

ANALYSIS OF THE RESULTS OF COMPREHENSIVE TREATMENT IN PATIENTS WITH INTERMITTENT STRABISMUS

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Background. Intermittent strabismus is characterized by episodic disruption of binocular vision with a transient deviation of one eye. The effectiveness of restoring full binocular vision remains limited, especially in non-accommodative forms of strabismus. This underscores the need to find new approaches, including those using computer-based technologies.

Objective. To analyze the results of comprehensive treatment in patients with intermittent strabismus.

Materials and Methods. Between 2021 and 2025, we observed 111 children (162 eyes), including 86 children (137 eyes) with intermittent strabismus and a control group of 25 healthy children (25 eyes). The patients were divided into three subgroups: Group 1 consisted of 28 children (43 eyes) diagnosed with intermittent exotropia, divergence excess type; Group 2 included 32 patients (52 eyes) diagnosed with intermittent exotropia, convergence insufficiency type; and the main Group 3 comprised 26 children (42 eyes) diagnosed with intermittent exotropia, basic type. All patients underwent ophthalmological examinations.

Results. Surgical treatment was performed on patients in Group 1 (28 children, 43 eyes) with a diagnosis of intermittent exotropia, divergence excess type, and on patients in Group 3 (16 children, 32 eyes). In analyzing the surgical outcomes, eye alignment was evaluated in the postoperative period. The absence of deviation on the Hirschberg test was considered correct eye alignment. A residual deviation of 8° or more on the synoptophore was interpreted as an undercorrection (hypoeffect), while a negative deviation of 5° or more was considered an overcorrection (hypereffect).

The results in Table 4.1 demonstrate the change in the deviation angle in children with intermittent strabismus during the course of comprehensive treatment (including surgery).

In Group 1, all patients had a pre-treatment deviation of more than 10 PD. The largest proportion consisted of cases with an angle of 19–25 PD, at 62.7% (27 eyes). A marked deviation of 26–35 PD was observed in 28% (12 eyes), and an angle of 35 PD or more in 9.3% (4 eyes). After treatment, complete correction (orthophoria, 0 PD) was achieved in 81.4% of cases (35 eyes). In 18.6% (8 eyes), a residual deviation of 0–10 PD remained, corresponding to a minimal undercorrection.

In Group 2, 11.5% of patients (6 eyes) had a slight pre-treatment deviation of 0–10 PD. The predominant angle was 11–18 PD, at 61.5% (32 eyes). A deviation of 19–25 PD was detected in 27% (14 eyes). After treatment, orthophoria was achieved in 77% of cases (40 eyes). A residual deviation of 0–10 PD was recorded in 23% (12 eyes).

In Group 3, the initial deviation angle exceeded 10 PD in all patients before treatment. The most common range was 11–18 PD, at 69% (29 eyes). A deviation of 19–25 PD was noted in 26% (11 eyes), and 26–35 PD in 5% (2 eyes). After treatment, correct eye alignment (0 PD) was achieved in 69% of cases (29 eyes). A residual deviation of 0–10 PD remained in 31% (13 eyes).

Conclusions. As a result of comprehensive therapy combined with subsequent pleoptic treatment, an improvement in visual acuity was observed in the children of the main study

groups. Orthoptic-diploptic therapy contributed to the formation of stable bifoveal fusion. Alongside the restoration of bifoveal fusion, a gradual recovery of full binocular vision occurred.