

The semiadjustable suture technique for inferior rectus recession in thyroid associated ophthalmopathy

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Purpose: Inferior rectus muscle recession with an adjustable suture has been associated with high rates of late overcorrection, especially in the setting of thyroid - associated ophthalmopathy (TAO). We sought to assess the effectiveness of the semi-adjustable suture recession of the inferior rectus muscle in TAO.

Methods: Consecutive patients with thyroid ophthalmopathy submitted to inferior rectus recession with the semi-adjustable suture technique, which involves scleral fixation of the lateral ends of the recessed inferior rectus tendon in addition to placement of an adjustable suture through the center of the muscle tendon, hanging back from the original insertion with the standard cinch adjustable suture technique, and a minimum 6 months follow-up time were included in the study. Patients were considered "successfully aligned" if they were asymptomatic and diplopia free in primary position and downgaze without the need of prisms or second strabismus surgery for vertical deviation. .

Results: Twenty six patients (15 female and 11 male) were studied. Eighteen patients were operated unilaterally (mean preoperative vertical deviation of 35.1 prism diopters (PD), range 14- 68) and 8 patients on both inferior rectus muscles, one on a semi-adjustable (mean 5.5 PD, range 1 -12 PD). Mean follow- up time was 2.7 years (range: 6 months to 15 years).

The amount of planned IR recession ranged from 4.50 to 10.00 mm. The mean postoperative deviation at final examination was 3 PD hypophoria in the involved side. Twenty five patients were successfully aligned in primary position and downgaze at final examination. Two patients were undercorrected (6-18 PD) and one patient had an overcorrection of 2 PD and required prismatic correction.

Conclusion: The semi-adjustable suture technique for inferior rectus recession proved to be a safe and effective procedure for primary correction of restrictive hypotropia in TAO, minimizing the risk of late postoperative overcorrections.