

Therapist assisted vision therapy improves outcome for stroke patients with homonymous hemianopia alone or combined with oculomotor dysfunction.

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Abstract

OBJECTIVE:

To improve visual performance and perception in stroke patients suffering from visual impairments by the use of therapist-assisted vision therapy.

METHODS:

This study was an interventional efficacy open-label investigation. The vision therapy was designed to enhance binocular vision, and saccadic ability, and vergence ranges maximally, and for patients with hemianopia also to improve peripheral awareness. The vision training consisted of one lesson a week for 12 weeks carried out by an optometrist and a vision therapist. Between lessons, patients were to train at home for a minimum of 15-20 min daily.

RESULTS:

Twenty-four patients completed the course. Significant improvements in visual performance were measured for all test parameters from the baseline to the evaluation after the last lesson of vision training. The COPM results improved both in terms of satisfaction with the completion of a task and with the way the task was carried out ($p = 0.001$). Groffman tracing test results improved from median 7.5 to 16 ($p = 0.002$), reading speed in words increased ($p = 0.0004$), and peripheral awareness of visual markers improved ($p = 0.002$).

CONCLUSION:

Therapist-assisted vision therapy increased peripheral visual awareness. Furthermore patients felt safer in the traffic and in outdoor activities. Reading speed significantly increased, and the ability to keep a moving object in focus improved.

KEYWORDS:

Stroke; hemianopia; oculomotor dysfunction; vision therapy