NEURO-OPHTHALMOLOGY

Confrontation Visual Field Testing in Routine Ophthalmic Practice: What is The Relevance?

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Introduction: Visual field testing aids in detecting, localizing, and monitoring diseases that affect the visual pathway. Early detection of which may help preserve the patient's sight or life. Techniques for visual field testing include confrontation visual filed (CVF), tangent screen, Goldmann, and automated perimetry. Goldmann and automated perimetry, although standard tests, are expensive and not readily available locally. CVF is a simple method of detecting gross visual field defects, at no cost and requires no equipment. The aim of this article is to draw attention to the benefits of CVF in routine ophthalmic practice.
Case Reports: Case 1: A 46-year-old female presented with headache of 2 years duration and visual loss left eye (LE). She was on bromocriptine tablets for galactorrhea and irregular menstruation. Best-corrected visual acuity (BCVA) was 6/6 right eye (RE), 6/60 LE. The examination was normal in the RE. There was a relative afferent pupillary defect (RAPD) and optic atrophy in the LE. CVF revealed a right homonymous hemianopia. Color vision (Ishihara chart) was RE: 15/17 and LE 8/17. The intraocular pressures (IOP) were normal. Other neurologic examination was normal. The impression was that of left optic tract compression from a pituitary adenoma. Automated perimetry confirmed a right homonymous hemianopia and Cranial CT scan showed a suprasellar mass. Ten months after tumor excision, BCVA was 6/6 RE, 6/9 LE. Color vision was 17/17 RE, 12/17 LE, and CVF revealed no gross defect. **Case 2:** A 28-year-old female presented with bilateral visual loss and headaches of 6 months duration. She was on bromocriptine tablets for galactorrhea. Best-corrected visual acuity was 6/9 right eye and 6/60 left eye. Color vision was RE: 1/17 and LE 0/17. A bitemporal hemianopia was detected on confrontation visual field testing. There was a left RAPD and bilaterally pale, pathologically cupped disc with a vertical cup/disc ratio of 0.7 RE and 0.8 LE. The IOP was 14 mmHg RE and15 mmHg LE. Other neurologic examination was normal. Impression was that of chiasmopathy from a pituitary adenoma. Automated perimetry confirmed bitemporal hemianopia. Magnetic resonance imaging brain was ordered and neurosurgery referral made, but the patient was lost to follow-up.
Discussion and Conclusion: When compared to automated static perimetry, the sensitivity of CVF is high (70–100%) for detecting altitudinal field loss, central/cecocentral scotoma, and homonymous hemianopia, but low (20–50%) for arcuate scotoma and bitemporal hemianopia;[1] it has a high specificity (97%) and a high positive predictive value (96%) which makes the detected field defects likely to be real.[2] In the two cases presented, the pattern of visual field defect detected on CVF helped to make a diagnosis on the spot. It helped to determine the etiology of optic atrophy in case 1, and that of the disc cupping in case 2 which can be mistaken for low-tension glaucoma. CVF testing may be the first pointer to a vision- or life-threatening disease, and it should be done routinely. However, it is not a substitute for formal quantitative visual field test.

REFERENCES

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