



ORIGINAL RESEARCH PAPER

Ophthalmology

UNILATERAL SEVERE VISUAL FIELD LOSS AS THE INITIAL PRESENTATION OF PROLACTINOMA IN A YOUNG ADULT FEMALE: A CASE REPORT

KEY WORDS: Prolactinoma; visual field defect; hyperprolactinemia; pituitary adenoma, craniopharyngioma.

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ABSTRACT

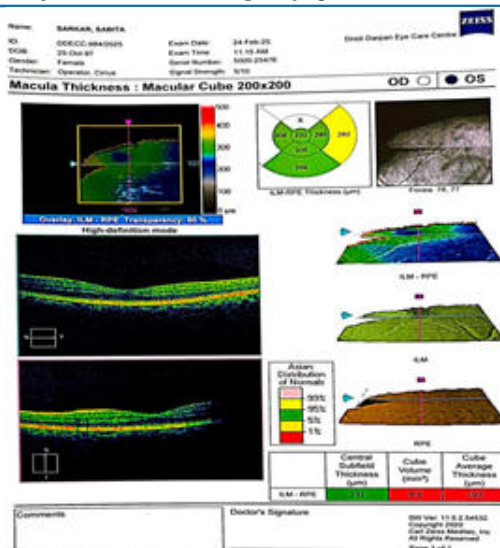
Purpose: To report a rare presentation of hyperprolactinemia manifesting primarily as unilateral visual field loss. **Case Description:** A 27-year-old female presented with progressive blurring of vision and perceived shadow in her left visual field. Examination revealed best-corrected visual acuities of 6/12 (OD) and 6/18 (OS). Fundus and OCT macula findings were within normal limits. Humphrey visual field (24-2) of the left eye showed severe visual field constriction (MD -24.25 dB, VFI 29%, PSD 13.79). Serum prolactin was markedly elevated (114.8 ng/mL; normal range: 4.1–28.9 ng/mL). A provisional diagnosis of prolactinoma with chiasmal compression was made, and the patient was referred for neuroimaging and endocrinological evaluation. **Conclusion:** Ophthalmic evaluation can be crucial in uncovering systemic endocrine disorders. In patients presenting with unexplained visual field defects and normal ocular findings, clinicians should consider intracranial pathology, including pituitary adenomas or craniopharyngioma.

INTRODUCTION

Pituitary adenomas represent approximately 10–15% of intracranial tumors and often produce visual field defects due to optic chiasm compression (Molitch, 2017). Prolactin-secreting adenomas (prolactinomas) are the most common functional subtype. While endocrine symptoms are more typical, ophthalmic manifestations can occasionally be the presenting sign. This case underscores the role of ophthalmic assessment in the early detection of underlying intracranial pathology.

Case Report:

A 27-year-old female presented with a one-month history of slowly progressive blurring of vision and a subjective shadow over the left visual field. No ocular pain, redness, or trauma was reported. Ophthalmic evaluation revealed best-corrected visual acuity (BCVA) of 6/12 in the right eye and 6/18 in the left eye. Anterior segment and fundus examinations were unremarkable. Intraocular pressure was within normal limits in both eyes. Automated perimetry (Humphrey Field Analyzer 24-2) demonstrated severe constriction of the visual field in the left eye (mean deviation -24.25 dB, visual field index 29%, pattern standard deviation 13.79), whereas the right eye was essentially normal.



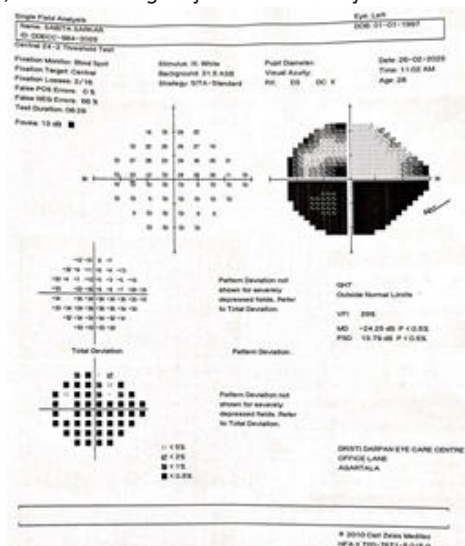
OCT macula of the left eye showed normal foveal and cube thickness (central subfield 232 μm; cube average 193 μm).

Given the pattern of visual field loss with normal ocular findings, systemic evaluation was pursued. Serum prolactin was significantly elevated at 114.8 ng/mL (female reference range: 4.1–28.9 ng/mL). A provisional diagnosis of prolactinoma was made, and neuroimaging (MRI) was advised. The patient was referred to endocrinology and neurosurgery for further management.

DISCUSSION

Visual field abnormalities, particularly bitemporal hemianopia, often prompt evaluation for pituitary adenomas. However, asymmetrical or unilateral field loss, as seen in this patient, can still indicate chiasmal involvement (Freda et al., 2011). Early recognition is essential, as timely treatment—medical (dopamine agonists) or surgical—can prevent irreversible visual loss (McKeag et al., 2007).

OCT macula helps exclude retinal or optic nerve pathology when visual fields are compromised. Normal imaging in this setting heightens suspicion of a retrochiasmal or compressive etiology. Hyperprolactinemia, confirmed through serum



levels, steers the diagnostic process toward prolactinoma, necessitating neuroimaging for localization and size assessment.

CONCLUSION

This case illustrates the clinical significance of integrating ophthalmic findings with systemic evaluation. In patients with unexplained visual field defects and normal ocular investigations, clinicians should consider intracranial etiologies, including prolactin-secreting pituitary adenomas. Multidisciplinary management ensures prompt diagnosis and favorable outcomes.

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