

Congenital Double Elevator Palsy

Ramesh Venkatesh*, Hemkala L Trivedi**

Abstract

A 30 yr old male came to our OPD with drooping of the right eye lid since birth. There were no other ophthalmic complaints. On ophthalmic examination, Vision in the right eye was 6/60 and left eye 6/6. fundus examination was normal. On squint evaluation there was chin elevation and head tilt to the left side. There was hypotropia of the right eye. There was restriction of elevation in the upgaze, levelevation and dextroelevation. There was drooping of the right eye which improved with fixing with the right eye.

Introduction

Double elevator palsy is also known as monocular elevation deficiency.

Double elevator palsy suggests that both elevator muscles (the superior rectus and inferior oblique muscles) of one eye are weak, with resultant inability or reduced ability to elevate the eye and a hypotropia in the primary position. The term is generally used to describe diminished ocular elevation present in all fields of gaze.

Case Report

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Discussion

Double elevator palsy is characterized by reduced elevation in all positions of gaze. When the patient fixates with the nonparetic

eye, the paretic eye will become hypotropic and the lid may become ptotic. Fixation with the paretic eye will cause a hypertropia of the nonparetic eye. Provided that the elevator muscle is not involved, the ptosis will also disappear. Patients often present with a chin-up position to maintain binocular vision.

Pathogenesis

Double elevator palsy may be due to innervational problems (supranuclear, nuclear, or infranuclear abnormality); mechanical, restrictive conditions in the orbit; or a combination of factors.

Treatment

If a patient with double elevator palsy is orthophoric in primary position, surgery is not indicated. If there is a vertical deviation in primary position, a forced duction test is necessary. In patients with a positive forced duction test, indicating restriction to elevations, an inferior rectus recession is indicated. When the forced duction test is negative, a Knapp procedure (transposing the medial and lateral recti to the corners of the insertion of the superior rectus) should be performed. As much as 35 prism diopters of hypotropia can be corrected with the Knapp procedure. However, only a modest increase

*Resident; **Associate Professor, Department of Ophthalmology, TNMC and BYL Nair Hospital, Mumbai 400 008.



Fig. 1 : Absence of elevation in upgaze, adduction and abduction in the right eye. Look for grade II inf oblique overaction of the left eye and hypotropia of the left eye.



Fig. 2 : Head tilt to the opp side.

in elevation is usually observed after this procedure. If the hypotropia is less than 30 prism diopters and the forced duction is negative, a graded resection of the superior rectus and recession of the inferior rectus can successfully correct the deviation.

If a patient has ptosis, the lowered-eyelid position may have resulted from the globe's hypotropic position (pseudoptosis), intrinsic levator weakness (true ptosis), or both hypotropic and levator weakness. Therefore, ptosis surgery should be avoided until the hypotropia is corrected. Once the eye alignment is improved, the ptosis can be reevaluated.



Fig. 3 : Fixing with the normal eye.



Fig. 4 : Improvement of ptosis on fixing with the abnormal eye.

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