

Are we overlooking the bigger picture? The role of primary care in managing vision loss among the elderly

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SUMMARY

Vision loss in elderly patients presents significant diagnostic challenges in primary care, where early recognition and accurate diagnosis are essential to prevent irreversible complications. This case highlights the critical role of primary care physicians (PCPs) in early evaluation and timely diagnosis of vision loss in elderly patients. A 73-year-old man presented with progressive visual impairment, which was eventually diagnosed as bitemporal hemianopia due to a pituitary macroadenoma compressing the optic chiasm. Furthermore, this case illustrates the essential contribution of PCPs in coordinating multidisciplinary care, addressing the complex medical and psychosocial challenges faced by patients and their families, and ensuring holistic management to enhance both clinical outcomes and quality of life.

INTRODUCTION

Vision problems in the elderly significantly impact quality of life and often exacerbate other health issues. As the global population ages, the prevalence of conditions like cataracts, age-related macular degeneration (AMD), glaucoma, and diabetic retinopathy continues to rise, leading to functional disabilities, dependency, and increased risks of falls, social isolation, and mental health issues such as depression and anxiety.¹

Less common but equally critical is chiasmal syndrome, characterized by bitemporal hemianopia due to optic chiasm compression, often caused by sellar or suprasellar masses like pituitary adenomas. Timely recognition is crucial, as delayed diagnosis can result in irreversible vision loss and broader systemic complications.²

PCPs, often the first point of contact, play a pivotal role in early recognition through thorough assessments, including visual acuity and field testing. However, such evaluations are underutilized, with vision loss frequently misattributed to aging or refractive errors, leading to delayed referrals and worsened outcomes.³

This case report underscores the importance of structured primary care evaluations, highlights a proposed flowchart for managing vision loss in elderly patients, and advocates for multidisciplinary collaboration to optimize outcomes and improve quality of life.

CASE PRESENTATION

The patient, a 73-year-old man, presented with progressive blurring of vision over one year, accompanied by peripheral field loss. There were no associated headaches, nausea, or constitutional symptoms. However, he reported fatigue and mild lethargy, which were initially attributed to aging and comorbid conditions. His medical history included dyslipidaemia, ischemic heart disease with coronary artery bypass grafting in 2013, and lymphocutaneous sporotrichosis. He was under treatment for mild hiatal hernia and benign prostatic hyperplasia.

At the time of presentation to the primary care clinic, his visual acuity (VA) was recorded as 6/6 in the right eye and 6/12 in the left eye. Due to these relatively preserved VA findings, his case was managed conservatively with advice on routine follow-up. However, no visual field assessment, such as confrontation testing or grid tests, was performed at the initial consultation.

The patient continued to experience worsening visual symptoms and returned to the clinic six months later, now complaining of bilateral eye discomfort and persistent fatigue. Referral to ophthalmology was made for suspected bilateral glaucoma. By this point, his VA had significantly deteriorated to 6/60 in the right eye and 6/24 in the left eye.

Further investigations revealed optic disc pallor on fundoscopy, with a vertical cup-to-disc ratio of 0.8 in the right eye and 0.7 in the left, indicative of optic nerve atrophy. Humphrey Visual Field analysis demonstrated bitemporal hemianopia, and optical coherence tomography showed thinning of the retinal nerve fibre layer, consistent with chronic chiasmal compression.

Contrast-enhanced computed tomography (CECT) of the brain in Figure 1 showed a well-defined extra-axial lesion in the pituitary fossa extending to the suprasellar region, measuring 2.8 cm x 3.0 cm x 3.2 cm (AP x W x CC). The lesion exhibited hypodensity, suggestive of necrosis, with no calcification. The optic chiasm was not visualized, likely due to compression, and the mass abutted the anterior, posterior, and middle cerebral arteries, all of which remained patent. Contrast-enhanced MRI in Figure 1 confirmed a sellar mass with suprasellar extension and optic chiasm compression, consistent with a pituitary macroadenoma.

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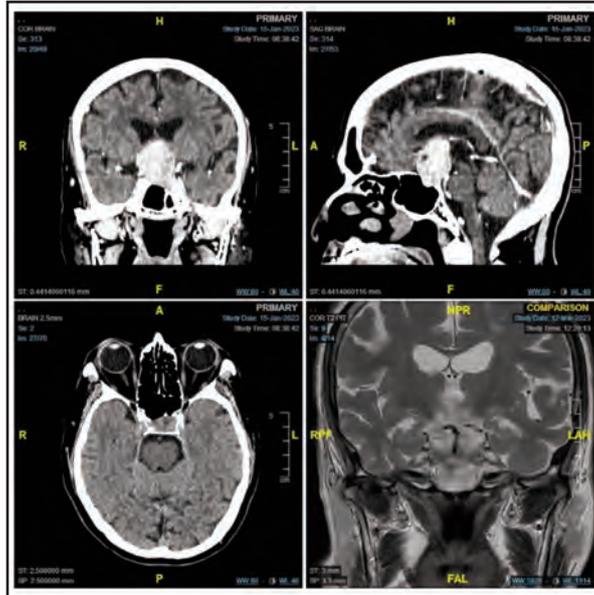


Fig. 1: Initial CT brain and MRI images of well-defined extra-axial lesion in the pituitary fossa extending to the suprasellar region

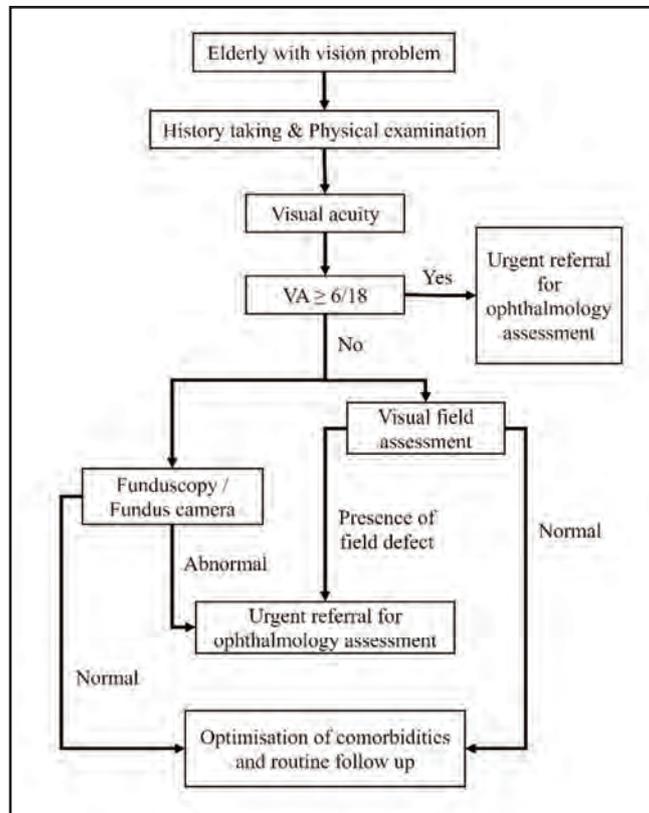


Fig. 2: Recommendation for primary care management of visual loss in the elderly

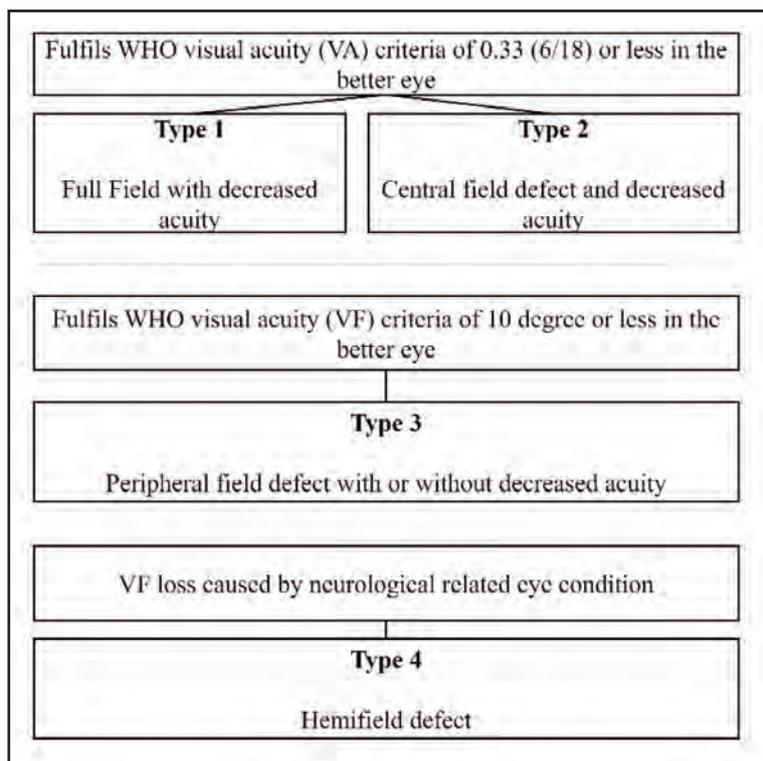


Fig. 3: Flow chart to classify types of visual loss in older adults according to WHO criteria as illustrated by Boey et al. (2022)⁵

The patient underwent transsphenoidal resection of the pituitary macroadenoma. Postoperative imaging demonstrated partial tumour resection, with residual changes attributed to postoperative effects. Histopathology confirmed a non-functioning pituitary adenoma.

Postoperative blood tests revealed evidence of hypopituitarism, including persistently low serum cortisol levels (105 nmol/L) and free thyroxine (FT4) levels at the lower end of normal (10.5pmol/L). These findings indicated ongoing hormonal insufficiencies, consistent with the effects of partial tumour resection and pre-existing pituitary dysfunction. Endocrinology recommended hydrocortisone supplementation to address adrenal insufficiency and levothyroxine therapy for hypothyroidism, with ongoing monitoring to ensure adequate hormonal replacement and symptom resolution.

The primary care physician coordinated multidisciplinary follow-ups, closely monitored symptoms like fatigue and signs of adrenal insufficiency, collaborated with endocrinologists on medication adjustments, and educated the patient and family on managing this chronic condition. This holistic, patient-centred approach significantly enhanced the patient's quality of life.

DISCUSSION

Vision loss in elderly, especially bitemporal hemianopia, profoundly impacts functional independence, increases fall risk, and diminishes quality of life. This discussion explores the unique challenges faced by PCPs, the complexity of care

coordination, and the broader implications of multidisciplinary management.

1. Role of PCPs in Early Recognition of Vision Loss in the Elderly

In this case, the patient's progressive vision loss was initially attributed to common conditions such as refractive errors or cataracts, resulting in delayed recognition of the underlying pathology. However, this approach missed critical early signs, such as bitemporal field loss and optic nerve pallor, which could have been identified through a thorough history, confrontation testing, and fundoscopy.

The presence of comorbidities such as dyslipidaemia, ischemic heart disease, and benign prostatic hyperplasia may have further complicated the diagnostic process. These conditions, along with age-related changes, can obscure or mimic symptoms of serious ophthalmological or neurological pathologies. For example, fatigue attributed to aging or comorbid conditions in this patient may have been an early indication of underlying hypopituitarism, which was only identified after advanced imaging and endocrine evaluations. This highlights the need for PCPs to maintain a high index of suspicion when vision complaints are accompanied by systemic symptoms, even if seemingly nonspecific.

Distinguishing between age-related vision deterioration and pathological vision loss remains a significant challenge, especially in primary care settings with limited access to advanced diagnostic tools such as optical coherence tomography (OCT) or automated visual field analysers.⁴ The

absence of these tools necessitates reliance on meticulous clinical assessments, including structured approaches to history taking, physical examination, and targeted use of available resources. To improve outcomes and reduce diagnostic delays, PCPs should adopt a systematic approach, such as the one proposed in Figure 2.

Figure 3 illustrates a structured flow chart designed to assist primary care providers in classifying types of visual loss among older adults who either meet the World Health Organization (WHO) criteria for low vision (visual acuity worse than 6/18) or present with hemifield visual defects.⁵

2. Challenges in Geriatric Populations

Elderly patients often present with overlapping symptoms, such as fatigue or headaches, that can obscure the primary pathology.¹ For instance, optic nerve atrophy in this case could have been mistaken for advanced glaucoma, delaying the correct diagnosis. Additionally, the risks associated with invasive interventions like transsphenoidal surgery are heightened in this population due to multiple comorbidities.⁶

PCPs play a critical role in preoperative optimisation and liaising with specialists to balance risks and benefits. Clear communication and shared decision-making are essential for minimizing complications and addressing patient and caregiver concerns.⁷

3. Coordination of Multidisciplinary Care

Managing chiasmal syndrome necessitates input from ophthalmology, endocrinology, neurosurgery, and radiology.² The PCP is the central coordinator, ensuring seamless communication and follow-up across these specialties. In this case, ophthalmology confirmed bitemporal hemianopia, endocrinology managed hypopituitarism, and neurosurgery performed tumour resection.

Psychosocial support is equally critical. The PCP provided reassurance, helped the patient and family adapt to vision loss, and connected them with community resources. This comprehensive approach enhances clinical outcomes and alleviates caregiver burden and emotional stress.⁷

4. Implications for Long-Term Management.

The PCP's role extends into long-term care, encompassing regular monitoring for tumor recurrence, visual function assessment, and endocrine stability. Vision rehabilitation, including occupational therapy and low-vision aids, may be necessary to maintain independence and improve quality of life.⁷

Additionally, addressing mental health concerns remains important. Encouraging participation in support groups or self-management programs can mitigate feelings of isolation, while professional mental health care may be warranted for more severe cases. Documenting these interventions ensures continuity and reimbursement where applicable.⁸

5. Broader Implications for Primary Care

This case exemplifies the vital role of PCPs in bridging the

gap between initial presentation and specialist care. A structured, evidence-based approach enhances diagnostic accuracy, particularly in resource-limited settings where access to specialists may be delayed. Moreover, ongoing medical education and access to decision-support tools are essential for PCPs to recognize rare systemic presentations, ensuring timely interventions and optimal outcomes. [Click or tap here to enter text.](#)³

In Malaysia's ageing population, optometrists serve as crucial allies in primary care by performing structured eye assessments that help detect early signs of visual impairment, including subtle field loss or optic disc changes. A study at Primary Eye Clinic (PEC) Universiti Kebangsaan Malaysia (UKM) reported a 16% prevalence of visual impairment among older adults, with cataracts and refractive errors as leading causes.⁹ Embedding optometrists in multidisciplinary teams improves timely triage and reduces unnecessary referrals, allowing PCPs to focus on systemic illnesses while ensuring that elderly patients with visual symptoms receive appropriate and early intervention.

6. Importance of a Holistic and Patient-Centered Approach

Beyond the diagnostic phase, PCPs play a pivotal role in managing the broader physical, psychosocial, and functional needs of elderly patients. Vision loss profoundly impacts activities of daily living (ADLs) such as managing medications, preparing meals, and maintaining personal hygiene. It also increases the risk of falls and related injuries, such as hip fractures.⁷

In this case, the PCP not only managed the patient's comorbidities, including ischemic heart disease and hypothyroidism, but also addressed the emotional impact of vision loss. The sudden transition from normal to impaired vision can be devastating, often resembling a grieving process. This places patients at risk for depression or adjustment disorders. Monitoring these psychological responses and providing timely intervention, such as counselling or referrals for mental health support, are integral to holistic care.

Educating the patient and family about the condition and its management fosters trust and ensures adherence to follow-up plans. This patient-centred approach improves engagement and overall quality of life.

CONCLUSION

Structured and timely evaluations in primary care are vital for elderly patients with vision loss. Early recognition of red flags, like bitemporal hemianopia, prevents delays in diagnosing serious conditions such as chiasmal syndrome. PCP plays a pivotal role in initiating investigations, coordinating multidisciplinary care, and addressing medical and psychosocial needs, ensuring better outcomes and quality of life.

DECLARATIONS:

There are no conflicts of interest among the authors regarding this case report. The patient and his family

members have provided written consent for the publication of this report and its accompanying images.

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