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NEW METHOD OF SENSORY FUSION REHABILITATION USING INTERMITTENT OCCLUSION WITH LCD GLASSES

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INTRODUCTION

Recovery of sensory fusion in children with congenital and early acquired strabismus is very important in the functional rehabilitation following strabismus surgery. This study aims to analyze sensory fusion recovery using method of intermittent occlusion with LCD glasses and compare its efficacy with orthoptic treatment using synoptophore.

METHODS:

Forty-six patients with prior esotropia and post-operative absence of sensory fusion were studied and divided into 2 groups. Main group (15 patients) underwent treatment with LCD glasses, while the control group (30 patients) underwent synoptophore treatment. Patients in the main group wore LCD glasses with optimal correction 4 hours/day. Patients in the control group received 3-4 courses of synoptophore treatment. The period of observation was 12 months.

RESULTS:

Mean age of patients was $7,1 \pm 1,1$ years. All patients had hyperopic refraction. Post-operative angle of deviation was $3,2 \pm 1,1$ degrees.

Stable sensory fusion was achieved in 12 patients, unstable – in 3 patients in the main group. In control group stable sensory fusion was achieved in 3 patients, unstable – in 8 patients. Normal retinal correspondence was achieved in 11 patients in the main group, and in 3 patients in control group.

DISCUSSION:

Sensory fusion recovery in 80% of cases using LCD glasses compared with 10% of cases using synoptophore treatment can be explained by a more effective daily influence of LCD glasses on the patient's visual system.

CONCLUSION:

Intermittent occlusion with LCD glasses is an effective mean of sensory fusion and normal retinal correspondence recovery in patients after successful strabismus surgery.