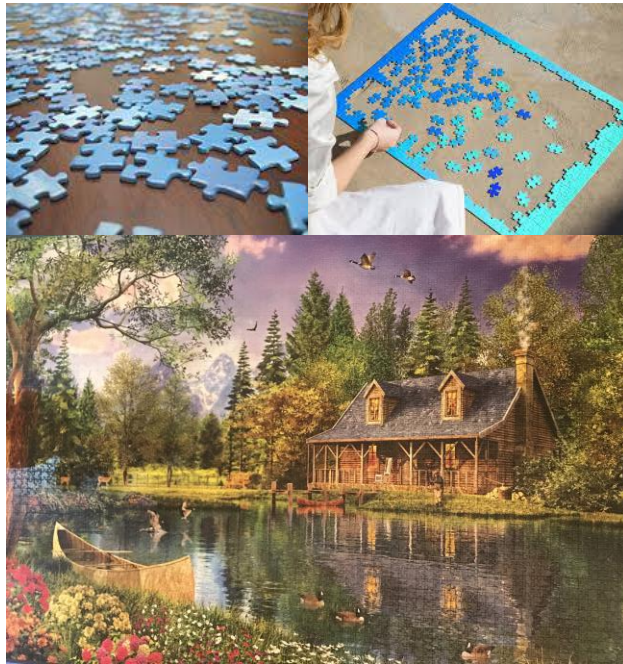


WHEN PIECES DON'T FIT TOGETHER.
NEUROOPHTHALMIC CASES THAT MIMIC GLAUCOMA

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PATIENT'S HISTORY, CLINICAL FINDINGS & WORKUP DATA ARE LIKE A PUZZLE, EVERY PIECE MUST FIT IN POSITION, TO GET FINAL DIAGNOSIS



WHEN SHOULD YOU BE IN DOUBT OF YOUR GLAUCOMA DIAGNOSIS?

Suspicious symptoms:

- When history is suggestive of a neurological deficit
- Unusual age of onset of glaucoma
- Sudden or rapidly progressive or transient visual loss
- Associated C/O of diplopia, painful ocular movement, morning headache or migraine
- Associated neurological symptoms: numbness, weakness, loss of libido (pituitary tumor)

Suspicious signs:

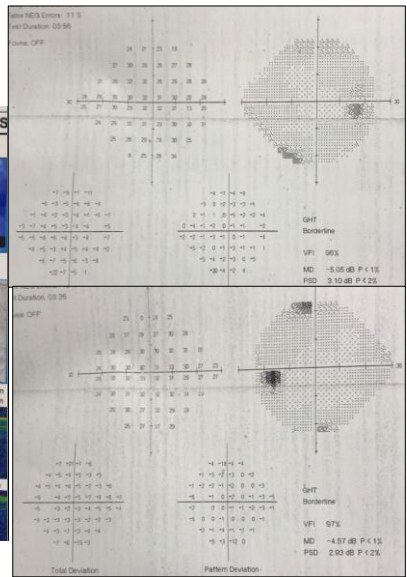
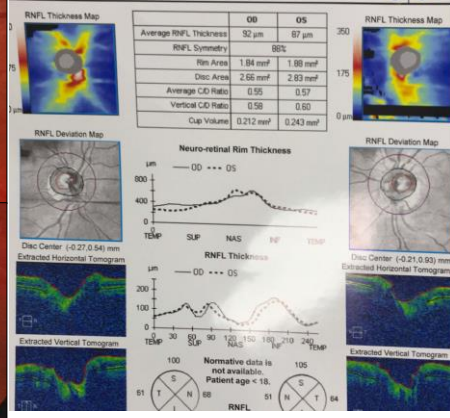
- Disc pallor exceeding cupping
- Unilateral afferent pupillary defect
- Color vision loss
- Field defect respecting vertical meridian
- Central scotoma
- Ptosis, proptosis, or facial asymmetry



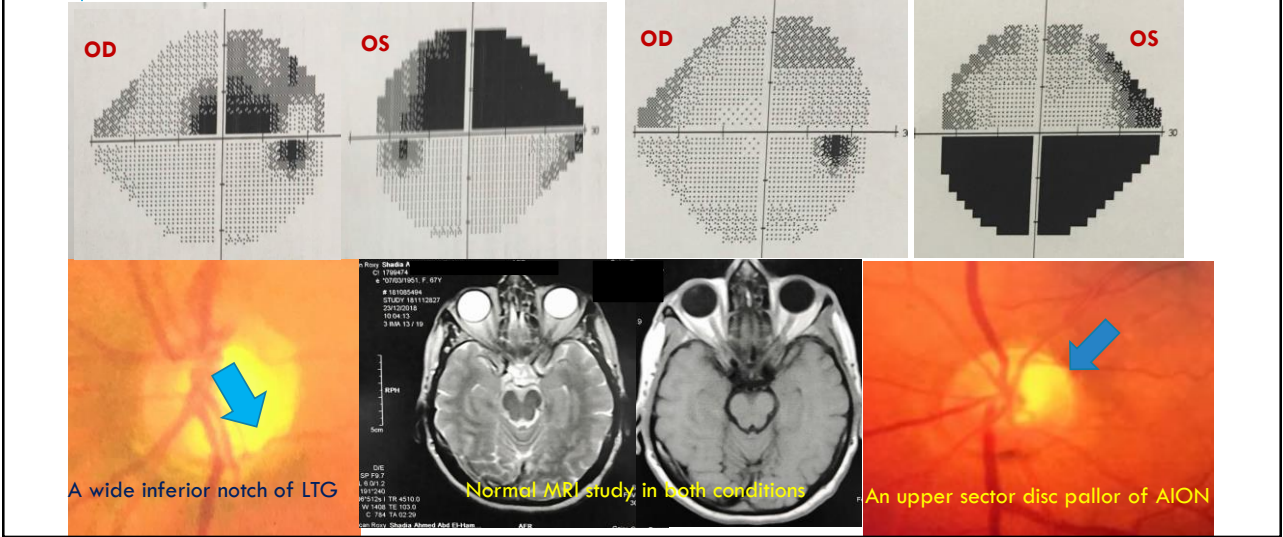
ANOMALOUS LARGE OPTIC DISC IN A 8-YR-OLD BOY SUSPICIOUS OF GLAUCOMA



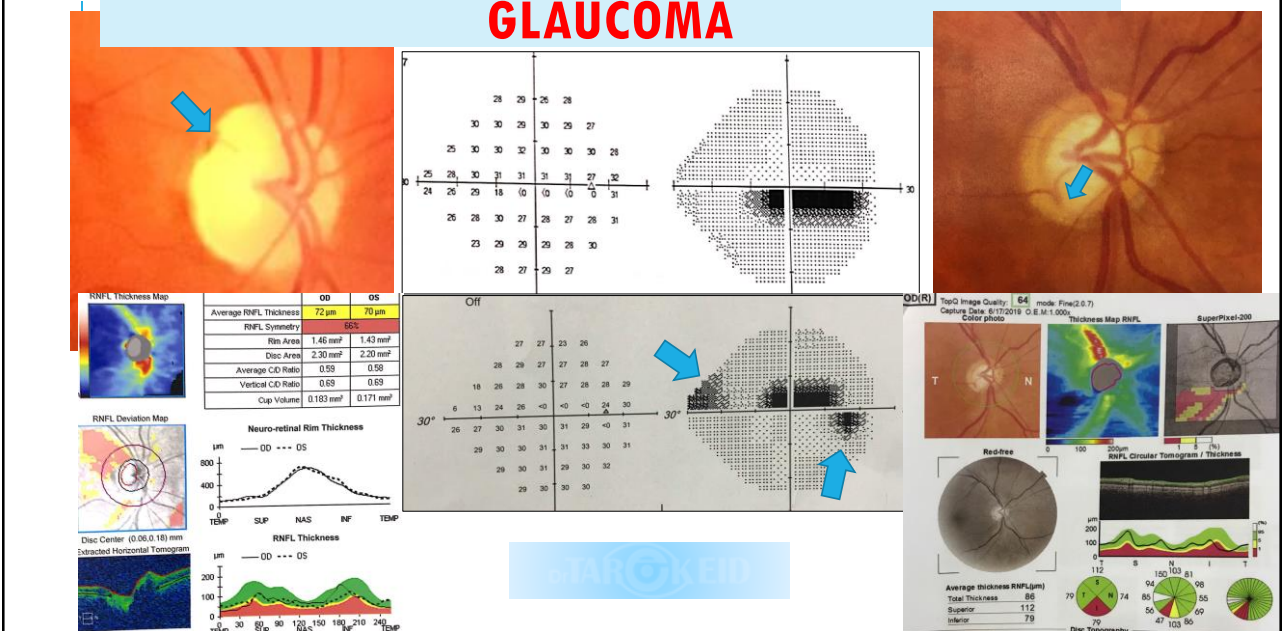
NH and RNFL OU Analysis: Optic Disc Cube 200x200 OD OS



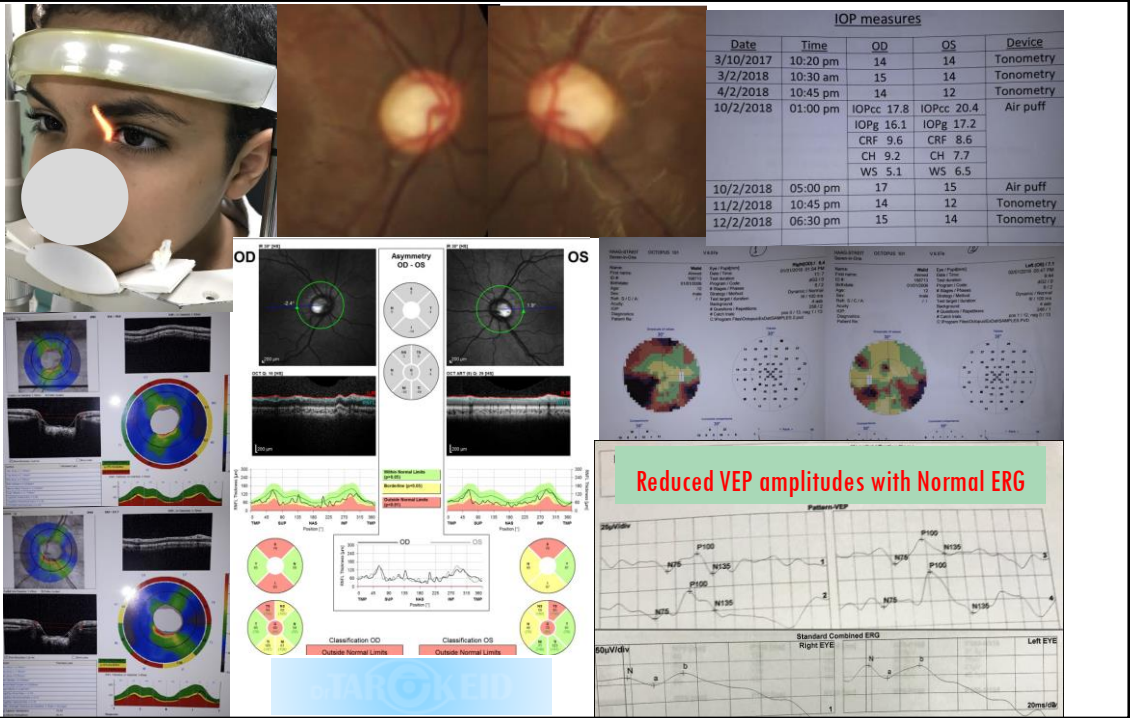
ALTITUDINAL HEMIFIELD FIELD DEFECT IN LOW-TENSION GLAUCOMA COMPARED TO ANTERIOR ISCHEMIC OPTIC NEUROPATHY WITH NORMAL MRI STUDY



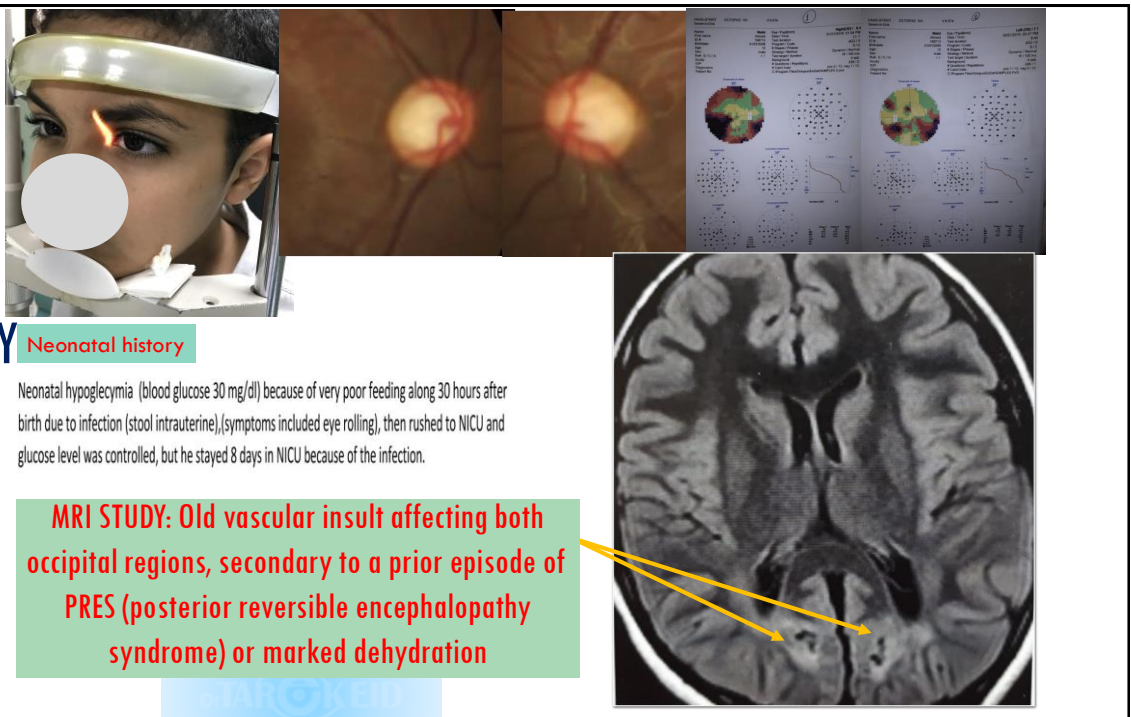
TOXIC AMBLYOPIA VS LOW-TENSION GLAUCOMA



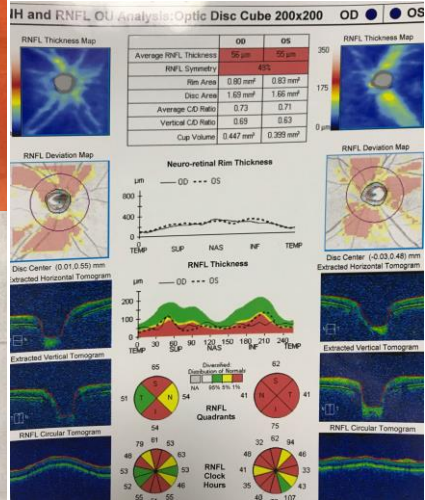
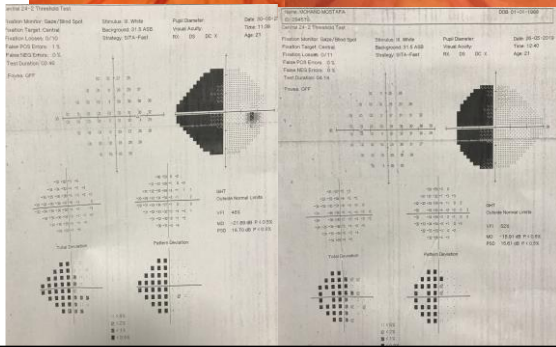
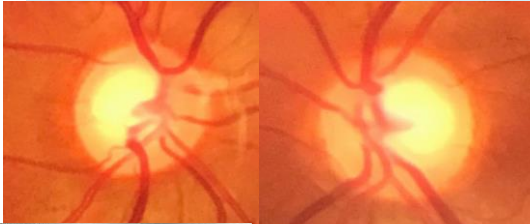
WHEN HISTORY IS THE CLUE IN A 9-YEARS-OLD BOY WITH DIAGNOSIS OF GLAUCOMA



WHEN HISTORY IS THE CLUE

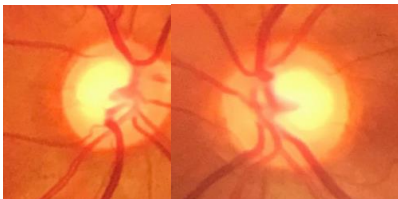


20-Y-OLD YOUNG MAN, WITH INTERMITTENT EXOTROPIA, MORE DECOMPENSATED IN LEFT EYE, REFERRED FOR ASSESSMENT OF HIS GLAUCOMA-LIKE DISCS

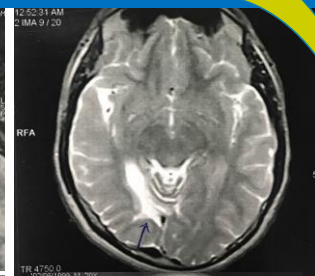
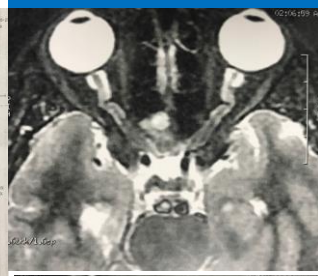
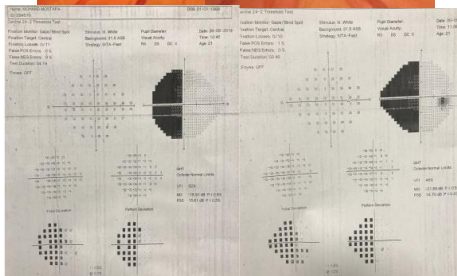


IOP
 OD: 17 mmHg
 OS: 16 mmHg

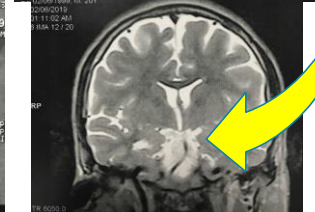
Central corneal thickness
 OD = 486 microns
 OS = 494 microns



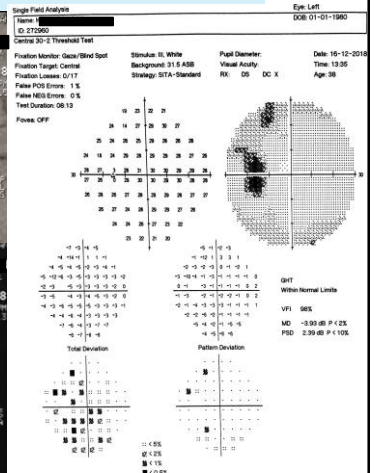
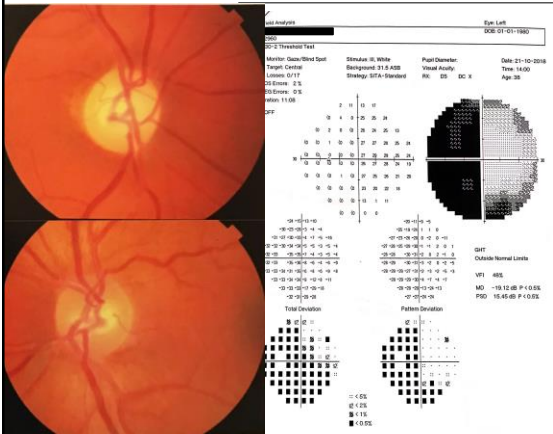
MRI BRAIN REVEALED OPEN LOOP CLEFT LINED BY GREY MATTER IN THE RIGHT OCCIPITAL CORTEX EXTENDING FROM THE EPENDYMAL SURFACE OF THE BRAIN TO THE PIA MATER, A RARE CONDITION CALLED SCHIZENCEPHALY



MRI ORBIT REVEALED TORTUOUS OPTIC NERVES WITH WIDE, PROMINENT SUBARACHNOID CSF SPACE AROUND. A PICTURE SUGGESTIVE OF IDIOPATHIC INTRACRANIAL HYPERTENSION



38-Y-OLD LADY, NLP OD, HISTORY OF EYE INJURY, DIAGNOSIS & TREATMENT AS ANGLE-RECESSION GLAUCOMA & ON 2 DROPS

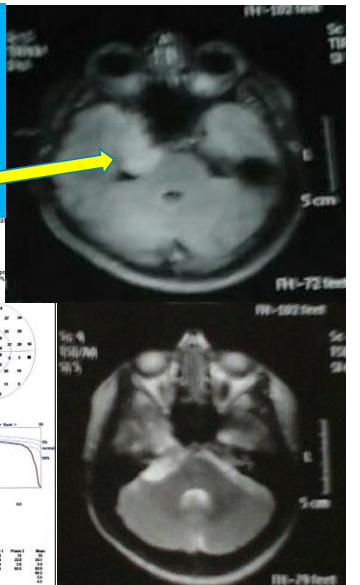
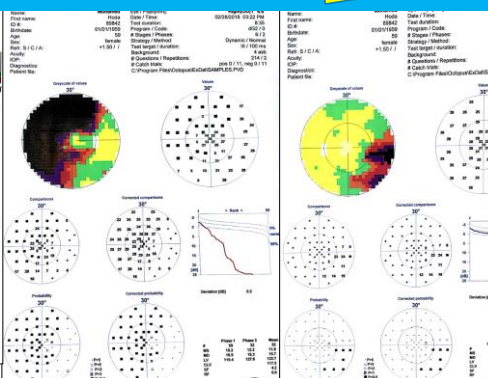
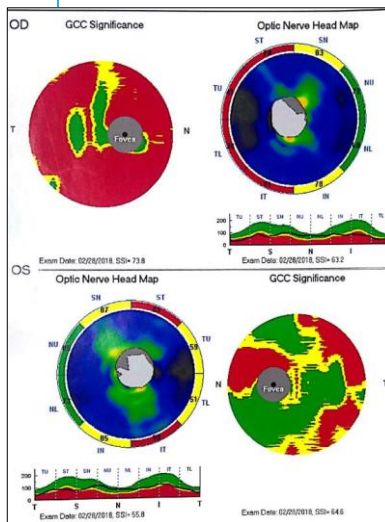


Findings are impressive of a large sellar & supra-sellar lesion likely representing Rathke's cleft cyst rather pituitary macro-adenoma with apoplexy for clinical & Laboratory correlation.

AFTER DX, PT REFERRED TO A NEUROSURGEON, HAD TANSPHENOIDAL EXCISION OF THE TUMOR & PRESERVED HER LEFT EYE VISION

WHEN GLAUCOMA IS OVERSHADOWED BY INTRACRANIAL LESION

- A 67-y old lady with POAG under treatment with disproportionate field defect in one eye
- MRI study revealed right trigeminal schwannoma



WHEN GLAUCOMA IS OVERSHADOWED BY INTRACRANIAL LESION

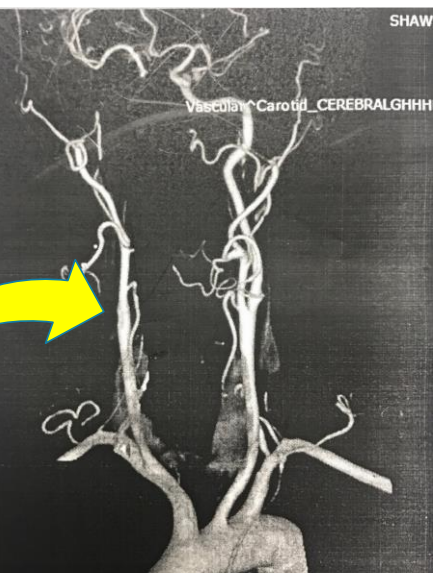
A 70-y old lady with history of parieto-occipital stroke, pituitary macroadenoma. She developed POAG recently

IMPRESSION:

- Findings are impressive of a left pituitary macroadenoma as above described for clinical & laboratory correlation.
- Left parieto-occipital area of encephalomalacia with surrounding gliosis likely secondary to an old vascular insult.
- Subcortical arteriolo-sclerotic leuco-encephalopathy.

NEOVASCULAR GLAUCOMA WITH CAROTID ARTERY OCCLUSIVE DISEASE

- Rapid visual deterioration & starting glaucoma Rx since 3 months
- Medical history: high serum cholesterol, Type 2 DM
- LP vision OD
- RAPD
- PALE DISC
- PXF
- No evident NVI
- Totally occluded angle w/ broad PAS
- No evident PDR or CRVO
- IOP 14 mmHg on 2 glaucoma drops
- Provisional Dx:
 - Near normal angle closure pseudo-exfoliative glaucoma with angle closure



Normal MRA with normal external & internal carotid arteries

Multi Slice CT angiography report: Totally occluded right internal carotid artery from its origin with collateral refilling of its attenuated supra-clinoid portion and cerebral branches

WHEN TO IMAGE YOUR GLAUCOMA PATIENT?

Unilateral normal pressure glaucoma

When afferent pupillary defect is more than subtle

When pallor of the nerve exceeds cupping

When field loss is

- respecting vertical meridian
- not matching with disc damage
- progressing faster than expected for glaucoma
- progressing despite controlled IOP

When other neurological manifestations are associated (diplopia, droopy eyelid)



REMEMBER **GLAUCOMA SPECIALISTS** USUALLY SEE THE HOLE IN THE DONUTS (**THE CUP**) WHILE **NEURO-OPHTHALMOLOGISTS** ALWAYS THINK OF THE DOUGH (**THE RIM**)



THANK YOU FOR YOUR KIND ATTENTION

