Acta Scientific Ophthalmology (ISSN: 2582-3191)

Volume 5 Issue 2 February 2022

Case Report

Accommodative Spasm on Teenage

Hari R[1]* and Shrijana Chaudhary[2]

[1]Assistant Professor, Vittala International Institute of Ophthalmology, Hosakerehalli, Banashankari Bangalore, India

[2]Intern (Final Year), Vittala International Institute of Ophthalmology, Hosakerehalli, Banashankari Bangalore, India

***Corresponding Author:** Hari R, Assistant Professor, Vittala International Institute of Ophthalmology, Hosakerehalli, Banashankari Bangalore, India.

Received: December 20, 2021

Published: January 31, 2022

Abstract

A 16 year old girl complaint of severe headache especially in occipital area since 2 weeks. History of long hours of computer usage more than 6 hours a day. No any ocular trauma or any head injury, or any significant medical history.

On examination her unaided visual acuity was found to be 6/6 monocularly and on slit lamp examination anterior segment was within the normal limit. Then dry auto refraction value was taken which was RE: -6.50 dsp/-0.75 dcyl at 31 and LE: -3.50 dsp/-0.50 dcyl at 4. Near point of convergence was measured by help of RAF ruler and it was 6cm. Also near point of accommodation was measured by help of RAF ruler and it was RE: 20D, LE: 6D and Binocularly 20D. Subjective refraction was done and she didn't accept any power her BCVA for distance was 6/6 and near was n6 (blur) monocularly and.

Then cycloplegic refraction was advised for her and cyclopentolate drops was used to rule out accommodative spasm and after that wet auto refraction value was taken which was RE: +0.50 dsp/-0.50 dcyl at 14 and LE: +0.75 dsp/-0.75 dcyl at 4 which show that the patients had accommodative spasm.

Keywords: Accommodative Spasm; Hypermetropia; Headache

Accommodative spasm refers to exertion of abnormally excessive accommodation. Causes may vary some of functional cases may have an underlying emotional cause [1], uncorrected moderate degree of hypermetropia, effort to control intermittent divergent strabismus, overwork and fatigue or temporary spasm from miotics. Clinical features may include defective vision due to induced myopia and asthenopic symptoms are more marked than the visual symptoms.

Case

A 16 year old girl complaint of severe headache especially in occipital area since 2 weeks. History of long hours of computer usage >6hrs a day. On examination it was found that her unaided vision was 6/6 monocularly. And on slit lamp examination everything was normal. Then dry objective refraction was taken which was RE: -6.50 dsp/-0.75 dcyl at 31 and LE: -3.50 dsp/-0.50 dcyl at 4.

Cycloplegic refraction was advised (cyclopentolate) to rule out accommodative spasm. After that the wet auto refraction value was RE: +0.50 dsp/-0.50 dcyl at 14 and LE: +0.75 dsp/-0.75 dcyl at 4 which show that the patients had accommodative spasm.

Treatment

First visit

BE homide eye drop HS for 3 weeks and +2.25D glass was given for reading only and she was called for review after 3 weeks.

Second visit

Her dry objective refraction was RE: +0.50 Dsp/-0.25dcyl at 11 and LE: +0.75dsp/-0.50dcyl at 12. On slit lamp examination pupil was pharmacologically dilated and others was within the normal limit. Child was symptomatically better and headache was com-

pletely resolved but has persistant pain around the eyes and was suggested to visit ENT specialist. Child is still continuing to use digital media for long hours. +2.25Ds glass was advised while using homide e/d and was asked to review after 2 weeks.

Third visit

Her dry objective refraction was RE: +0.50 Dsp/-0.25dcyl at 12 and LE: +0.75dsp/-0.50dcyl at 8. On slit lamp examination pupil was pharmacologically dilated and others was within the normal limit. Child was symptomatically better and headache was completely resolved but has persistant pain around the eyes and was suggested to visit ENT specialist. +2.25Ds glass was advised while using homide e/d. parents and child was reassured and accommodative spasm was explained in detail and its reccurence was also explained. BE homide e/d for BD for 1 week and then 1 time on alternate day for 1 week and then stop and to use +2.25Ds glass for reading only while using homide e/d. Ans she was advised to consult ENT specialist to rule out sinusitis and to review every 6 monthly.

Treatment

For treatment both eye homide eye drop hs for 3 weeks was given and +2.25Ds was given for reading only.

On her second after 2 weeks her auto refraction value was RE:+0.50 Ds/-0.50Dcy at 14 and LE:+0.75 Ds/-0.50Dcy at 4 and third visit after 2 weeks her auto refraction value was taken which was RE:+0.50 Ds/-0.25Dcy at 12 and LE:+0.75Ds/-0.50Dcy at 8. On slit lamp examination pupil was pharmacologically dilated and anterior segment was within the normal limit. Patient was symptomatically better and headache was completely resolved but had persistant pain around the eyes and was suggested to consult ENT specialist. BE homide e/d for 1 week HS and then on alternate days for 1 week and then stop to use +2.25Ds glass while using homide e/d for reading only.

Discussion

Accommodative spasm refers to exertion of abnormally excessive accommodation. Functional cases may have an underlying cause [1], uncorrected moderate degree of hypermetropia, effort to control intermittent divergent strabismus, overwork and fatigue or temporary spasm from miotics. Organic cases are due to irritative lesions of the brain stem, trigeminal neuralgia, drugs (morphine and vitamin B), multiple sclerosis, trauma and cyclic oculomotor spasm (Dagi., *et al*. 1987, Goldstein and Schneekloth 1996, Monteiro., *et al*. 2003, Sitole and Jay 2007). The most common symptoms include blurring of distance vision, varying visual acuity as well as pains in the orbital region and the head. Treatment may include use of cycloplegics drugs (atropine, cyclopentolate, homide) and use of reading glass according to patient comfort, but there is no any defined guideline. Imaging test can also help in case of any ocular or head trauma [2-7].

Conclusion

There is no any specific guidelines for treatment of accommodative spasm but cycloplegic drugs can be a beneficial in treatment of it. Along with that bifocal glass can be also used for certain period of time while using the drops.

Bibliography

1. Rutstein RP., *et al*. "Accommodative spasm: A study of 17 cases". *Journal of the American Optometric Association* 59 (1988): 527-538.

2. Sitole S and Jay WM. "Spasm of the near reflex in a patient with multiple sclerosis". *Seminar on Ophthalmology* 22 (2007): 29-31.

3. Laura Lindberg. "Spasm of Accommodation". *Duodecim* 130.2 (2014): 168-173.

4. G A Peinado., *et al*. "Unilateral accommodation spasm: Case report and literature review". *Archivos de la Sociedad Española de Oftalmología (Engl Ed)* 94.6 (2019): 285-287.

5. Lind T., *et al*. "Diagnosis of accommodative spasm aided by handheld photoscreener". *Journal of Binocular Vision and Ocular Motility* 70.1 (2020): 37-39.

6. Kayla Snipes Vickers. "Clinical findings and management of; accommodative spasm" (2013).

7. Rutstein RP. "Accommodative spasm in siblings: A uniquie finding". *Indian Journal of Ophthalmology* 58.4 (2010): 326-327.