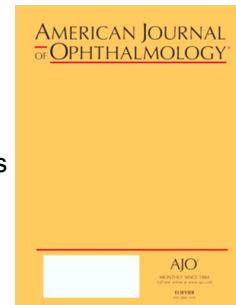


Accepted Manuscript

Anomalous vertical deviations in attempted abduction occur in the majority of patients with esotropic Duane syndrome

Soolienah Rhiu, Suzanne Michalak, Warachaya Phanphruk, David G. Hunter



PII: S0002-9394(18)30439-2

DOI: [10.1016/j.ajo.2018.07.046](https://doi.org/10.1016/j.ajo.2018.07.046)

Reference: AJOPHT 10617

To appear in: *American Journal of Ophthalmology*

Received Date: 2 April 2018

Revised Date: 30 July 2018

Accepted Date: 30 July 2018

Please cite this article as: Rhiu S, Michalak S, Phanphruk W, Hunter DG, Anomalous vertical deviations in attempted abduction occur in the majority of patients with esotropic Duane syndrome, *American Journal of Ophthalmology* (2018), doi: 10.1016/j.ajo.2018.07.046.

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Abstract

Purpose

To describe a phenomenon, depression in attempted abduction, not previously recognized as a feature of Duane syndrome (DS).

Design

Retrospective, observational case series

Methods

- Setting: Institutional practice
- Patient population: Patients diagnosed with esotropic DS at Boston Children's Hospital from 2002-2015. Patients with clinical photographs documenting horizontal gaze were included. Patients with prior strabismus surgery were excluded.
- Observation Procedures: Patients were classified into 3 groups according to their vertical eye position in attempted abduction: midline group, depression group and elevation group. Group assignment was performed by 3 independent ophthalmologists. Baseline characteristics, eye movement, and ocular deviation were compared among the 3 groups.
- Main Outcome measures: Horizontal and vertical deviation on attempted abduction in the DS eye

Results

Depression in attempted abduction was present in 74/113 unilateral patients (66%) and 18/42 gradable eyes (43%) of bilateral patients. Abduction limitation was significantly less severe in the midline group (median: -3.0) than in the depression group (median: -4.0) ($P=0.01$). Vertical deviation in attempted abduction was more severe in the elevation group than in the depression group ($P=0.003$).

Conclusions

Depression of the eye in attempted abduction has not been widely described, yet it is present in the majority of DS patients. It is more likely to occur with more severe abduction limitation. This phenomenon is likely another form of dysinnervation in DS, the result either of anomalous vertical rectus muscle activation or asymmetric lateral rectus muscle innervation during attempted abduction. Awareness of vertical deviation in attempted abduction may facilitate surgical planning in affected patients.

Key words: Abduction limitation, Duane retraction syndrome, Duane syndrome, Depression in abduction, Esotropic Duane syndrome

Download English Version:

<https://daneshyari.com/en/article/10138109>

Download Persian Version:

<https://daneshyari.com/article/10138109>

[Daneshyari.com](https://daneshyari.com)