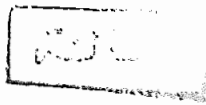


OBLIQUE MUSCLES DYSFUNCTIONS

617173
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Thesis

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M.D Degree in Ophthalmology



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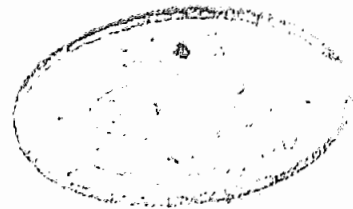
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بِسْمِ اللّٰهِ الرَّحْمٰنِ الرَّحِیْمِ

۞ وَمَا أَوْتِیْتُمْ مِنَ الْعِلْمِ إِلَّا قَلِیْلًا۞

صدق الله العظيم

To My Father

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List Of Abbreviations

- ET : Esotropia
XT : Exotropia
HT : Hypertropia
EOM : Extraocular Muscles
MR : Medial rectus
LR : Lateral rectus
IO : Inferior oblique
SO : Superior oblique
SR : Superior rectus
IR : Inferior rectus
PD : Prism diopter
 Δ D : Prism diopter
H&E : Haematoxylin and Eosin
D.V.D: Dissociated Vertical Deviation
Left : LT
Right : RT
Alternating : ALT
Inferior oblique overaction : IOOA

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INTRODUCTION

INTRODUCTION

Ocular motility is an interesting subject taking deeply into the field of physiology . No other physiological system shows the same richness and elegance as the motor organization of the eyes and its close relation to the sensory function .

Strabismus is one of the most common eye problems and it is an important cause of visual and psychological disability .

Early proper management of strabismus is essential for restoration of proper alignment of the visual axes and the establishment of binocular vision . Non surgical treatment of strabismus includes glasses , prisms , cycloplegics , and orthoptics .

When the previous treatment fail to straighten the eyes adequately , surgery has to be the next step . The basic indications for strabismus surgery fall into two groups : functional and cosmetic . Misalignment of the eyes can be a social and emotional handicap of great importance , and strabismus surgery for cosmetic reasons alone is certainly justified .

Oblique muscle dysfunctions play an important role in misalignment of the visual axes , they lead to diplopia , abnormal

head posture , monocular fixation and lastly abnormal retinal correspondence .

They need patience in diagnosis especially superior oblique palsy , also need special tests like Bielschowsky head tilt test , Maddox double rod test, Maddox double prism test and lastly forced duction test .

Oblique muscle dysfunctions are surgical problems , the idea to do surgery without complications (100% success rate) is still a dream .

Inferior oblique overaction is a common condition . Many operative procedures were described to weaken this muscle , recession , myotomy , myectomy and disinsertion .. None has 100% success rate , but the results are good .

Superior oblique palsy is also a common condition . The affected eye becomes hypertropic.

It is still a matter of discussion to weaken the antagonistic muscle (IO of the same eye) or to strengthen the weak SO muscle

Superior oblique overaction is an uncommon condition . The surgical management is difficult , many procedures were described to weaken this muscle , However , the results are not encouraging .

Following this brief introduction about oblique muscle dysfunctions and their results , we must at least study most of these procedures to select the best one that has higher success rate .

Also to compare between these surgical procedures , the results, complication , and indications .

Finally , the detection of oblique muscle dysfunctions and solving these problems are a break through in modern strabismus surgery .

*REVIEW
OF
LITERATURE*

REVIEW OF LITERATURE

ANATOMY OF THE OBLIQUE MUSCLES

A complete understanding of the anatomy of the oblique muscles is essential to anyone attempting surgical weakening or reinforcement of these muscles .

In man there are three pairs of extraocular muscles (EOM) in each orbit : a pair of horizontal rectus muscles , a pair of vertical rectus muscles , and a pair of oblique muscles (Warwick , 1976)

The two oblique muscles approach the globe from in front , at the medial side of the orbit , and continue obliquely and laterally to insert on the sclera posterior to the equator on the temporal part of the globe. (Duke - Elder , 1961)

The anatomy of the superior oblique " **SO** " is unique . From its origin above and medially to the optic foramen , the **SO** courses anteriorly in a line parallel with the upper part of the medial wall of the orbit , reaching the trochlea at the angle between the superior and medial wall . (Fig.1) (Apt , 1980)

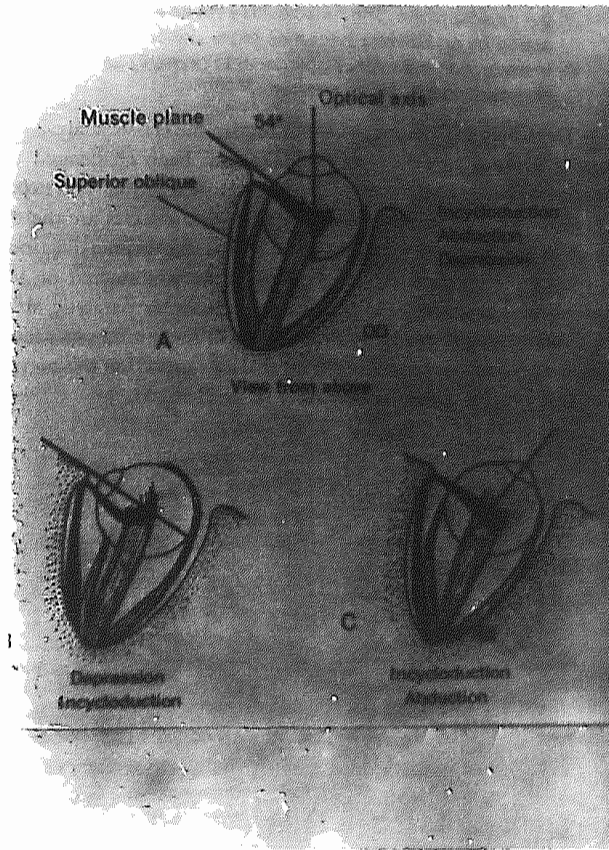


Fig (1) Superior Oblique Muscle { Quoted from Noorden , 1983 }