# CASE REPORT

## HOMONYMOUS HEMIANOPIA: RECOVERY OF VISUALFIELDS IN ACUTE STROKE

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**ABSTRACT:** Homonymous hemianopia the most common cause is stroke. The field defect of vascular origin the prognosis for spontaneous recovery is poor. The objective of this case was to describe the characteristics of spontaneous recovery of homonymous hemianopia. In this case left homonymous hemianopia. We have confirmed by formal visual field testing and CT scan was done which revealed right parietal infarct. Follow up of this case was done after 1 month visual field were analyzed spontaneous recovery was seen.
**KEYWORDS:** hemianopia, homonymous hemianopia, visual field defect.

**INTRODUCTION:** Homonymous Hemianopia involves visual loss on the same side of the visual field in both eyes. This type of visual field loss is indicative of a lesion involving the visual pathway posterior to chaisma. The most common cause Homonymous Hemianopia in adult is stroke about 52%-70%. Other common causes like traumatic brain injury (14%), tumours (11%). less common cause nonketotic hyper glycemia. Identifying and managing these visual difficulties can have significant effect on patient quality of life.

Approximately 17% to 19% of post stroke patient with total Homonymus hemianopia experience complete recovery within in 1 month.

**CASE REPORT:** A 62 year old man came to outpatient department of Princess esra hospital with chief complaints of inability to see in the lef half of visual field in both eyes. With slight imbalance while walking since two days. Patient is type 2 diabetic since 15 years.

On examination, patient's visual acuity in right eye was 6/9, with PHL 6/6 and left eye was 6/18 with PHL 6/6. On slit lamp examination anterior segment was within normal limits and fundus examination within normal limits. Confrontation visual field was done which revealed left hemianopia. For confirmation Humphery visual field test was done which revealed complete left Homonymous Hemianopia. On neurological examination distal sensory defect, deep tendon reflex was decreased.

On investigation FBS was 238mg / dl and PLBS was 348mg/dl. Patient underwent lipid profile: total cholestrol was 16mg/dl, HDL was 36mg/dl, LDL was 116mg / dl and HDL ratio was 4.6mg/dl. CT Brain showed wedge shaped 30x28mm hypodensity in right parieto-occipital region in MCA territory, suggestive of right parietal infarct. Vertebral Doppler was done which was suggestive of diffuse atherosclerosis of right MCA vessel. MRI brain was advised which the patient didn't undergo.

Diabetic levels were controlled by Endocrinologist and neurologist has started the patient on Aspirin and citicoline.

There was improvement in visual field on 1 month follow-up with complete recovery.

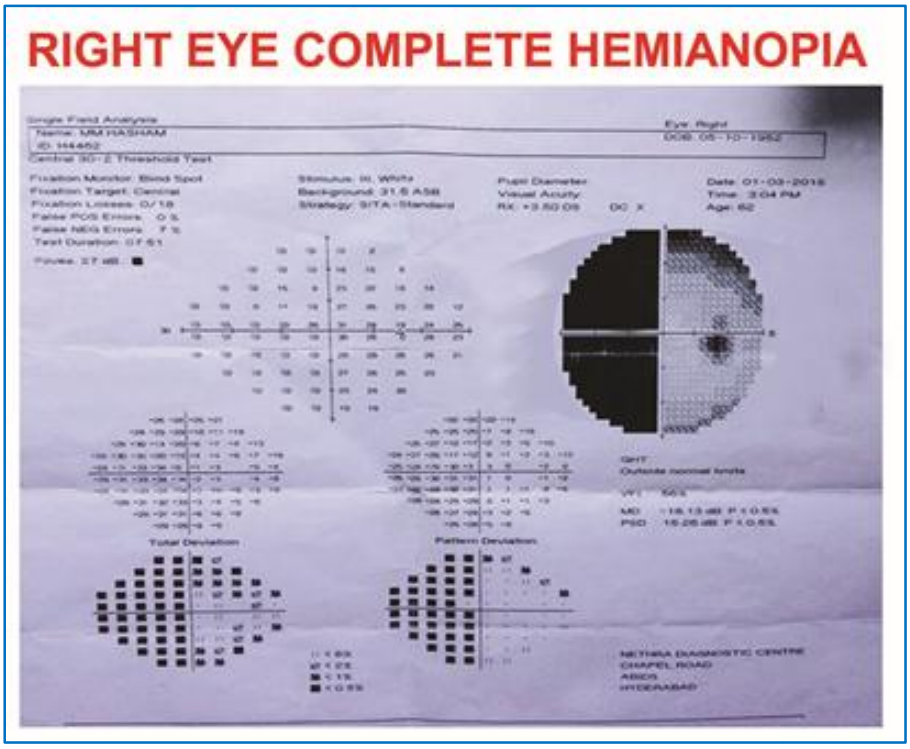


**Fig. 1(A)**

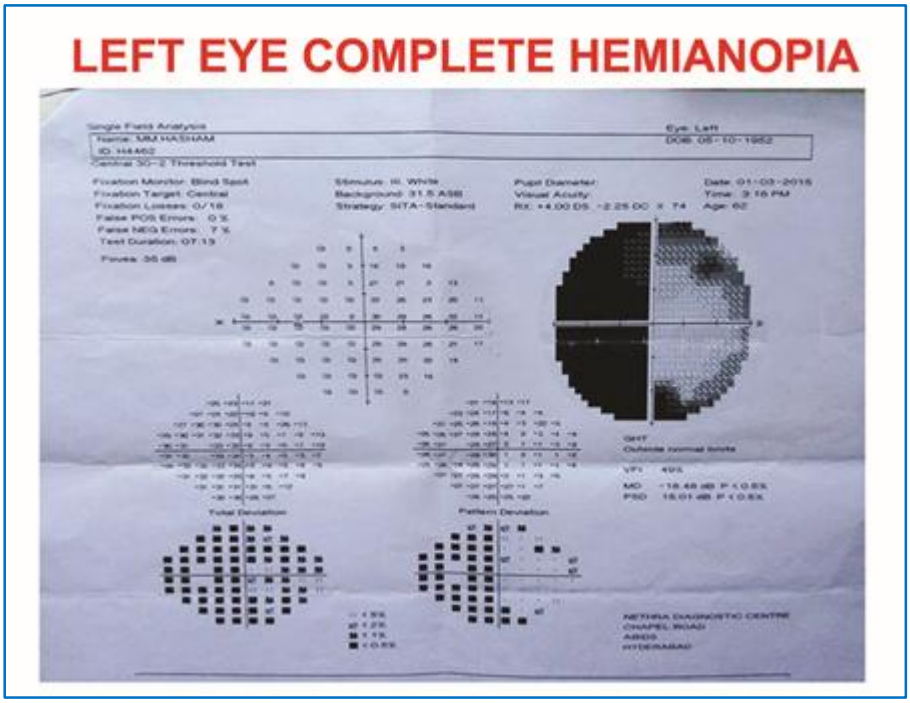


**Fig. 1(B)**

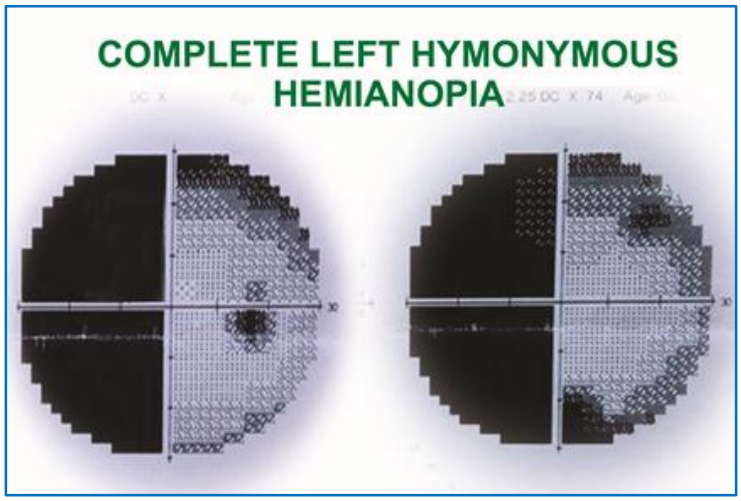


**Fig. 2**

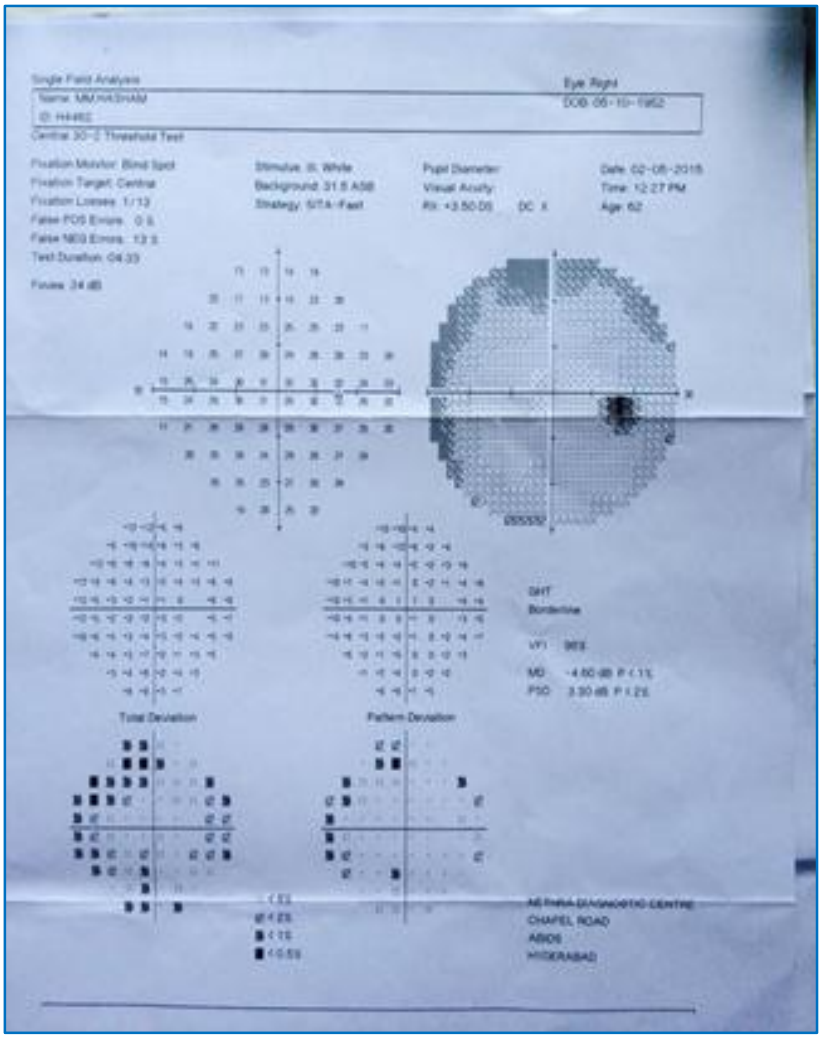

**Fig. 3: Recovery in the visual field After 1 month in Right eye**

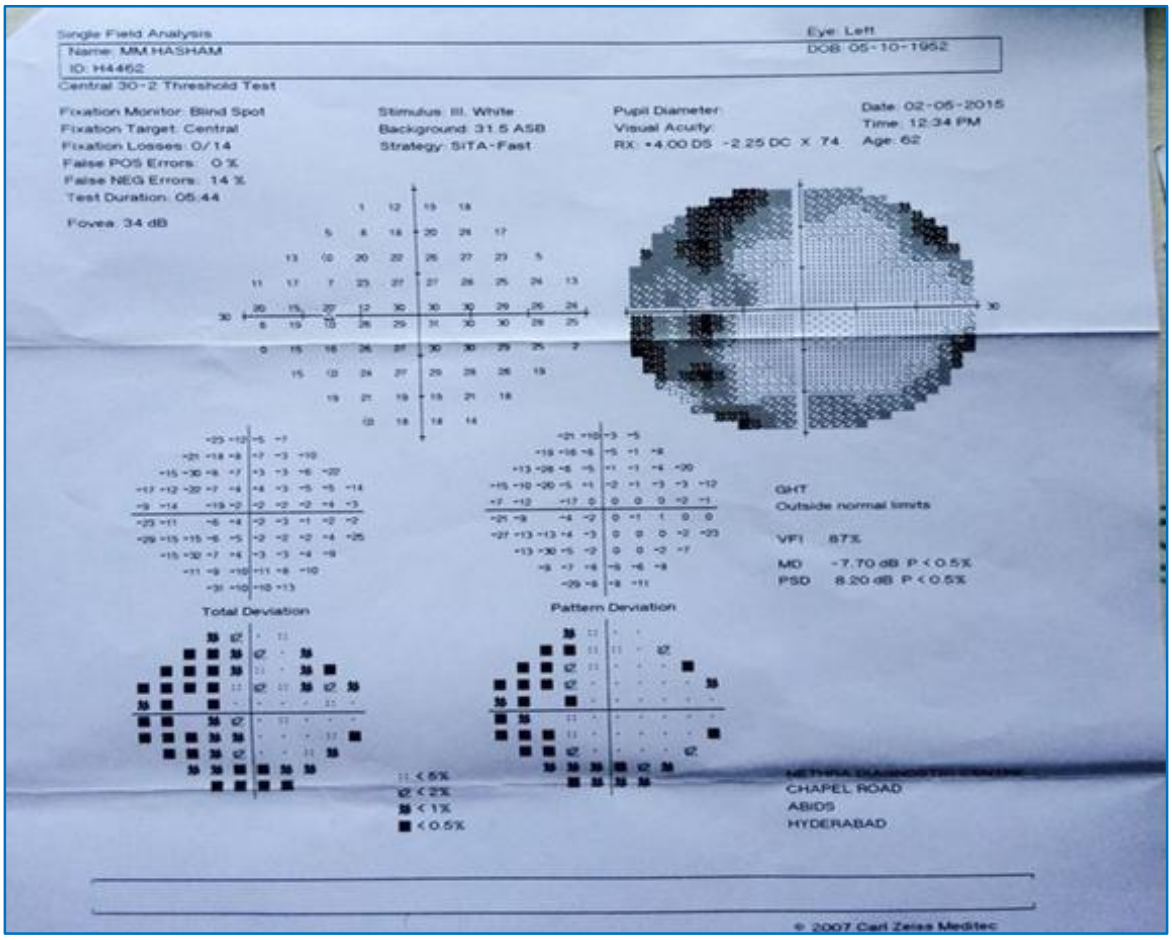


**Fig. 4: Recovery in the visual field after 1 month in Left eye**

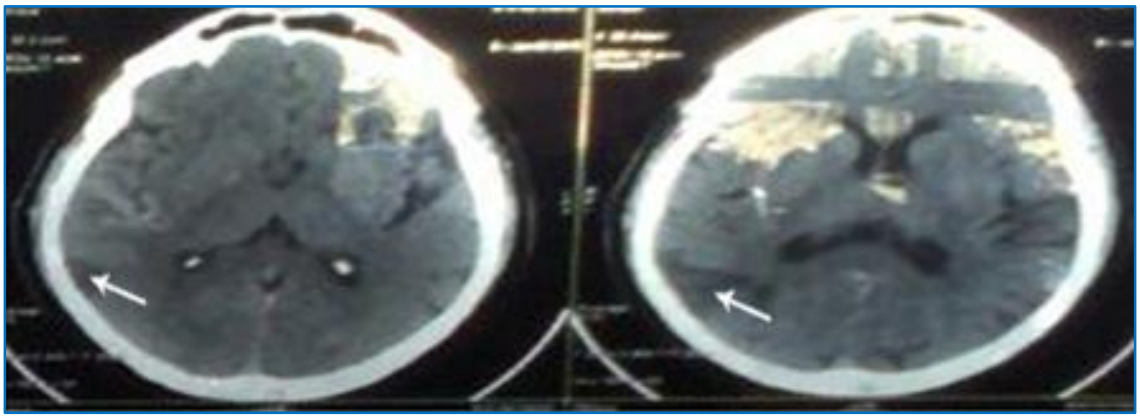

**Fig. 5: CT Brain showed wedge shaped 30x28mm hypodensity in right parieto-occipital location in MCA territory suggestive of right parietal infarct**

**DISCUSSION:** Homonymous hemianopia (HH) is the commonest form of acquired homonymous visual field defect. The most common causes of homonymous hemianopia are stroke, head injury and intracranial tumors. Forty per cent of homonymous hemianopias involve lesions in the occipital lobe, 30% the parietal lobe, 25% the temporal lobe, and 5% the optic tract and lateral geniculate nucleus (LGN).[1,2] The lesions causing homonymous hemianopia: 70% of lesions are arterial infarctions, 15% are tumours, and 5% are haemorrhages.[3,2] Males aged 50–70 are most frequently affected, reflecting the fact that homonymous hemianopia is primarily a consequence of vascular disease.

The degree of resolution depends on the underlying pathology.[4,5,6] regarding field defects of vascular origin, the prognosis for spontaneous recovery is poor. Approximately 17% -19% of post stroke patient with total homonymous hemianopia experience complete recovery with in 1month. In different study, Zhang et al reported that 55% of homonymous hemianopic[7] patients have at least some improvement of visual field with in 1 month. Sabel and Kasten, reported recovery rates ranging from 7% to 86%.[8] Pambakian and Kennard reported that less than 10% fully recover and up to 50% show partial improvement of varying extent.[9]

The chance of recovery diminished with increasing time since injury: after 1 month, the rate of recovery is >50%, whereas after 6 months, it is only 20%. Recovery is unlikely after 6 month unless underlying cause resolves.

In our case patient presented to us with visual field loss in both eyes and slight imbalance while walking. On Humphery's visual field recording it revealed complete left homonymous hemianopia. On brain imaging it was found that right parietal infarct. This case was diagnosed with left homonymous hemianopia with right parietal infarct. Patient was treated according to it. Visual field was repeated after 1 month patient was found to have recovered completely.

**CONCLUSION:** Homonymous hemianopia most common cause is stroke. The field defects of vascular origin, the prognosis for spontaneous recovery is poor. In this case patient presented with left homonymous hemianopia due to right parietal infarct. Patient was treated early and recovery was found in field defect with in 1month.

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