

## **Comparison between medial rectus pulley fixation and augmented recession in children with convergence excess and variable-angle infantile esotropia.**

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### **Abstract**

#### **PURPOSE:**

To compare the outcomes of medial rectus (MR) muscle pulley fixation and augmented recession in children with convergence excess esotropia and variable-angle infantile esotropia.

#### **METHODS:**

This was a prospective randomized interventional study in which children with convergence excess esotropia or variable-angle infantile esotropia were randomly allocated to either augmented MR muscle recession (augmented group) or MR muscle pulley posterior fixation (pulley group). In convergence excess, the MR recession was based on the average of distance and near angles of deviation with distance correction in the augmented group, and on the distance angle of deviation in the pulley group. In variable-angle infantile esotropia, the MR recession was based on the average of the largest and smallest angles in the augmented group and on the smallest angle in the pulley group. Pre- and postoperative ductions, versions, pattern strabismus, smallest and largest angles of deviation, and angle disparity were analyzed.

#### **RESULTS:**

Surgery was performed on 60 patients: 30 underwent bilateral augmented MR recession, and 30 underwent bilateral MR recession with pulley fixation. The success rate was statistically significantly higher ( $P = 0.037$ ) in the pulley group (70%) than in the augmented group (40%). The postoperative smallest and largest angles and the angle disparity were statistically significantly lower in the pulley group than the augmented group ( $P < 0.01$ ).

#### **CONCLUSIONS:**

Medial rectus muscle pulley fixation is a useful surgical step for addressing marked variability of the angle in variable angle esotropia and convergence excess esotropia.

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