

# “Pseudo inferior oblique overaction, clinical findings, mechanism and surgical outcomes”

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## Abstract:

**Purpose:** To investigate clinical findings of the pseudo inferior oblique overaction (IOOA) syndrome, the outcomes of strabismus surgery, and to discuss the mechanisms have been proposed for this disease.

**Methods:** This syndrome is defined by Y pattern strabismus with exotropia in upgaze. There is marked abduction and hypertropia of the adducting eye when elevation is carried out in side gaze, but there is no hypertropia of adducting eye in horizontal side gaze. Sixteen patients were included and surgery was performed in 14 patients. Success was defined as correction of the Y pattern, orthotropia in upgaze, and maintaining orthotropia post operatively in primary and downgaze.

**Results:** Thirteen of the sixteen patients were female. The mean age was  $9.6 \pm 6.1$  years. The mean follow up time was  $14.7 \pm 16.9$  months. Pre-operatively all patients were orthotropic in the primary and downgaze with mean exotropic deviation in upgaze of  $25.06 \pm 5.9$  (18 to 40) PD. All patients underwent 2mm bilateral lateral rectus recession combined with full tendon supraplacement in 7 patients and 2/3 tendon supraplacement in the other 7 patients. The success rate of surgery was 92.8% after the first operation, rising to 100% one patient underwent a second surgical procedure.

**Conclusions:** Strabismus surgery is effective in correcting the Y pattern in patients with pseudo IOOA.

A 2/3 tendon supraplacement combined with 2 mm recessions of the lateral rectus muscles is the

preferred treatment. Results of our study supports the theory of aberrant innervation as main cause of this syndrome.

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