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Definition

Hemianopsia, or hemianopia, is a decreased vision or blindness (anopsia) in half the visual field, usually on one side of the vertical midline. The most common causes of this damage are stroke, brain tumor, and trauma.

This article deals only with permanent hemianopsia, and not with transitory or temporary hemianopsia, as identified by William Wollaston PRS in 1824. Temporary hemianopsia can occur in the aura phase of migraine.

Types

Homonymous hemianopsia



Paris as seen with left homonymous hemianopsia.

A homonymous hemianopsia is the loss of half of the visual field on the same side in both eyes. The visual images that we see to the right side travel from both eyes to the left side of the brain, while the visual images we see to the left side in each eye travel to the right side of the brain. Therefore, damage to the right side of the posterior portion of the brain or right optic tract can cause a loss of the left field of view in both eyes. Likewise, damage to the left posterior brain or left optic radiation can cause a loss of the right field of vision.



Paris as seen with binasal hemianopsia.

Heteronymous hemianopsia



Paris as seen with bitemporal hemianopsia.

A Heteronymous hemianopsia is the loss of half of the visual field on different sides in both

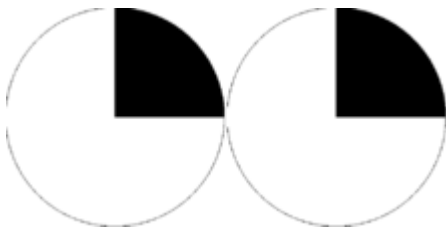
eyes. It is separated into two categories:

- Binasal hemianopsia - the loss of the fields surrounding the nose;
- Bitemporal hemianopsia - the loss of the fields closest to the temples.

Other forms

- Superior hemianopsia - the upper half of the field of vision is affected;
- Inferior hemianopsia - the lower half of the field of vision is affected.

Quadrantanopia



Superior right quadrantanopia.

Quadrantanopia (quadrantanopsia or quadrant hemianopsia) is decreased vision or blindness in one quarter of the visual field. The particular quarter of vision missing depends on whether the location of the brain damage is temporal or parietal, and the side of the lesion. For example, a lesion to the right temporal lobe with damage specifically to Meyer's loop will give rise to a left upper (superior) quadrantanopsia, while a lesion to the right parietal radiation with damage specifically to Baum's loop will result in a left lower (inferior) quadrantanopsia.

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