

Ptosis correction surgeries for the patients with chronic progressive external Ophthalmoplegia

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Aims: The aim of the study was to determine the effectiveness and possible complications of the ptosis correction surgeries (frontalis sling or levator resection) in patients with chronic progressive external ophthalmoplegia (CPEO)

Method: A prospective interventional case series of 12 eyes (6 patients) consecutive patients with ptosis related to CPEO who received the ptosis correction using levator resection or sling with silicone rods from 2011 to 2015 were included in this study. Medical records were reviewed and the clinical characteristics and postoperative surgical results of these patients were analysed. The main outcome measures were margin reflex distance (MRD), Abnormal head posture (AHP) and corneal status.

Results: Mean age at surgery was 45 ± 15 years. Four patients were operated by levator resection and 2 patient frontalis sling with silicon rod. The mean follow-up period was 34 ± 19 months. Pre-operative measurements for MRD were -0.54 ± 1.03 mm that was increased to 2.4 ± 0.6 ($P=0.002$) post operatively .Mean degree of chin up position decrease from 21.6 to 3.3 degree ($p<0.05$).None of the patients has not had corneal exposure before surgery. . Mild exposure keratopathy was seen in 2 eyes among 12 eyes. Pre-operative measurements for lid lag and lagophthalmos were 1.4 ± 0.90 and 0.13 ± 0.23 mm that were increased to 3 ± 1 and 1.08 ± 1.04 mm post operatively respectively ($p=0.002$ and 0.007).All results were the same between two types of procedures. All patients were undergone prophylaxis for dry eye and corneal exposure by lubricants after surgery.

Conclusion: The levator resection or frontalis sling operation using silicone rod can safely and effectively correct ptosis and decrease chin up position in chronic progressive external ophthalmoplegia patients without serious corneal complications.