

CENTRAL CHIASMAL LESION

- Bitemporal hemianopia
(Nasal fibers decussate and nasal fibers correspond to temporal field of vision)
- Bitemporal hemianopic paralysis of pupillary reflexes
(pupillary response on temporal part of pupil is absent)
- Optic Atrophy

[Defective pupillary reflexes and optic atrophy seen only in lesion upto the lateral geniculate body]

LATERAL CHIASMAL LESION

- Binasal hemianopia
- Binasal hemianopic paralysis of pupillary reflex
- Optic Atrophy

OPTIC TRACT LESION

- ~~Left~~ Optic Tract Fibers consist of
 - uncrossed temporal fibers from ipsilateral side
 - crossed nasal fibers from contralateral side
- Left optic tract → Represent right side of field of vision
- Right optic tract → Represent left side of field of vision

Optic Tract Lesion:

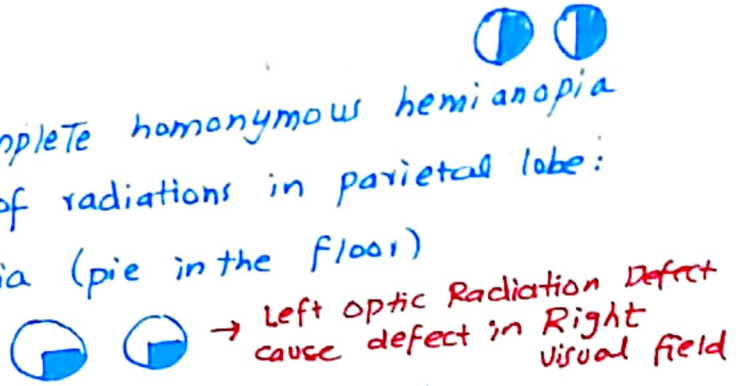
- Incongruous homonymous hemianopia
(Incongruous bcz nasal part of field are smaller compared to temporal part of field)
- Hemianopic pupillary response (Wernicke pupil)
[No pupillary response in affected part of pupil
Pupillary response is present in normal part of pupil]
- Optic Atrophy
- contralateral 3rd nerve palsy and ipsilateral hemiplegia (sometimes)

LATERAL GENICULATE BODY LESIONS

- homonymous incongruous hemianopia
- sparing of the pupillary reflex
- May have partial optic atrophy

OPTIC RADIATION LESIONS

- Total optic Radiation Lesion → Complete homonymous hemianopia
- Involvement of superior fibers of radiations in parietal lobe:
 - ↳ Inferior quadrantic hemianopia (pie in the floor)



- Involvement of inferior fibers of radiations in temporal lobe:
 - ↳ Superior quadrantic hemianopia (pie in the sky)



- No effect on pupillary reflex

VISUAL CORTEX LESION

- Blood Supply of Visual Cortex: Posterior cerebral Artery
Middle cerebral Artery

- Both carotid system and vertebral system contribute to blood supply of visual cortex
- Max number of fibers in visual cortex represent macula
- Mostly posterior cerebral artery contribute to the blood supply of visual cortex (most of the anterior part of visual cortex). So whenever there is a stroke involving posterior cerebral, almost entire visual cortex will be affected except macular part.

- contralateral congruous homonymous hemianopia (usually sparing the macula)

- Normal pupillary Reflex

- No Optic Atrophy



Macular sparing due to its dual blood supply

- Macula is spared bcz macula gets its blood supply from middle cerebral artery even in case of posterior cerebral artery stroke

Defect In Tip of Occipital Lobe

Tip of occipital lobe may be affected by:

- Head injury
- Gunshot Injury

Here macular fibres get affected and the lesion is

- Contralateral congruous homonymous macular defects



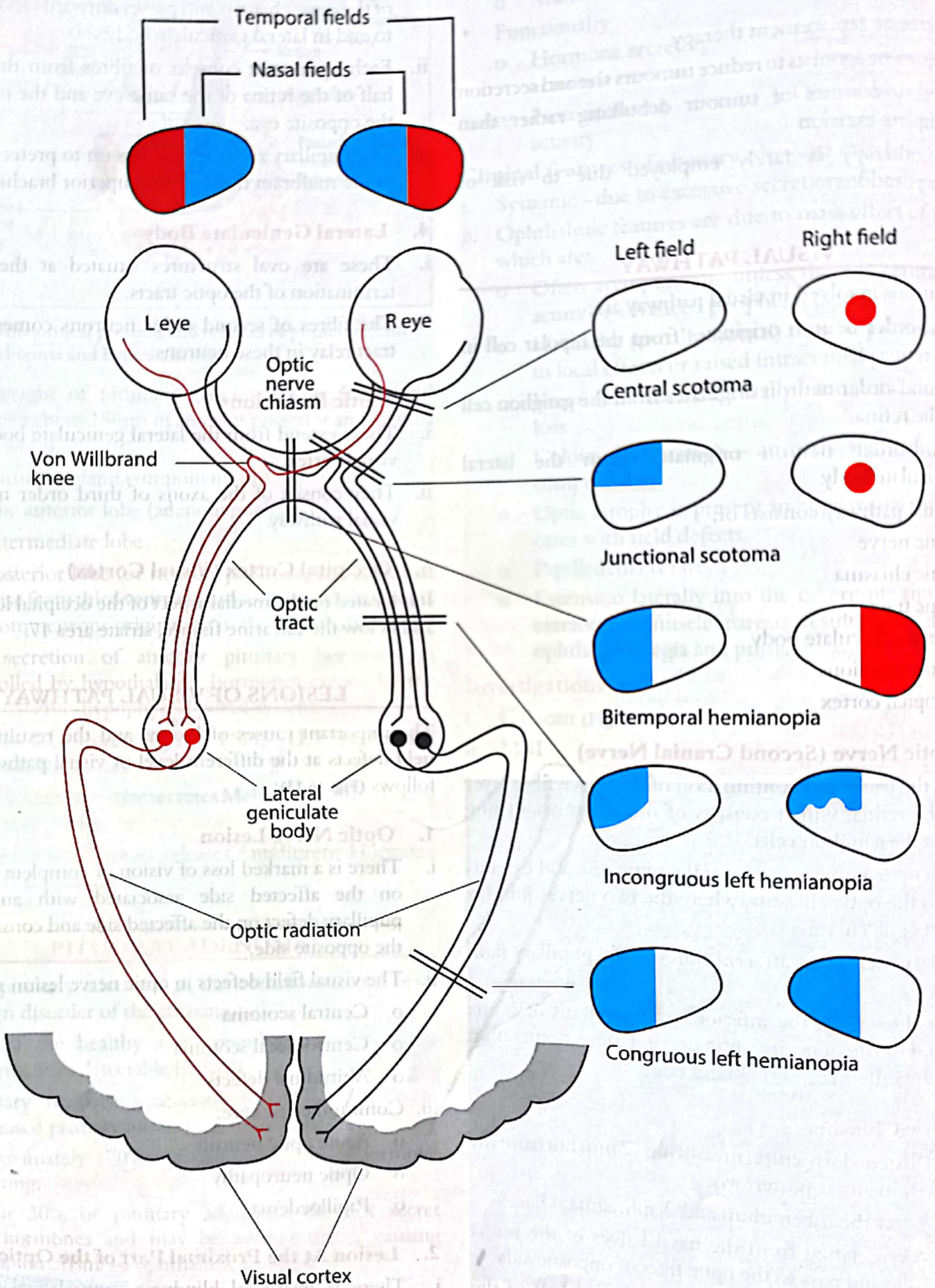


Fig. 16.13: The visual pathway shows a visual field loss, linked to the site of damage to the visual pathway.