

## SURGICAL OUTCOMES OF CONSECUTIVE EXOTROPIA

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**Purpose:** To evaluate the results of the surgical management of consecutive exotropia .

**Method:** Retrospective study design. We reviewed the charts of the 46 patients who had operations for consecutive exotropia in our hospital from 1996 to 2001. Age of onset, age of primary operation, interval between primary and secondary operations, preoperative and post-operative angles of deviation, surgical methods, cycloplegic refraction status, and amblyopia were recorded respectively.

**Result:** The mean age for consecutive exotropia correction was 20.4 years-old. Preoperative deviation angle was 46.5 prism diopters (PD). The post-op 1 day deviation angle was 2.3 PD, post-op 1 week deviation angle was 4.9PD, and post-op 6 weeks deviation angle was 14.0 PD. Mean follow-up time was 28.5 months. The success rate (final position between +10 and -10 PD)

was 63.0%. The mean dose-effect relationship between the reduction in the angle of deviation and the sum of millimeters of the reoperation was strongly correlated with the amount of preoperative exodeviation. ( $p=0.0163$  by simple linear regression) For those whose preoperative deviation angles were  $< 57.5$ PD and  $\geq 57.5$ PD, the mean dose-effect relationships were 2.72 and 3.79 PD/mm respectively. ( $p=0.0012$  by two independent sample T tests) We also discovered an exotropic drift in the first 6 weeks. (7.1 PD,  $p=0.0067$  by generalized estimating equation analysis)

**Conclusion:** Patients receiving surgery for primary esotropia should be monitored regularly. Consecutive exotropia may occur many years after. The preoperative deviation angle was correlated with the dose-effect relationship. Also, there is an exotropic drift following consecutive exotropia surgery.

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