

Holme Adie Pupil in a Patient with Migrane : A Spectrum of a Local Autonomic Dysfunction

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Abstract

The Holme Adie Pupil (HAP) consists of unilateral or bilateral tonic pupil of unknown origin . If it is associated with migraine, nasal congestion, rhinorrhoea, lacrimation, then, local autonomic dysfunction is considered. I report a case of young female patient with recently diagnosed migraine associated with Holme Adie Pupil (HAP).

Keywords : Holme Adie Pupil, migraine

Introduction

A tonic pupil results from parasympathetic denervation at the level of the ciliary ganglion . It is characterized by a large, regular pupil with decreased response to light but preserved to Pupil shows. Vermiform movement and hypersensitivity to pharmacologic constricting agents.^{1,2,3,4} The diagnosis in our case established with rapid miotic response of the affected pupil to 0.125% pilocarpine drop.¹

Case

A 22 years female presented with moderate to severe unilateral fronto-orbital, non throbbing, non migrating headache on the right side of cranium; associated with episode of nasal congestion, rhinorrhoea , lacrimation and photophobia during daytime. At first evaluation, she had experienced continuous headache for 7 days. She graded the pain 8 in the visual analogic scale (VAS). She had no other problem at that point and denied any previous head injury.

Neurological examination showed anisocoria, the right pupil was dilated and non responsive to either direct or consensual light stimulus .On prolonged convergence effort there was slow pupillary contraction of right iris. Upon returning gaze to distance, there was slow and tonic redilation. Vermiform Contraction of right iris was seen under magnification after intense light stimulation of the right eye (Figure 1). Slit Lamp examination of right eye was normal except for some segmental

palsy of right iris sphincter . Extra ocular movements were normal and there was no ptosis. Her left eye examination was normal .

Her fundus examination and IOP measurement of both eye were normal. one drop of dilute 0.125% pilocarpine lead to strong contraction of the right pupil only.¹²⁻¹³ Holme Adie pupil was commented in the right eye. Her deep tendon reflexes were normal.

Contrast enhanced computerized tomography scan, laboratory tests for syphilis, hemosedimentation rate, C-reactive protein, total blood count, blood electrolytes were normal. Search for possible asymptomatic autonomic nervous system disorder include blood pressure and heart rate response to valsalva maneuver, orthostatic hypotension, presence of abnormal sweating, exercise intolerance .

Indomethacin was started 25mg twice daily, after 3 days the patient noticed great relief from headache and after 1 week headache was totally controlled. (0.125%). Diluted pilocarpine eye drop was started as thrice daily. This strength of pilocarpine obtained by diluting commercial 1% pilocarpine solution with sterile saline. Patient was completely relieved from photophobia .

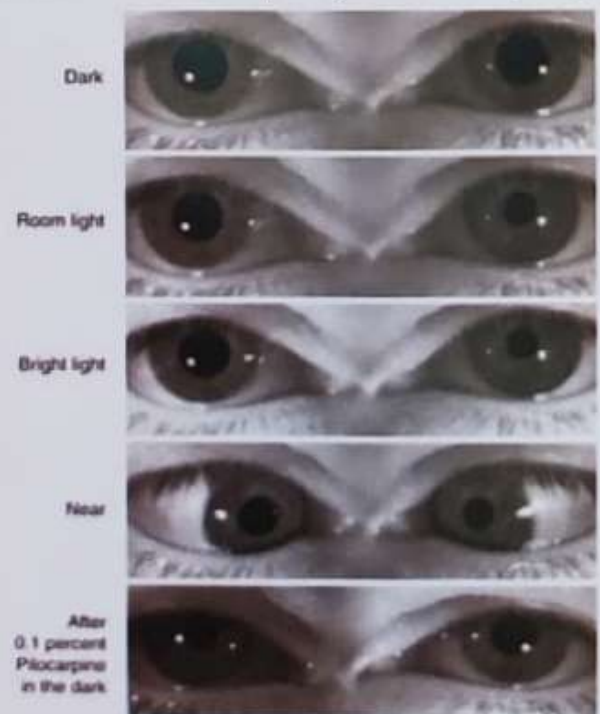


Fig. 1 : Evaluation of both pupils

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