Common Neuro-ophthalmological problems in GP Practice

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Introduction

- Common difficulties in GP whilst during with eye problems:
- Not enough material to diagnose
  - Not enough medication to treat
  - Not confidence to treat
  - Lack of exposure during medical training
- However, these do not stop you from treating because you can make full use of what you have!

"What I have?"

- You should have
  - Your fingers – not all ten are required
  - Your touch light
  - A red pin (after this boring lecture)
  - A direct ophthalmoscope (if you have one still functioning ..)

Common Problems

- Visual field defect
- Double vision
- Abnormal pupil size

Visual Field Defect (1)

- Common problem for elderly
- Sudden or subacute onset
- Gradual onset is asymptomatic
- Patients are prone to have vascular risk factors

Visual Field Defect (2)

- Usual suspects in GP setting:
  - Stroke
  - Tumour

Visual Field Defect (3)

- Symptoms:
  - Sudden or subacute
  - Partial field defect e.g. “Pie in the sky!”
  - Never c/o full blindness in one eyes in the case of stroke

Visual Field Defect (4)

- Findings:
  - No relative afferent pupil defect (RAPD)
  - Positive in field defect
  - No gross abnormality in the fundus by direct ophthalmoscopy

How to check RAPD?

- You are not an ophthalmologist so you may not be so precise in your technique (for god’s sake!)
- Steps:
  - A small and powerful pen touch shines towards a pupil with a distance of 33 cm
  - Observe the pupil’s size and count ‘one thousand, two thousand and three thousand’
  - Slowly swing the light to the other eye by counting ‘one thousand’
  - Observe the other pupil, compare the size and starting counting again if you want to recheck the first eye again
- Positive of RAPD will be subjective in vascular damage to the nerve rather than to the brain cortex
- Occasionally tumour could trigger

How to check visual field?

- You can use your fingers, your pens or a more posh way – a red target
- Two techniques
  - Confrontation
  - Moving object

Confrontation Test

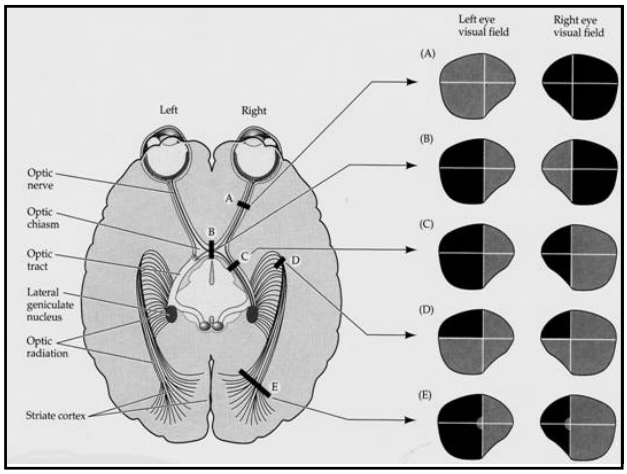
- Close your right eye and ask the patient to close his left eye with his left hand
- Divide the patient’s right eye vision into 4 imaginary quadrants
- Ask him to look at your left eye and keep a distance of 0.5m
- Show him two right fingers and one left fingers at his upper part of his vision
- Ask him how much he could see
- Show him one right fingers and two left fingers at his lower part of his vision
- Ask him how much he could see

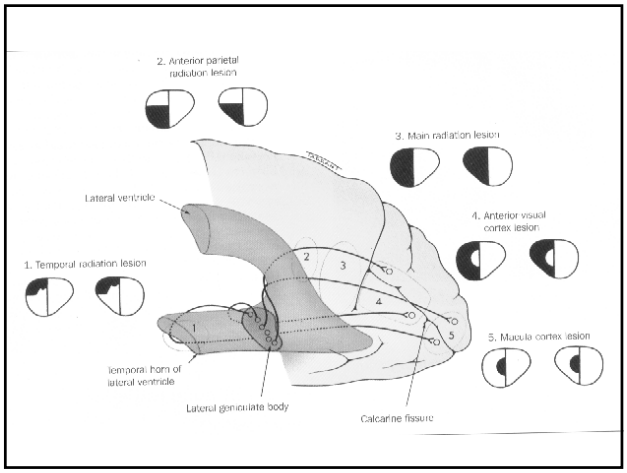
Moving Object

- More favorable GP technique
- Close your right eye and ask the patient to close his left eye with his left hand
- Divide the patient’s right eye vision into 4 imaginary quadrants
- Ask him to look at your left eye and keep a distance of 0.5m
- You must tell him that you are going to show him an object and please tell you if he sees so
- Slowly move your target from the upper part of his right ear towards the front wait until his responds
- Repeat this test in another three imaginary quadrants and you should be able to plot a rough visual field defect

How to do Direct Ophthalmoscopy?

- A fully charged and functioning ophthalmoscope
- Ask the patient to see a far object, preferably the corner of the ceiling
- Hold your ophthalmoscope in a proper way
- Starting from a distance of 0.5 m and shine towards the pupil – you may see cataract
- Move gradually towards the pupil
- You may see the disc and macula
- A dark room will facilitate the result





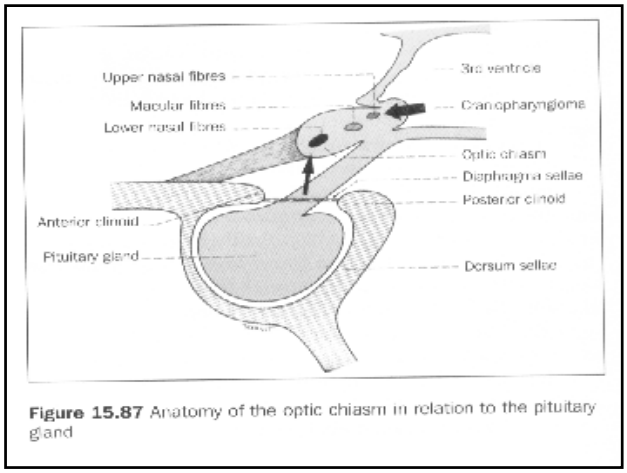
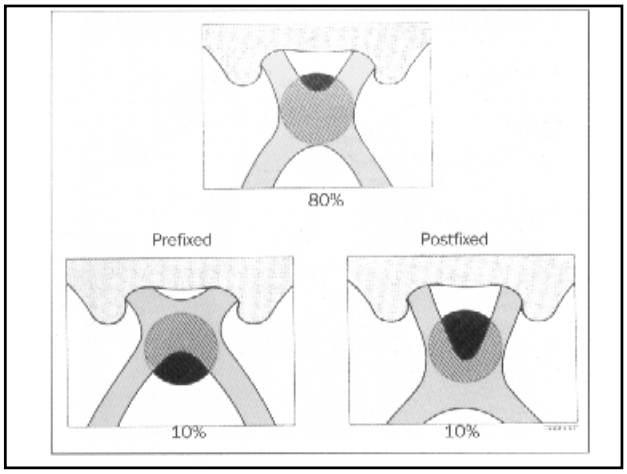
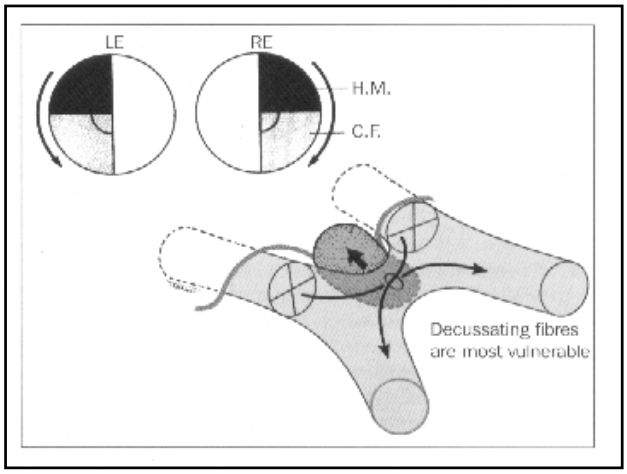
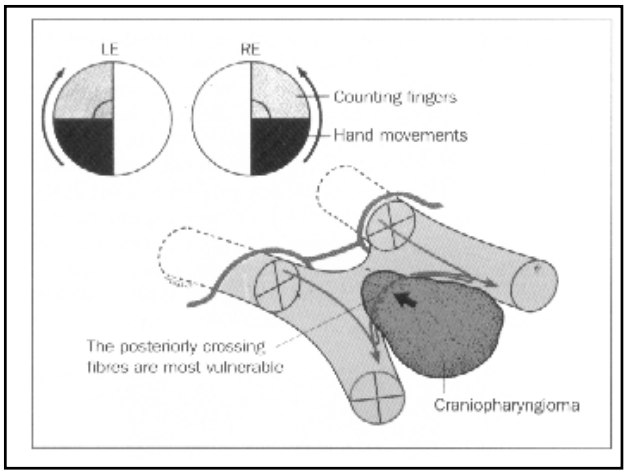
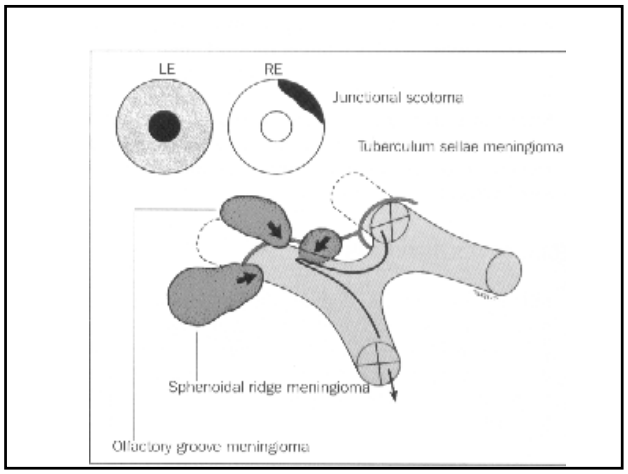


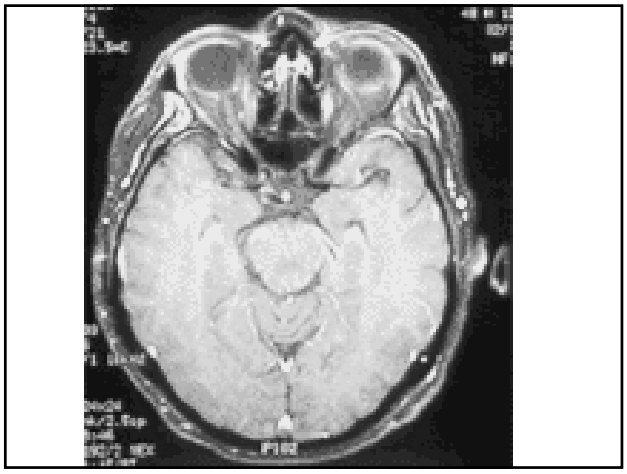
Figure 15.87 Anatomy of the optic chiasm in relation to the pituitary gland

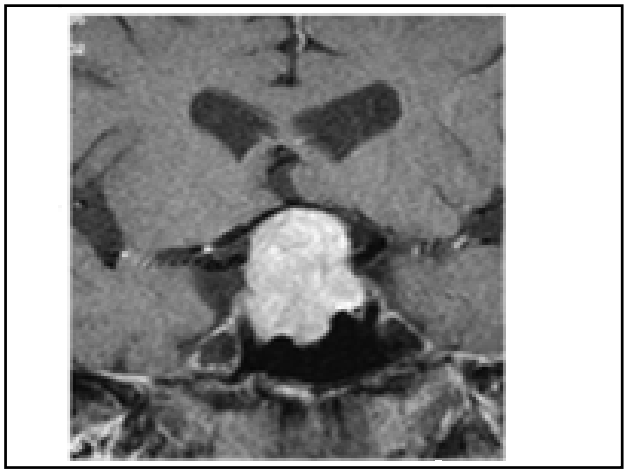












Double vision

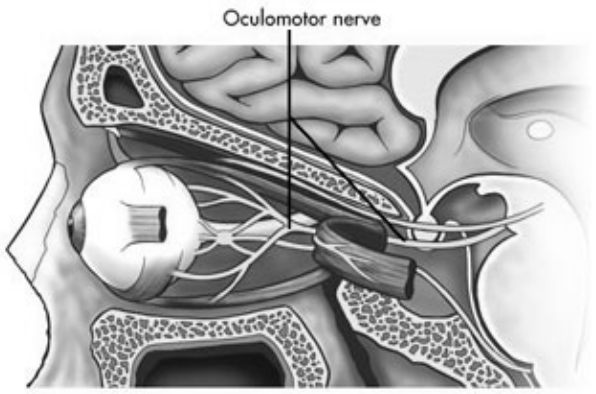
- Your golden questions: “Do you have it in one eye?”
- If yes – refractive error regardless of age
- More common post cataract surgery – can be due to improper lens position
- Please ask them to see optician
- If no and the patient does not have sudden onset of obvious squint – you can refer him to ophthalmologist in a routine basis, the underlying cause should not be severe
- If no but the patient has a sudden onset of obvious squint – you need to contact your local ophthalmologist ASAP
- Why?

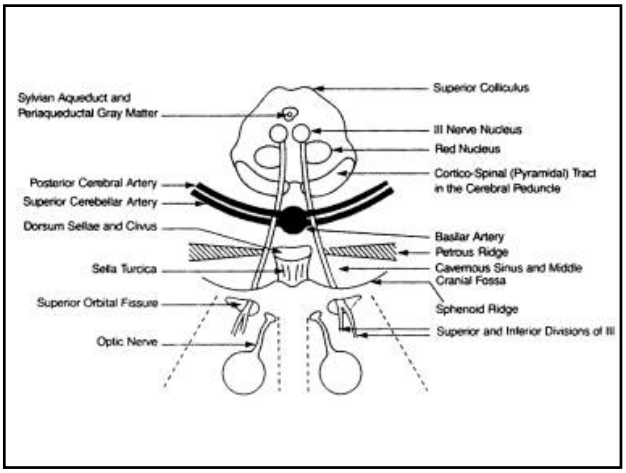
“Why?”

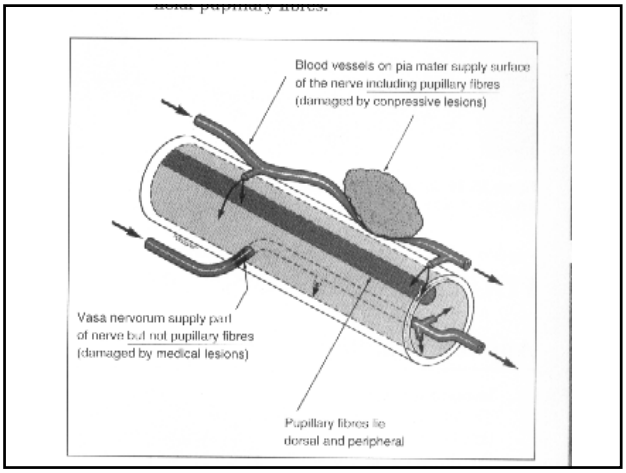
- Please try to rule out
  - III Palsy
  - VI Palsy

III Palsy

- Patient's eye should be deviated laterally and inferiorly
- Must rule out any constant headache
- Must check for any RAPD
- A constant headache and RAPD is suggestive of surgical III Palsy, ie, possible Berry's aneurysm







III Palsy – causes?

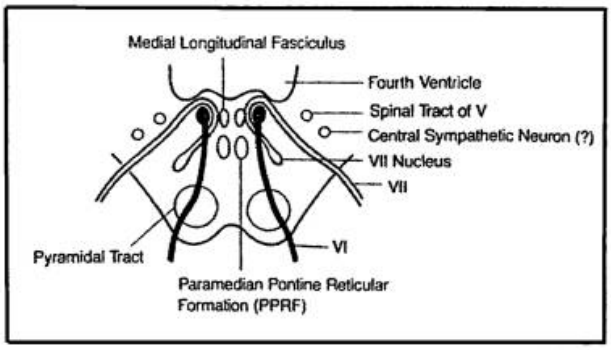
- In elderly, vascular causes by DM, HBP and CVA
- Most of time – partial ptosis, pupil is spared and partial III Palsy
- In youngster – possible Berry's aneurysm and tumour
- Most of time – ptosis, pupil is dilated, positive RAPD and full III Palsy

"What am I going to do?"

- As a GP, hospital is your friend
- Please contact us
- Being a hero in this situation has no medal
- Please check the patient's ocular movement by fixating technique if you are interested

Sixth Nerve Palsy

- Sudden onset of IV palsy with fever or headache is distressing
- This may indicate presence of sudden increase in ICP
- The patient's eye is deviated medially
- Please refer to hospital
- Please check the patient's ocular movement by fixating technique if you are interested



Abnormal Pupil Size

- Mostly young girls - False hoax?

- Dilated?
- Constricted?
- Either one – please check for RAPD
- If positive RAPD, more likely to be vascular causes or glaucoma

Usual Suspects

- In no RAPD cases:

- Dilated: mostly Adie's pupil – idiopathy or viral, ?pharmacological effect
- Constricted: Horner's syndrome

Dilated pupil

- Adie's pupil is caused the dysfunction of ciliary ganglion
- Its underlying causes are not sighted threatening
- Pupil is bigger
- Sluggish response to light
- Refer to ophthalmologist in a routine basis

Constricted pupil

- In Horner's syndrome, please confirm the pupil size again in a dark room
- This will enhance the outcome
- Please rule out Horner's related symptoms
- Please refer to Neurologist and Ophthalmologist