

**Comparing Frontalis Sling Operation;
Supralash Stab Incision versus the Eyelid
Crease incision for the Treatment of Ptosis**

Thesis

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By

Noha Ahmed Abdul-Khaliq

M.B.B.Ch

Faculty of Medicine, Ain Shams University

Under Supervision of

Prof. Dr. Saad Mohamed Rashad

Professor of Ophthalmology

Faculty of Medicine, Ain Shams University

Dr. Ahmed Mohamed Shafik

Lecturer of Ophthalmology

Faculty of Medicine, Ain Shams University

Dr. Mahmoud Ahmed EL-samkary

Lecturer of Ophthalmology

Faculty of Medicine, Ain Shams University

Ophthalmology Department

Faculty of Medicine - Ain Shams University

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قالوا

سببنا أنك لا تعلم لنا
إلا ما علمتنا إنك أنت
العليم العظيم

صدق الله العظيم

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Dedication

To

MY DEAR PARENTS

*Who gave me too much
And received too little*

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List of Abbreviations

<i>Abb.</i>	<i>Full term</i>
<i>&</i>	<i>and</i>
<i>CFEOM</i>	<i>Congenital Fibrosis of the Extraocular Muscles</i>
<i>CPEO</i>	<i>Chronic Progressive External Ophthalmoplegia</i>
<i>LPS</i>	<i>Levator Palpebrae Superioris</i>
<i>m</i>	<i>months</i>
<i>MD</i>	<i>Myotonic Dystrophy</i>
<i>mm</i>	<i>millimeter</i>
<i>MRD</i>	<i>Margin-Reflex Distance</i>
<i>Op.</i>	<i>Operative</i>
<i>OPMD</i>	<i>Oculopharyngeal Muscular Dystrophy</i>
<i>PTFE</i>	<i>Polytetrafluoroethylene</i>
<i>P-value</i>	<i>Probability Value</i>
<i>Sc</i>	<i>Subcutaneously</i>
<i>SD</i>	<i>Standard Deviation</i>
<i>Vs</i>	<i>Versus</i>
<i>X²</i>	<i>Chi-square</i>

ABSTRACT

This study aims at comparing the functional and cosmetic outcomes of correcting congenital ptosis associated with poor levator function via open versus closed approaches using PTFE (Gore-Tex) as a sling material.

Our results revealed that upper eyelid severe ptosis can be effectively managed utilizing sling operation either supraciliary incision (closed) or trans-crease (open) technique, with no significant difference in ptosis recurrence. However, the closed technique appeared to be superior to the open technique regarding the incidence of good post-op. MRD1, eyelid symmetry, and formation of aesthetic eyelid crease rendering the procedure cosmetically and clinically more promising.

Keywords: Congenital Fibrosis of the Extraocular Muscles - Levator Palpebrae Superioris - Myotonic Dystrophy

INTRODUCTION

Ptosis, an abbreviation for the term blepharoptosis, refers to vertical narrowing of the palpebral fissure secondary to drooping of the upper eyelid to a lower than normal position. The normal adult upper lid margin is 0.5–2 mm below the superior corneal limbus and is highest just nasal to the pupil ⁽¹⁾.

Congenital ptosis can be isolated or associated with disease of one or more of the extraocular muscles and/or other systemic conditions. More severe forms may involve hypoplasia of the levator–palpebrae–superioris muscle or tendon with a minimal or absent eyelid crease. Congenital ptosis is considered a non-progressive condition; however, it is associated with the development of astigmatism, anisometropia, amblyopia, ocular torticollis, and strabismus. These sequelae of ptosis provide a compelling reason to pursue early surgical correction; for prevention of visual loss related to amblyopia. ⁽²⁾

Acquired ptosis can have a myogenic, neurogenic (peripheral or central lesion of the sympathetic nerves, or the oculomotor nerve), aponeurotic, mechanical, or traumatic cause. ⁽¹⁾ The large majorities are aponeurogenic and are associated with disinsertion or dehiscence of the levator aponeurosis from its distal insertion in the eyelid. ⁽³⁾

Frontalis suspension is indicated in patients with blepharoptosis and poor levator muscle function. “Poor”

function is defined as levator function of 4 mm or less.⁽⁴⁾ This surgery connects the eyelid to the brow with a sling material and utilizes the power of the frontalis muscle to elevate the poorly functioning eyelid.⁽⁵⁾

Cosmetic issues that are raised with standard frontalis suspension surgery include scarring in young children, unsatisfactory geometric tenting of the pretarsal and preseptal skin, and obliteration of the eyelid crease. These may be related to the choice of sling material and to the superficial location of the sling in the eyelid, so several surgical designs and materials have been proposed for frontalis suspension for treating ptosis with poor levator muscle function.⁽²⁾