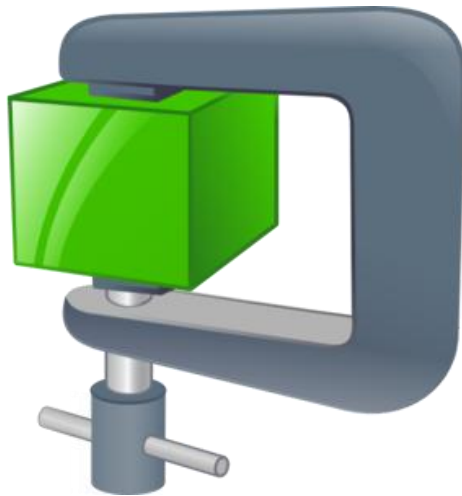
(h) end stage, complete field loss





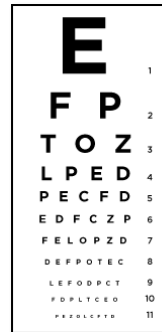
Compressive optic neuropathy

COMPRESSIVE OPTIC NEUROPATHY

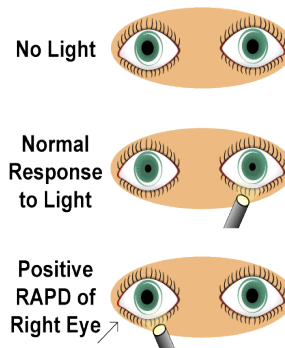


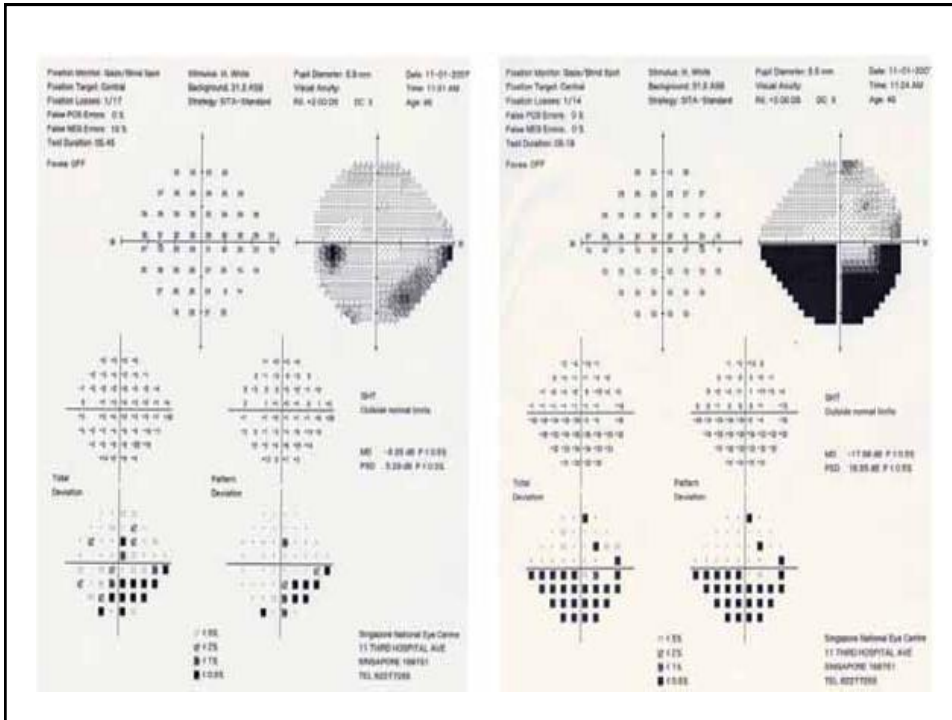
Characteristics often noted when observing the Compressive optic disc include:

- Acute **vision loss** secondary compressive optic neuropathy has the potential to be marked (20/100 or worse)
- IOP typically is within **normal** range unless altered by an intraorbital mass (mass effect).
- VF defects occur in the **central** or **cecocentral** portion of the visual field.
- Compressive lesions often induce **disc pallor**.

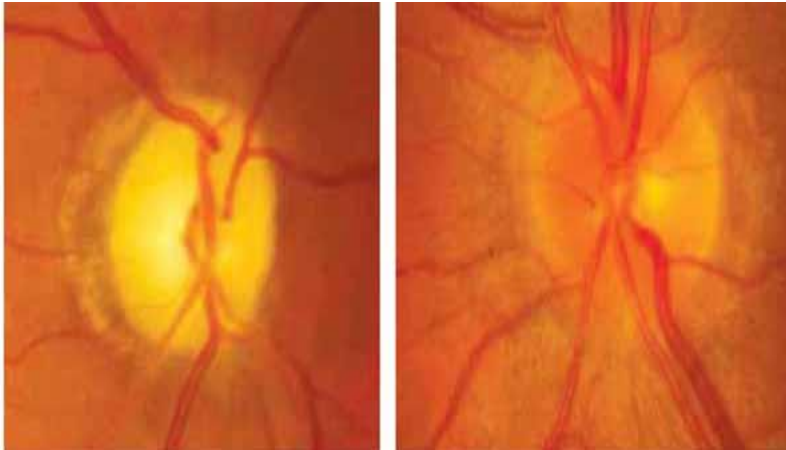


- Dyschromatopsia, **red color** desaturation defects, **brightness** desaturation defects and an **APD** that is inconsistent with the appearance of the disc's cupping or visual field severity.
- The **age** and **demographics** of compressive optic neuropathy often do not match the demographics of the typical glaucoma patient





Fundus Examination



Fundus Examination
after 7 months

ISCHEMIC OPTIC NEUROPATHY

Ischemic optic neuropathy may be confused with glaucoma when the patient is seen in a non-acute phase.

- **Arteritic AION**: at least 92% of patients develop optic disc cupping months after the acute event.
- **Non-arteritic AION**: 2 to 14% will normally develop cupping

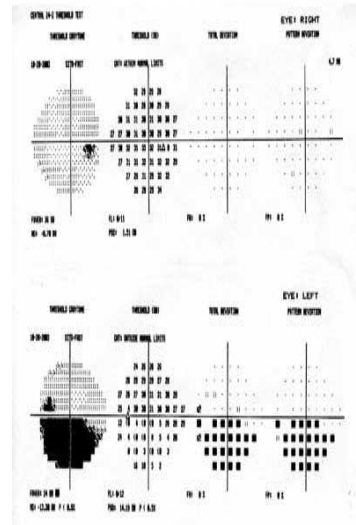
One entity that is often confused with **NTG** is a unilateral or bilateral ischemic optic neuropathy from systemic hypotension and/or blood loss.

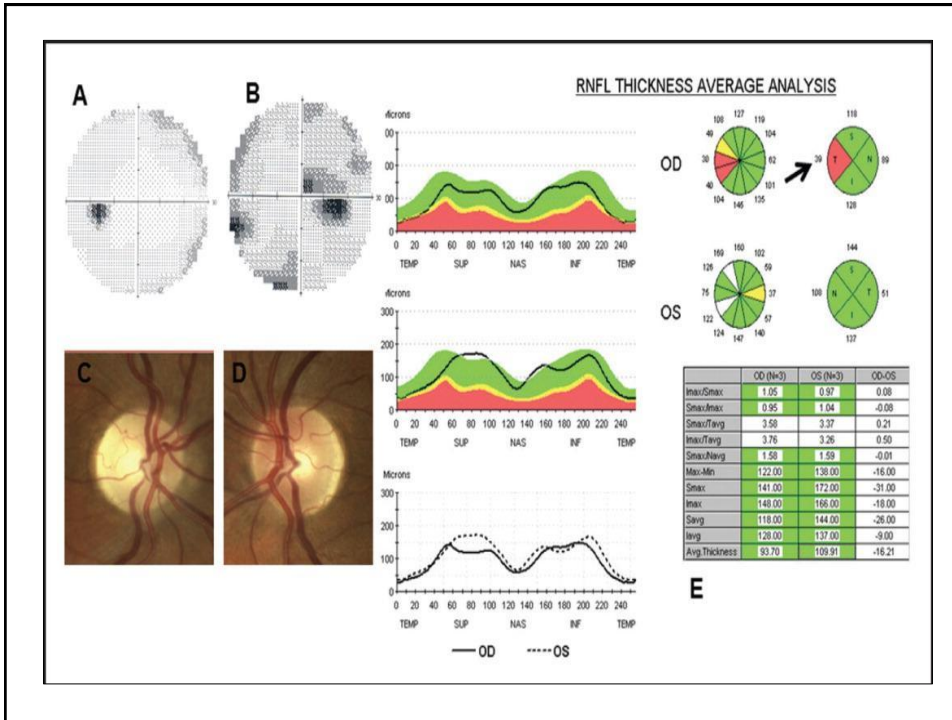
In these patients, the **visual field defect will remain stable**, as there is no active ongoing glaucomatous process.



Visual Field In AION

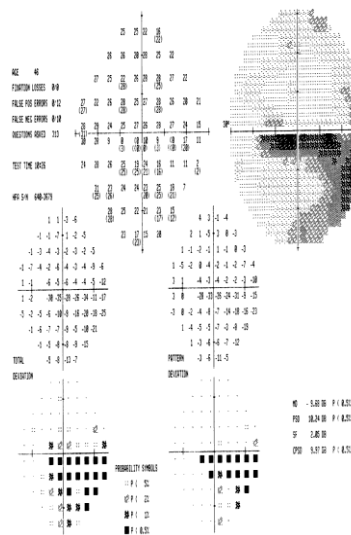
- Complete **altitudinal** pattern respecting the horizontal meridian because of a propensity to be sectorial rather than diffusely damaging.
- Demonstrate a **steep depth**, they are **very repeatable** and consistent, they **do not worsen or improve** because of the anatomy affected.



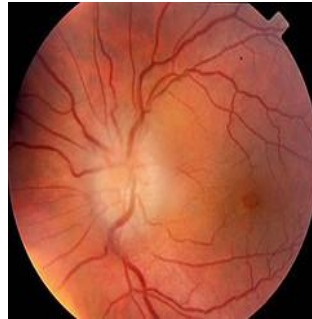


INFLAMMATORY OPTIC NEUROPATHY

- IOP is typically within **normal** range.
- VF defects occur in the **central** or **cecocentral** portion of the visual field.
- Visual fields often demonstrate a history of improvement correlating to recovery from the acute event.

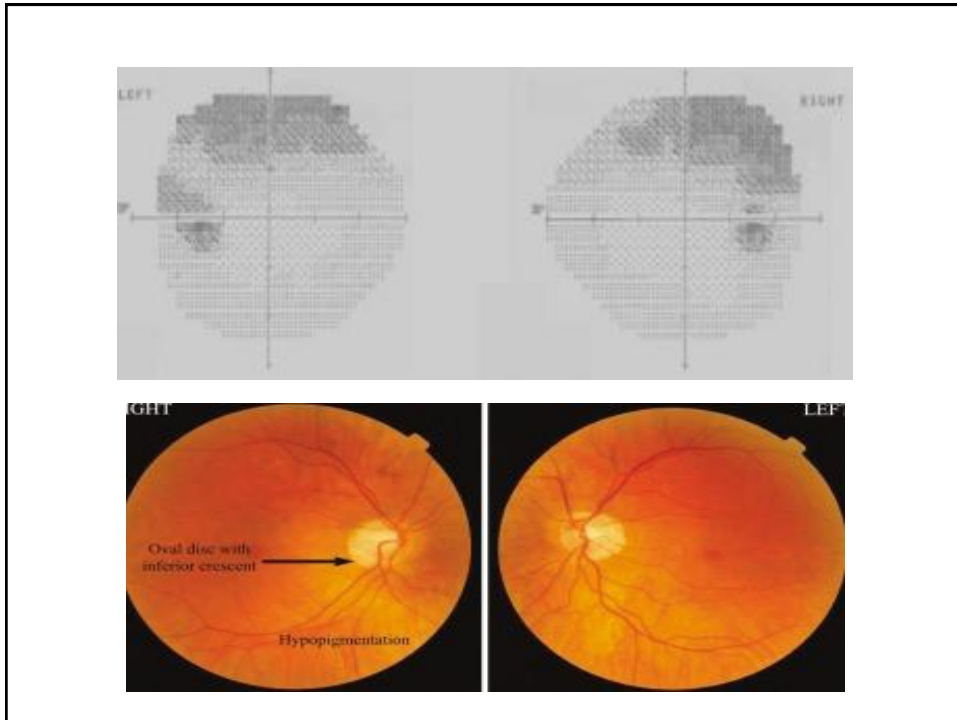


The difficulty in distinguishing this from glaucoma is when the patient is seen **after the acute event** if there is cupping of the optic disk and a residual visual field defect.



However, the accompanying **disc pallor** and possible residual **dyschromatopsia** or **decreased central acuity** in the setting of post-inflammatory optic atrophy should be helpful clinical features that serve to distinguish this entity from glaucoma.






- IOP typically is within **normal** range.
- VF defects vary widely and may mimic those seen in glaucoma; however, they are often **deep defects** that are consistently repeatable.
- Visual fields (as well as the disc appearance) remain **Stable over time**.
- Anomalies do not have a specific demographic predilection.




Stability over time



TAKE HOME MESSAGE

Before deciding that a visual field defect results from Glaucoma.


Get a thorough, detailed history.



TAKE HOME MESSAGE

Before deciding that a visual field defect results from Glaucoma.


Do a careful exam, and keep an open mind.



TAKE HOME MESSAGE

Before deciding that a visual field defect results from Glaucoma.


Note the speed of progression.



TAKE HOME MESSAGE

Before deciding that a visual field defect results from Glaucoma.


Don't rely on a single piece of information.



TAKE HOME MESSAGE

Before deciding that a visual field defect results from Glaucoma.

Check for pallor of the optic nerve.



TAKE HOME MESSAGE

Before deciding that a visual field defect results from Glaucoma.

Consider the patient's age.

TAKE HOME MESSAGE

information
information
information



**Don't Be Always
Glaucoma minded**

thank
YOU