CASE REPORT

Glare in a Case of a Craniopharyngioma

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ABSTRACT

Glare is commonly encountered in patients with corneal disease, uveitis, or retinal problems. Rarely, it may be a presenting manifestation of more sinister conditions such as chiasmal lesions. We present the case of a 42-year-old male who complained of glare for 2–3 months. There was neither headache nor blurring of vision. His neuro-ophthalmological examination was within normal limits except for slight decrease in colour contrast of the upper temporal dots of the red-dot perimetry chart. Automated visual fields showed a central scotoma on the right eye and a temporal-inferior field defect on the left. He underwent neuro-imaging, which revealed a suprasellar cystic mass, most likely a craniopharyngioma. Referral to the neurosurgeon was made who performed supraorbital keyhole surgery. Intraoperative findings showed a cystic mass stuck bilaterally on the optic nerves, carotids, and optic chiasm with the pituitary stalk deviated to the right side. Histopathology report revealed a craniopharyngioma, adamantinomatous variant. One month post excision, the patient showed improvement in his visual functions.

KEYWORDS chiasmal lesions, craniopharyngioma, glare, photophobia, red-dot perimetry chart

INTRODUCTION

The symptom of glare is commonly encountered in patients with corneal disease, uveitis, or retinal problems. Although very uncommon, glare may also be the presenting manifestation of more sinister conditions such as chiasmal lesions.^{1–3}

CASE REPORT

We present the case of a 42-year-old Chinese male who came to the clinic complaining of a subacute onset of glare in both eyes, the symptoms began 1 to 2 months prior to his consultation. The glare was present especially when driving when he felt that there were “bright lights everywhere” such that he had to wear tinted glasses almost all the time. No other associated symptoms of headache, nausea, vomiting, or blurred vision were reported. He consulted a private ophthalmologist where he was diagnosed with early cataracts and prescribed a new set of glasses but which did not afford relief of his symptoms. A few days later he noted worsening of glare with decreased colour

perception. He then consulted another ophthalmologist who referred him to the neuro-ophthalmology clinic.

On examination, his corrected visual acuity was 6/7.5 (right eye) and 6/9 (left eye), N6 in each eye. He identified 13 of the 15 Ishihara colour plates correctly and his confrontation visual fields were full. However, using the red-dots contrast sensitivity visual field chart^{4,5} he noted a very slight decrease in colour contrast of the upper temporal dots in both eyes (Figure 1a). Slit lamp examination revealed very early cataract of the right eye. The rest of the ophthalmological examination was normal. Due to the findings on the red-dots perimetry chart, he had an immediate automated visual field examination which revealed a central scotoma on the right eye and a temporal and inferior field defect on the left eye (Figure 1b). Neuro-imaging revealed a suprasellar mass reported as a predominantly cystic lesion, most likely a craniopharyngioma with internal thin septa, irregularly enhancing at the superior portion, measuring 2.3 × 1.2 × 2.8 cm. The tumour compressed the optic chiasm and displaced the pituitary stalk to the right (Figure 2a and 2b). He was referred on to

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FIGURE 1 (a) Red dot perimetry chart (in grayscale) result of the patient who noted a slight decrease of colour contrast on the upper temporal dot in the right eye, and two of the upper temporal dots on the left. (b) Automated visual fields result of the patient (pre-excision of the mass), showed a central scotoma on the right eye, and a temporal and inferior field defect on the left eye. (c) Automated visual fields result of the patient (post-excision of the mass), showed resolution of the visual field defects on the right eye, whereas the left eye showed a resolution of the inferior field loss with a residual superior field defect.

a neurosurgeon who subsequently performed a right eyebrow incision supraorbital keyhole approach on the patient. The intra-operative findings revealed a cystic mass adherent bilaterally to the optic nerves, internal carotid arteries, and to the optic chiasm. On histopathological examination, it was revealed that the tumour was a craniopharyngioma, adamantinomatous variant.

One month post excision of the mass, the patient had no visual complaints. His left eye distance visual acuity improved to 6/7.5, whereas the right eye remained the same. On the near chart each eye improved to N5. He was able to identify all of the Ishihara colour plates in each eye. Automated visual fields showed resolution of the visual field defects on the right eye, whereas the left eye showed a resolution of the inferior field loss with a residual superior field defect (Figure 1c).

DISCUSSION

There are only a few reports of photophobia (glare and a sensation of bright light with preference for dim

illumination) associated with chiasmal lesions compressing the optic nerves and/or chiasm.³⁻⁵ Of nine previously published reports,¹⁻³ only two cases were craniopharyngiomas. Our patient complained of glare, with a slight decrease in colour perception, which differs from the previously published cases where the clinical presentation was accompanied or followed by dimming of vision or headaches or both.

Lesions compressing the optic chiasm usually present with vague dimming or loss of vision; however, in the early stages there may be no specific visual symptoms and the eye examination may be reported as normal unless an adequate visual field examination is performed. Symptoms of glare in such cases have been suggested to be due to meningeal irritation.

The case here presented indicates that chiasmal lesions can present with symptoms of photophobia, which a patient may describe as "glare" and thus mislead the unwary to suspect anterior segment disease, especially when there are no other neurological clues such as headache, blurring or dimming of vision. Visual field examination, according to Walsh and Hoyt,⁶ should

FIGURE 2 (a) Brain MRI with contrast—sagittal view. Suprasellar cystic lesion with thin septa with irregular enhancement at the superior portion, measuring $2.3 \times 1.2 \times 2.8$ cm (short arrow). The tumour compresses the chiasm superiorly and extends to the interpenduncular cistern. The pituitary gland is slightly displaced towards the sphenoid sinus (long arrow). (b) Brain MRI with contrast—coronal view. Suprasellar cystic lesion compressing the chiasm, flattening the pituitary gland and deviating the pituitary stalk to the right.

form part of every eye examination; and in our patient, a simple field examination led to the explanation of his glare symptoms.

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