ABSTRACT

Anisocoria and Horner’s Syndrome

CASE SUMMARY (continued)

Patient 1: A 25-year-old male presented with a ptosis of O.D. and partial ptosis of O.S. Patient was suffering from intermittent alternating exotropia. The patient was offered accommodation training, which in some cases can restore the pupil function as noted in the following history.

Patient 2: A 56-year-old male’s chief complaint was a history of exotropia. Examination revealed a 25 pd. intermittent alternating exotropia at near, and a miotic pupil O.D. Instillation of 11,000 phenylephrine O.U. revealed no pupil dilation O.D. or O.S.

Upon further inquiries it was learned that the patient had an adverse relationship with his father, who sat to his right at the dinner table.

Freud’s report of the vision anomalies of Anna O led to an awareness of the relationship between vision and psychological processes. Vision training to relax accommodation using the Accommotrac® Vision Trainer resulted in equal pupil sizes O.U.

Patient 3: A 39-year-old male had the complaints of unstable focusing and cognitive impairment following a series of rear-end automobile accidents. Upon examination he was noted to have a miotic pupil, and partial ptosis O.D.

One possible cause of anisocoria is a miotic pupil of Horner’s syndrome, which is innervated by the sympathetic nervous system. The sympathetic nervous system fibers innervating the pupil arise from the hypothalamus. The sympathetic system is one of the components of the limbic system. The systematic nervous system fibers innervating the pupil arise from the hypothalamus. It can be, therefore, logical to assume that an interference in this pathway may be an etiology of Horner’s syndrome.

DISCUSSION

For the second patient a psychogenic etiology is proposed. As is known, there are three retinohypothalamic tracts, and the hypothalamus is one of the components of the limbic system. The systematic nervous system fibers innervating the pupil arise from the hypothalamus. For the second patient a psychogenic etiology is proposed. As is known, there are three retinohypothalamic tracts, and the hypothalamus is one of the components of the limbic system. The systematic nervous system fibers innervating the pupil arise from the hypothalamus.

Three patients with anisocoria had three different etiologies, with two testing positive for Horner’s syndrome, with the specific neurological impairment being discovered for one of them.

CASE SUMMARY (continued)

Instillation of 1:1,000 phenylephrine O.U. revealed pupil dilation O.D., and no effect O.S. MRI testing found mild disc protrusion and stenosis at C3-4, and trauma to the right insula.

DISCUSSION

Three patients with anisocoria had three different etiologies, with two testing positive for Horner’s syndrome, with the specific neurological impairment being discovered for one of them.

Sources


Suggested Reading


Pre-Post