

Incidence & Associated Symptoms of Convergence Insufficiency among General Population

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Abstract

Introduction: Convergence Insufficiency (CI) is the leading cause of eyestrain, blurred vision, double vision (diplopia), and/or headaches. In the evaluation of patients with ocular asthenopia, convergence insufficiency should be suspected. Convergence insufficiency disorder interferes with a person's ability to see, read, learn, and work at near. In studies that used standardized definitions of Convergence insufficiency, investigators have reported a prevalence of 4.2% to 6% in school and clinic settings. *Objectives:* To assess the incidence & associated symptoms of convergence insufficiency among general population. *Materials & Methods:* Patients visiting the ophthalmology OPD of SSIMS & RC were included for the study. patients were given CISS(convergence insufficiency symptoms survey) questionnaire & convergence insufficiency was tested with RAF rule. *Result:* In group A total 68 patients (13.6%) out of 500 were diagnosed with convergence insufficiency. Most common associated symptom was headache (32.35%) [p value<0.04]. In group B 50 patients(10%) out of 500 had convergence insufficiency. Most common associated symptom was headache(17.64%). *Conclusion:* Convergence insufficiency is more common in Group A (<18 yrs. of age) & is one of the important causes for headache (32.35%). So all the patients with headache should be tested for convergence insufficiency.

Keywords: Convergence Insufficiency; Diplopia; Ocular asthenopia.

Introduction

Convergence Insufficiency (CI) is the leading cause of eyestrain, blurred vision, double vision (diplopia), and/or headaches. In the evaluation of patients with ocular asthenopia, convergence insufficiency should be a part of the differential diagnosis.

As convergence insufficiency is the most frequent cause for muscular discomfort it is of considerable clinical significance [1,2]. Convergence insufficiency is a common near vision problem that – due to recent scientific research – is gaining public recognition. Convergence insufficiency disorder interferes with a person's ability to see, read, learn, and work at near (close distances). In the past, convergence insufficiency disorder has often gone undetected because testing is not included in (1) pediatrician's eye tests; (2) school screenings; or (3) basic eye examination. A person can pass the 20/20 eye chart

test and still have convergence insufficiency. In studies that used standardized definitions of Convergence insufficiency, investigators have reported a prevalence of 4.2% to 6% in school and clinic settings. The standard definition of Convergence insufficiency is exophoria greater at near than at distance, a receded near point of convergence, and reduced convergence amplitudes at near [2].

Objective

To assess the incidence & associated symptoms of convergence insufficiency among general population.

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Table 1:

| Patients | Most Common Symptom | Second Most Common Symptom |
|-----------------------------------|---------------------------|----------------------------------|
| With convergence insufficiency | Headache [P value < 0.04] | Uncomfortable feel while reading |
| Without convergence insufficiency | Headache | -- |

Materials & Methods

Patients visiting the ophthalmology OPD of SSIMS & RC were included for the study. Patients were given CISS (convergence insufficiency symptoms survey) questionnaire & convergence insufficiency was tested with RAF rule. Patients were divided into groups. Group A (<18 yrs. of age), & group B (> 18 yrs. Of age). Total one thousand patients were included for the study. Both group A & group B had had 500 patients.

Results

In group A total 68 patients (13.6%) out of 500 were diagnosed with convergence insufficiency. Most common associated symptom was headache (32.35%) [p value < 0.04]. Uncomfortable feel while reading or doing close work (17.64%). In group B 50 patients (10%) out of 500 had convergence insufficiency. Most common associated symptom was headache (17.64%).

Discussion

Convergence insufficiency is one of the most frequent cause for muscular discomfort, it should be a part of differential diagnosis in the evaluation of patients with ocular asthenopia [1]. This condition is characterized by inability to converge the eyes effectively as the object of visual interest moves from distance to near. Associated with convergence insufficiency is a wide range of symptoms that can vary from mild to severe [1]. It is more common in younger age groups & most common associated symptom is headache [1,2].

Our study also showed that similar results headache being most common symptom followed by uncomfortable feel while reading or doing close work so all the patients with headache should be examined for convergence insufficiency.

Conclusion

Convergence insufficiency is more common in Group A (<18 yrs. of age) & is one of the important causes for headache (32.35%). So all the patients with headache should be tested for convergence insufficiency. This study need to be further evaluated for treatment outcome.

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