Inferior oblique muscle anteriorization in congenital superior oblique palsy


BACKGROUND
Inferior oblique muscle overaction of variable amounts is usually present with congenital superior oblique palsy. Inferior oblique muscle anteriorization has been described as a suitable surgical procedure in this entity. The aim of this study was to investigate the effect of inferior oblique muscle anteriorization in patients with congenital superior oblique palsy on vertical, torsional and horizontal alignment.

PATIENTS AND METHODS
The study was designed as an institutional retrospective cohort study. 45 patients with congenital superior oblique palsy (15 female, 30 male; mean age 36 years ± 19.2 SD, ranging from 6 to 75 years) underwent inferior oblique muscle anteriorization between 2000 and 2010. Preoperative amounts of vertical, torsional and horizontal deviation (using Harms tangent screen), measurements of Bielschowsky head tilt phenomenon as well as stereopsis (Lang test) were compared with findings three months and one year postoperatively.

RESULTS
Preoperative vertical deviation in primary position measured 10.1° (mean; range 0-19). Three months postoperatively vertical deviation was significantly reduced (p<0.001) to 4° (mean; range 0-20). After one year vertical deviation measured 3.5° (mean; range 0-15). The values three months postoperatively did not significantly differ from those one year postoperatively (p=0.46).

CONCLUSIONS
Inferior oblique muscle anteriorization leads to a significant and sustained improvement of ocular alignment in patients with congenital superior oblique palsy of various degrees of severity. Thus the procedure is recommendable as a first line treatment in this clinical situation.