Orthoptic Training of Symptomatic Convergence Insufficiency in Parkinson's Disease

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Keywords

Convergence insufficiency; Diplopia; Intermittent exotropia; Orthoptic training; Parkinson's disease

Clinical Images

A 71-year-old Caucasian man, affected by Parkinson's Disease (PD), presented to our orthoptic unit complaining of eyestrain, blurred vision and occasional diplopia.

On examination, Corneal Reflexes (CR) revealed intermittent exotropia (X (T)) for near (Figure 1) and orthophoria for distance.

Prism Cover Test (PCT) showed 25 Δ X (T) for near, confirming orthophoria for distance.

Convergence Amplitudes (CA) were very poor, especially for near.

Near Point of Convergence (NPC) was remote, with marked Convergence Insufficiency (CI) and crossed horizontal diplopia.

A period of Orthoptic Training (OT) was offered, including office exercises with pencil push-ups, prisms and 3D stereograms (20-minute twice a week), and basic home exercises simply with pencil push-ups (10-minute daily).

After 3 months, he demonstrated an improvement of sensory-motor fusion, with a decrease in symptomatology.

Satisfactory results at 6-month follow-up (Figure 2a and 2b) encourage to treat patients with symptomatic CI, including secondary forms such as those related to PD.
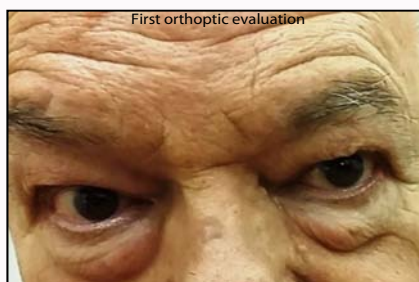
Figure 1: X (T) for near with crossed diplopia and remote NPC (>20 cm).
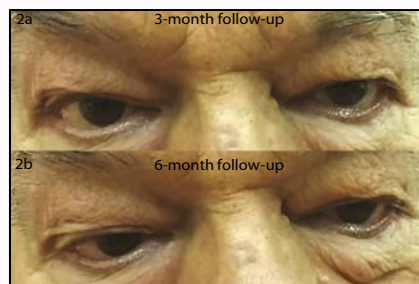

Figure 2A: Symmetric RC for near with binocular vision and improved CI (NPC=12 cm).
Figure 2B: Further improvement of CI (NPC=8 cm).