ORIGINAL RESEARCH PAPER
Volume - 15 | Issue - 08 | August - 2026 | PRINT ISSN No. 2277 - 8179 | DOI : 10.36106/ijsr
INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

VISUAL FIELD LOSS DUE TO COEXISTING OCCIPITAL GLIOSIS AND PAPILLEDEMA: A CASE REPORT

Ophthalomology

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ABSTRACT

Visual loss associated with papilloedema with coexisting gliosis may lead to atypical field defects and complicated diagnosis. Early changes in visual field can be picked up on perimetry which may help in early diagnosis and hence the treatment. A case of such a patient has been reported, having visual field defect due to papilloedema and occipital lobe gliosis, secondary to systemic hypertension and diabetes mellitus.

KEYWORDS

Papilledema, gliosis, visual field defect, homonymous quadrantanopia

INTRODUCTION

Visual loss associated with papilledema and coexisting occipital gliosis can lead to visual field defects detectable on perimetry [1], facilitating early diagnosis and treatment.

We report a case of a patient with painless visual field loss due to papilledema [2] and occipital lobe gliosis, secondary to systemic hypertension. A detailed clinical examination, perimetry, optical coherence tomography and magnetic resonance imaging were performed.

Visual field defect may be peripheral or central and is caused by damage to the pathway carrying the visual signals from the eye to the brain.These may result from a combination of ocular and intracranial pathologies. Common causes include glaucoma, stroke [3], brain tumors, and systemic illnesses such as diabetes and hypertension, which may lead to symptoms such as bumping into objects, reading difficulties or missing objects in the surroundings.

Based on the type of visual field defect, the lesion site can be detected. Generally, monocular visual field loss denotes a prechiasmal lesion, whereas binocular visual field loss denotes a retrochiasmal lesion. Comprehensive evaluation with perimetry and neuroimaging is essential for accurate diagnosis and management.

CASE REPORT

A 40-year-old Hindu male patient presented with complaints of painless right-sided temporal visual field loss and decreased night vision, which he noticed shortly after two road traffic accidents. He was recently diagnosed with diabetes mellitus and hypertension.

Examination

- Best corrected visual acuity was 6/6 in the right eye and 6/36 in the left eye, respectively.
- Color vision was normal.
- Anterior segment examination was normal.
- Intraocular pressure was 14 mmHg in both eyes.
- His fundus examination showed grade IV hypertensive retinopathy (Keith–Wagener–Barker classification) with papilledema.

Investigation: Perimetry (Central 30-2 threshold test) report: generalized visual field constriction with right homonymous inferior quadrantanopia in both eyes (figure 1).

Optical coherence tomography of the macula was normal whereas optical coherence tomography of the disc (figure 2) showed a large, vertically oval, edematous, hyperemic optic disc with all the disc margins blurred.

Magnetic resonance imaging of brain with orbit (figure 3) showed gliosis in the left occipital lobe.

Management and follow up: The patient was referred to a neurophysician and was advised to manage the situation conservatively with antihypertension and antidiabetic drugs. On regular follow-ups, no significant visual improvement was observed, although his blood pressure and sugar levels are now within normal limit.

DISCUSSION

Initially, based on his history and complaints, a clinical diagnosis of monocular temporal crescent syndrome [4] was made. However, on further examination and investigations, the crescent syndrome was clearly ruled out, as perimetry showed binocular visual field loss, which involves an area larger than a crescent; moreover, neuroimaging showed, posterior medial occipital lobe involvement, resulting in right-sided homonymous inferior quadrantanopia. Papilledema was likely due to systemic hypertension leading to optic nerve head edema and hence resulting in peripheral visual field loss. Additional visual field loss resulted from gliosis in the left occipital lobe. The coexistence of papilledema and occipital gliosis explains the combined visual field defects observed in this case.

This case underscores the importance of detailed visual field analysis and neuroimaging in patients presenting with visual complaints, especially when multiple contributing pathologies may coexist.

CONCLUSION

Based on the clinical findings and neuroimaging, the patient was diagnosed with right-sided homonymous inferior quadrantanopia with generalized peripheral visual field constriction due to gliosis and papilledema respectively. This case demonstrates that visual field defects may result from a combination of both ocular and intracranial pathologies. A thorough clinical examination supported by perimetry and neuroimaging is essential for accurate localization and diagnosis. Early identification and management of systemic conditions such as hypertension and diabetes are crucial in preventing further visual deterioration.

DECLARATIONS: Patient Consent: The author certify that they have obtained appropriate patient consent.

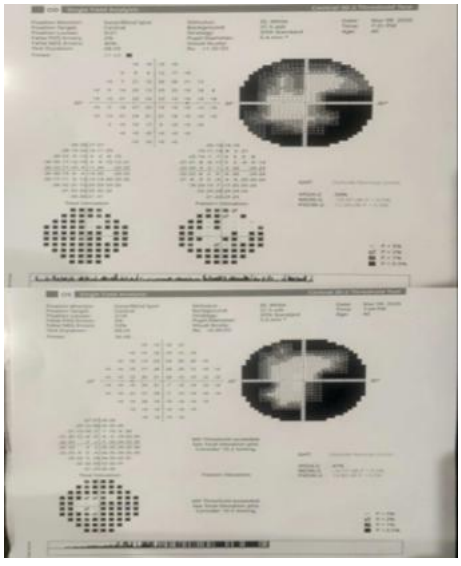

Figure 1:Perimetry

Figure Note: Perimetry of Right and left eye (central 30-2 threshold test) showing visual field loss in right-sided homonymous inferior quadrant with generalized peripheral visual field constriction.

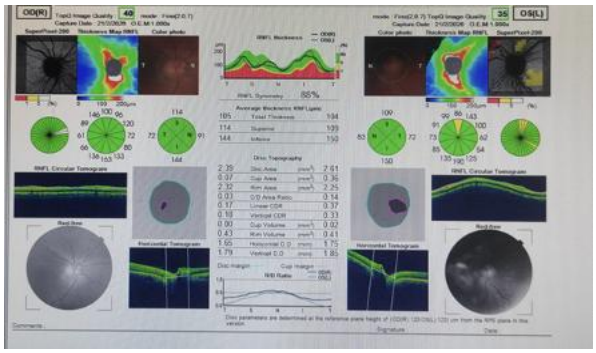

Figure 2

Optical coherence tomography: Disc

Figure Note: Optical coherence tomography (Disc) showing vertically oval, large hyperemic disc, edematous disc with all the disc margins blurred.

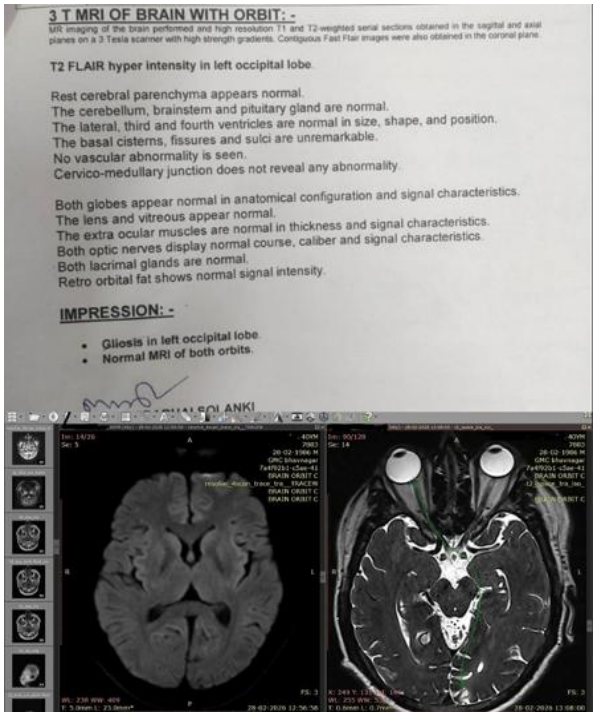

Figure 3:Magnetic Resonance Imaging

Figure Note: Magnetic Resonance Imaging report showing gliosis of the left occipital lobe.

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