Letter to the Editors

Combined Resection and Anterior Transposition of the Inferior Oblique Muscle for the Treatment of Moderate to Large Dissociated Vertical Deviation Associated With Inferior Oblique Muscle Overaction

To the Editors:

Farvardin and Attarzadeh are to be congratulated for their excellent article describing the use of combined resection and anterior transposition of the inferior oblique muscle for the treatment of moderate to large dissociated vertical deviation (DVD) associated with inferior oblique muscle overaction. Various surgical procedures have been advocated for treating DVD and perhaps the most bothersome complications are the recurrence of DVD and the persistence of residual DVD. These problems may reflect our attempt to solve an underlying central cortical problem by performing extraocular muscle surgeries. The results of combined resection and anterior transposition in the study appear to be encouraging. However, we would like to offer the following comments and observations.

Realistic goals of DVD surgery are to minimize dissociation and improve control. The sum of forces in any DVD surgery should favor depression. Anterior transposition of the inferior oblique has been used in the management of DVD associated with inferior oblique overaction. This procedure is based on the theory that moving the insertion of the inferior oblique muscle anterior to the equator changes its vector from one of elevation to one that opposes elevation. Snir et al. introduced combined resection and anterior transposition of the inferior oblique muscle and speculated that this technique would mechanically restrict the elevation of the eye and equilibrate the functional muscle balance. However, in the study by Farvardin and Attarzadeh, only 20% of eyes showed mild limitation in elevation (-1). The hypothesis of "mechanical restriction" appears to be untenable. After anterior transposition of the inferior oblique muscle, either the Lockwood's ligament or the neurovascular bundle serves as a new functional origin and converts the action of the muscle from an elevator to a depressor. The depressor action is further augmented by the resection of the inferior oblique. The "depressor" hypothesis appears to be more attractive and helps explain the excellent surgical results of the study.

The issue has been debated whether surgery should always be performed in both eyes although the DVD is present preoperatively in only one eye. It is not uncommon, and indeed disappointing, to have a patient who has had surgery in one eye return with a DVD in the fellow eye. However, the fellow eyes of the three patients who underwent unilateral surgery were not mentioned in the article.

Anteriorization of the inferior oblique has been found to significantly affect elevation. It is therefore surprising that the "augmented anteriorization procedure" does not result in any hypotropia or significant limitation in elevation.

Recurrence of DVD is common even after an initially satisfactory surgical result. A trend of increasing deviation at the 1-year follow-up was observed in eight eyes of nine patients. It is less clear whether the excellent surgical results of the study can be maintained in long-term follow-up.

We commend the authors for their excellent surgical results. The technique merits consideration and further evaluation of its long-term efficacy.

References

2. Kushner BJ. Restriction of elevation in abduction after inferior muscular...


