Vision Therapy for Post-Concussion Vision Disorders

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Abstract   **Author Information**Authors   **Article Metrics**Metrics

Purpose To determine the frequency and types of vision disorders associated with concussion, and to determine the success rate of vision therapy for these conditions in two private practice settings.

Methods All records over an 18-month period of patients referred for post-concussion vision problems were reviewed from two private practices. Diagnoses of vergence, accommodative, or eye movement disorders were based on pre-established, clinical criteria. Vision therapy was recommended based on clinical findings and symptoms.

Results Two hundred eighteen patient records were found with a diagnosis of concussion. Fifty-six percent of the concussions were related to sports, 20% to automobile accidents, and 24% to school, work, or home-related incidents. The mean age was 20.5 years and 58% were female. Eighty-two percent of the patients had a diagnosis of an oculomotor problem [binocular problems (62%), accommodative problems (54%), eye movement problems (21%)]. The most prevalent diagnoses were convergence insufficiency (CI, 47%) and accommodative insufficiency (AI, 42%). Vision therapy was recommended for 80% of the patients. Forty-six per cent (80/175) either did not pursue treatment or did not complete treatment. Of the 54% (95/175) who completed therapy, 85% of patients with CI were successful and 15% were improved, and with AI, 33% were successful and 67% improved. Clinically and statistically significant changes were measured in symptoms, near point of convergence, positive fusional vergence, and accommodative amplitude.

Conclusions In this case series, post-concussion vision problems were prevalent and CI and AI were the most common diagnoses. Vision therapy had a successful or improved outcome in the vast majority of cases that completed treatment. Evaluation of patients with a history of concussion should include testing of vergence, accommodative, and eye movement function. Prospective clinical trials are necessary to assess the natural history of concussion-related vision disorders and treatment effectiveness.

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