Dizziness Ameliorated With Prism Treatment of Vertical Heterophoria

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INTRODUCTION

The visual system is an integral part of the balance system. However, a specific visual disorder causing dizziness and headache has not been described in the ophthalmology literature. Vertical Heterophoria (VH) is a binocular vision disorder with symptoms of headache, dizziness, anxiety, neck pain, reading difficulties, treatable with prismatic lenses. The study’s objective was to identify new symptoms, develop a symptom questionnaire, and evaluate efficacy of prismatic lens treatment in patients with a chief complaint of dizziness and headache concurrently diagnosed with VH.

METHODS

Retrospective analysis of 40 patients presenting to an ophthalmic binocular vision subspecialist with a chief complaint of dizziness and who were simultaneously diagnosed with VH between August 2009 and May 2011. Pre- and post-treatment data was collected from validated survey instruments (Headache Disability Index (HDI), Dizziness Handicap Inventory (DHI), Zung Self-Rating Anxiety Scale (SAS); from the Vertical Heterophoria Symptom Questionnaire (VHSQ)). The population was stratified based on the severity of each symptom before and after prism treatment, using paired t-tests. To determine the percent change in symptom level, these patients have had many other diagnoses prior to being diagnosed with VH including: failure to compensate, psychogenic dizziness, vestibular migraine, vertigo, and motion sickness.

RESULTS

Treatment effects were analyzed using paired t-tests. Following prismatic lens treatment, there was a 50 % decrease in DHI score (p<0.xxx); 46.9% reduction in VHSQ score (p<0.xxx); 49.4% reduction in VHSQ score (p<0.xxx); and 46.9% reduction in DHI score (p<0.xxx); from the authors to determine VH symptom burden; from a subjective rating (10- scale) of headache, dizziness and anxiety severity; and from a sub- analysis of VHSQ questions that pertain specifically to headache, dizziness and anxiety. Upon conclusion of treatment, subjective assessment of overall improvement of VH symptoms was obtained utilizing a 10 cm visual analog scale (VAS).

ANXIETY SYMPTOMS

- Poor depth perception
- Losing your place while reading
- Problems with reflection or glare
- Double vision
- Fatigue with reading
- Motion sickness
- Poor vision

VISION SYMPTOMS

- Neurons
- Closing or covering an eye
- Light sensitivity
- Paradoxical symptoms
- Problems with reflection or glare
- Problems with vision
- Problems with walking

VESTIBULAR SYMPTOMS

- Pain with eye movement
- Motion sickness
- Head tilted backwards
- Intense lightheadedness

ANXIETY DATA

- 0-10 Anxiety Rating Scale (SAS); from the Vertical Heterophoria Symptom Questionnaire (VHSQ) (a validated self- administered instrument developed by the authors to determine VH symptom burden) from a subjective rating (10- scale) of headache, dizziness and anxiety severity; and from a sub- analysis of VHSQ questions that pertain specifically to headache, dizziness and anxiety. Upon conclusion of treatment, subjective assessment of overall improvement of VH symptoms was obtained utilizing a 10 cm visual analog scale (VAS).