ANTERIOR TRANSPOSITION VERSUS MYECTOMY FOR CORRECTION OF INFERIOR OBLIQUE MUSCLE OVERACTION

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Introduction

Overaction of the inferior oblique muscle is a common aspect of new and recurring cases of strabismus. Children with infantile esotropia often develop overelevation in adduction. Incomitant eso- and exo-deviations in children and adults frequently show V, X, or Y patterns with overelevation. Weakening of one or both inferior oblique muscles may be indicated in all these conditions.

Aim of the Work

To compare the outcome of inferior oblique muscle weakening by graded anterior transposition or myectomy in primary and secondary inferior oblique overaction.

Subjects and Methods

This randomized Prospective clinical study will be conducted on a total of 30 patients with IOOA in one or both eyes divided into two main groups and be matched according to age and sex.

Results

There were no significant differences in hypertropia between Group A and Group B, both preoperatively and postoperatively, across all measures (primary gaze, contralateral gaze, ipsilateral gaze, and tilt). Both groups showed significant improvements in hypertropia from pre- to postoperative assessments, indicating the effectiveness of the surgical approaches. Group A demonstrated better postoperative outcomes in primary gaze and contralateral tilt, with significantly lower residual hypertropia in primary gaze. Group B showed greater improvements in ipsilateral tilt, although this was not statistically significant. Both groups had comparable results in other areas, with no clear superiority of either group.

Table 1: Comparison between the two studied groups according to Hypertropia in primary gaze for unilateral and bilateral surgery

Improvement	Group A	Group B	U	p_1
Preoperative primary gaze	(n = 9)	(n = 9)		
Min. – Max.	4.0 – 20.0	6.0 – 20.0	31.500	0.436
Mean ± SD.	10.78 ± 6.40	13.0 ± 4.53		
Median (IQR)	12.0 (4.0 – 15.0)	12.0 (10.0 – 16.0)		
6 months Postoperative primary gaze	(n = 9)	(n = 9)		
Min. – Max.	0.0 –6.0	0.0 –6.0	20.500	0.077
Mean ± SD.	1.11 ±2.03	3.11 ±2.20		
Median (IQR)	0.0 (0.0 –2.0)	4.0 (2.0 –5.0)		
Improvement in Primary gaze	(n = 9)	(n = 9)		
Min. – Max.	2.0 – 20.0	4.0 – 15.0	36.500	0.730
Mean ± SD.	9.67 ± 6.67	9.89 ± 4.23		
Median (IQR)	6.0 (4.0 – 14.0)	10.0 (6.0 – 14.0)		
Test of Significance (P) between pre & post operative	Z= 2.670 p_2= 0.008	Z= 2.677 p_2=0.007		

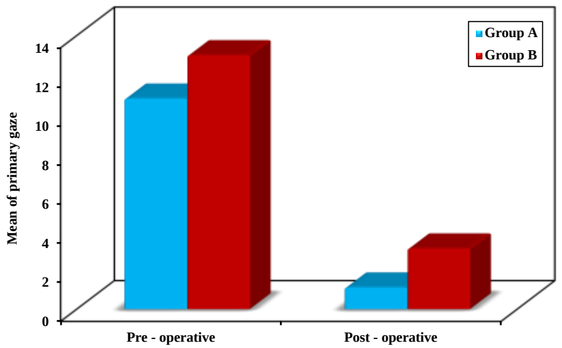

Figure 1: Comparison between the two studied groups according to hypertropia in primary gaze for unilateral and bilateral surgery

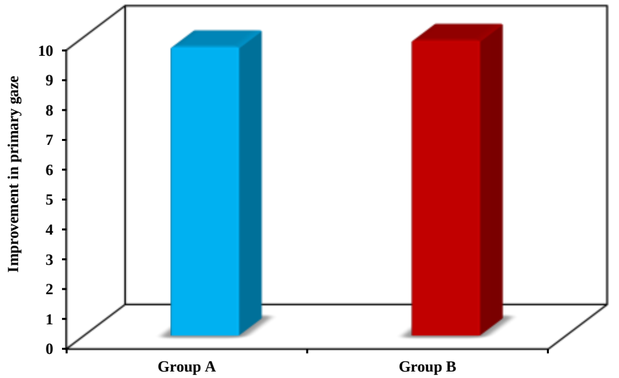

Figure 2: Comparison between the two studied groups according to hypertropia in improvement primary gaze for unilateral and bilateral surgery

Conclusion

The comparison between the two studied groups across various measures of hypertropia and contralateral incomitance for unilateral and bilateral surgeries demonstrated significant improvements in both groups postoperatively, with no substantial differences in overall outcomes.