Dizziness Ameliorated With Prism Treatment of Vertical Heterophoria

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ABSTRACT

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 otorhinolaryngology literature. Vertical heterophoria (VH) is a binocular vision disorder with symptoms of headache, dizziness, anxiety, neck pain and reading difficulties, treatable with prism lenses. The study's objective was to quantify dizziness and associated symptom reduction after prism lens treatment in patients with a chief complaint of dizziness concordantly diagnosed with VH.

METHODS

Methods: Retrospective analysis of 40 patients presenting to an optometric binocular vision subspecialist with a chief complaint of dizziness and who were simultaneously diagnosed with VH between August 2009 and May 2011. Pre/post-treatment data was collected from validated survey instruments (Headache Disability Index (HDI), Zung Self-Rating Anxiety Scale (SAS); from the Vertical Heterophoria Symptom Questionnaire (VHSQ) (a validated self-administered symptom assessment instrument developed by the authors to determine VH symptom severity) and from a visual analog scale (VAS) subjective assessment of headache, dizziness and anxiety severity; and from a sub-analysis of VHSQ questions pertaining specifically to headache, dizziness and anxiety. Upon conclusion of treatment, subjective assessment data and improvement in symptoms were obtained utilizing a 10 cm visual analog scale (VAS).

Results: Treatment effects were analyzed using paired t-tests. Following prism lens treatment, there was a 50% decrease in DHI score (p<0.0001); 46.9% reduction in VHSQ overall score (p<0.0001); 49.4% reduction in VHSQ score (p<0.0001); and 57.8% reduction in SAS score (p<0.0001). There was also a reduction in the 0-10 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 data and improvement in symptoms were obtained utilizing a 10 cm visual analog scale (VAS).

RESULTS

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HISTORY and PHYSICAL EXAM

Patients that present with a combination of non-vertiginous dizziness, facial pain around the eye, headache, neck pain, and anxiety are often difficult to treat. They often have seen many different specialists prior to being diagnosed with VH.

Patients have skew deviation (vertical eye misalignment), head tilt to the side, and slight disconjugate gaze. Symptoms are often duplicated by horizontal drifts to one side while walking (44.1%, p=0.0269), six VHSQ dizziness questions (54.5%, p<0.0001), scores for headache (60.4%, p<0.0001), dizziness (64.1%, p<0.0001), and anxiety (57.8%, p<0.0001); the two VHSQ headache questions (50.2%; p=0.0036) (see Figure 1).

PRISM CHALLENGE

The current study used a validated VH symptom assessment instrument (VHSQ) to quantify dizziness and associated symptom reduction after prism lens treatment in patients with a chief complaint of dizziness concordantly diagnosed with VH.

CONCLUSIONS

Treatment of dizziness with prismatic lenses resulted in a marked score reduction of the validated and other metrics for dizziness, headache, anxiety, which correlated with a marked reduction of overall VH symptom level. These results support further research to determine prevalence of VH in dizziness patients.

REFERENCES

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