

Case report: Diagnosis of a double hyperphoria

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A double hyperphoria problem is a form of strabismus characterized by the upward deviation of the line of sight of either eye while the other fixates.¹ Various terms have been employed to describe this condition: "alternating sursumduction", "dissociated vertical divergence" and "occlusion hypertropia".² It is frequently associated with overaction of the inferior oblique muscles and infrequently with latent nystagmus.³ The hyperdeviation is often different in the two eyes and the amplitude is usually difficult to measure. On performing the cover test, the occluded eye rotates upward, often with extorsion; with removal of occlusion, the eye moves down, often accompanied by intorsion.⁴ This phenomenon occurs in a patient with otherwise normal binocular vision or in association with other types of visual anomalies.² Its etiology is obscure at the present time.² Hugonnier⁴ states that this anomaly is present in 10% of all strabismics. Surgical treatment is unpredictable; a few authors have advocated a weakening procedure of the elevators.³

History and findings

Patient R.S., age 10, was complaining of blurred vision at distance for the left eye but was not reporting any difficulty at near. Family history was free of any health problem, eye disease, or squint. The patient reported that sometimes he had the impression that one eye tended to go up (with fatigue or during day-

dreaming). No previous eye examination.

Present RX: None V.A.: O.D.: 20/40
O.S.: 20/40

Refractive examination showed:

O.D.: +0.25 (-1.25) 15° V.A.: 20/20
O.S.: +0.25 (-1.00) 165° V.A.: 20/20 -

Internal and external examination showed no sign of pathology in either eye. Pupillary reflexes and central fields were normal O.U.

The unilateral cover test performed at near and at distance revealed a hyperphoria recovery movement in each eye upon removal of the occlusion. Binocular testing revealed the presence of binocular vision. The following results were obtained on the von Graefe ductions tests:

at 6 m 1^Δ Exo
B.I. x/10/6 B.O. x/8/4
at 40 cm 5^Δ Exo
B.I. x/14/10 B.O. x/10/4

Stereoscopic testing (Titmus fly) was found to be 100 seconds of arc. However, with the red glass diplopia test, the patient reported seeing two images, the red one below the light (red glass in front of O.D.) and the same response was obtained when the red lens was placed on the L.E. On the Maddox rod test performed at 40 cm, the horizontal and vertical deviations were measured with the prism bar to be 4^Δ of Exo and 4^Δ to 8^Δ Hyper, respectively (O.U.).

On the examinations of the levo — and dextro — versions with the Hirschberg test the eyes showed no deviation. In the extreme superior fields, the versions were slightly abnormal (possible overaction of the inferior oblique muscles).

Conclusion:

The diagnosis of double hyperphoria was made on the basis of the hyper present in each eye upon covering of either eye and the cylinder correction was prescribed. The patient was instructed to return if any problem (squint, diplopia; . . .) would appear with the wearing of the Rx. Orthoptics was not suggested to this patient at the time of the evaluation since the patient did not have any problem with school work and never complained of double vision that could be more likely to happen in this particular case. As success in V.T. depends on many factors, an important one being the patient's motivation, the author did not really feel, in this case, the need for V.T.

However, orthoptics have been advisable in similar cases where suppression and/or alignment problems were associated with the double hyperphoria and where the patient was experiencing discomfort, especially for close work. Since these problems are sensory but not motor, anti-suppression therapy and fusional therapy are highly effective.

References

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