

# **Comparative Study between Endonasal Endoscopic and Conventional Dacryocystorhinostomy**

*Thesis*

Submitted for Partial Fulfillment of MD Degree in Otorhinolaryngology

*Presented by*

**Mahmoud El- Said Ibrahim Al Sobky**

M.B. B. Ch, Msc in Otorhinolaryngology

*Under supervision of*

**Prof. Dr. Amin Mohamed El-Rashidi**

Professor of Otorhinolaryngology

Al-Azhar University Faculty of Medicine (Cairo)

**Prof. Dr. Mohamed Kamal Abd-El Aziz**

Professor of Otorhinolaryngology

Al-Azhar University Faculty of Medicine (Cairo)

**Prof. Dr. Younis El Said Abdel-Hafez**

Professor of ophthalmology

Al-Azhar University Faculty of Medicine (Damietta)

**Prof. Dr. Abd El-Hamid Mohamed Abd El-Mottaleb**

Professor of Otorhinolaryngology

Al-Azhar University Faculty of Medicine (Damietta)

**Dr. Mohamed Mahmoud Fathy Ramadan**

Lecturer of Otorhinolaryngology

Al-Azhar University Faculty of medicine (Damietta)

**Al-Azhar University**

**Faculty of Medicine**

**(2014)**

:Y~}i^]deA U•Ö.S eUNoe q:º :íPj]U:í^ \€  
:íeA ÖNt\j. x:Á PUN2³4Bj

رسالة

توطئة للحصول علي درجة الدكتوراه في أمراض الأنف والأذن والحنجرة

مقدمة من

**الطبيب: محمود السعيد ابراهيم السبكي**

بكالوريوس الطب والجراحة، ماجستير جراحة الأنف والأذن والحنجرة

تحت إشرافه

**أ.د. أمين محمد الرشيدى**

أستاذ جراحة الأذن والأنف والحنجرة  
كلية طب جامعة الأزهر (القاهرة).

**أ.د. محمد كمال عبدالعزيز**

أستاذ جراحة الأذن والأنف والحنجرة  
كلية طب جامعة الأزهر (القاهرة)

**أ.د. يونس السعيد عبدالحافظ**

أستاذ طب وجراحة العيون  
كلية طب جامعة الأزهر (دمياط)

**أ. د. عبد الحميد محمد عبدالمطلب**

أستاذ ورئيس قسم الأذن والأنف والحنجرة  
كلية طب جامعة الأزهر (دمياط)

**د. محمد محمود فتحي رمضان**

مدرس الأذن والأنف والحنجرة  
كلية طب جامعة الأزهر (دمياط)

جامعة الأزهر

كلية الطب

(2014)



---

## Introduction and aim of the work

---



---

## Review of literature

---



---

## Patients and Methods

---



---

## Results

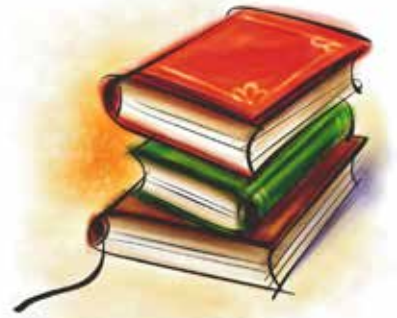
---



---

## Discussion

---



---

## Summary, conclusion and recommendations

---





---

## Arabic summary

---



---

## الملخص العربي

---



---

## References

---

# Acknowledgements

## *First, All Thanks to Allah*

*I would like to express my sincere thanks and profound gratitude to **Prof. Dr. Amin Mohamed El-Rashidi**, Professor of Otorhinolaryngology, Al-Azhar University Faculty of Medicine (Cairo), for his supervision, great help and advice.*

*I would like to express my deepest thanks to **Prof. Dr. Mohamed Kamal Abd-El Aziz**, Professor of Otorhinolaryngology, Al-Azhar University Faculty of Medicine (Cairo), for his help throughout supervising this work.*

*I am grateful to **Prof. Dr. Younis El Said Abdel-Hafez**, Professor of ophthalmology, Al-Azhar University Faculty of Medicine (Damietta), for his paternal supervision and great help.*

*I would like to express my profound gratitude to **Prof. Dr. Abd El-Hamid Mohamed Abd El-Mottaleb**, Professor of Otorhinolaryngology, Al-Azhar University Faculty of Medicine (Damietta). It is a great honor to work under his supervision, and I did benefit from his wide base of knowledge.*

*I would like to express my sincere thanks to **Dr. Mohamed Mahmoud Fathy Ramadan**, Lecturer of Otorhinolaryngology, Al-Azhar University Faculty of medicine (Damietta), who provided me with his advice that helped me to complete this work in his final print in due time.*

*Finally, my deepest thanks to all patients participating in this work, and to every one who helped me in this work.*

## Contents

Subject	Page
Introduction	1
Aim of the work	4
Review of literature	5
Anatomy of nasolacrimal drainage system	5
Anatomy of nasal cavity	15
Physiology of lacrimal drainage	19
Pathology	23
Diagnosis of lacrimal duct obstruction	29
External Dacryocystorhinostomy	39
Endoscopic endonasal dacryocystorhinostomy	58
Patients and methods	65
Results	87
Discussion	95
Summary	105
Conclusion & recommendations	107
References	108
Arabic summary	-

## List of abbreviations

a-SMA	a-smooth muscle actin
CBC	Complete blood count
CDCR	Conjunctivo-dacryocystorhinostomy
CNLO	Chronic nasolacimal obstruction
CT	Computed tomography
DCG	Dacryocystography
DCR	Dacryocystorhinostomy
DS	Deviated septum
DSG	DCG and scintillogram
ECG	Electrocardiogram
EEL	Endoscopic endonasal laser
EES	<i>Endoscopic endonasal surgical</i>
ESS	Endoscopic sinus surgery
ExDCR	External DCR
FDDT	Fluorescence dye disappearance test
FESS	Functional Endoscopic Sinus Surgery
H&E	Hematoxylin and eosin
IgA	Immunoglobulin A
IM	The inferior meatus
IT	Inferior turbinate
KOH	Potassium hydroxide
MRI	Magnetic resonance imaging
NLD	Nasolacimal duct
NLDO	Nasolacimal duct obstruction
NSAIDs	Nonsteroidal anti-inflammatory drugs
PANDO	Primary acquired nasalacimal duct obstruction
PT	Prothrombin time
PTT	Partial thromboplastin time
rER	Rough endoplasmic reticulum
SD	Standard deviation
SG	Secretory granules
SPSS	Statistical package for social science
SR	Sphenoethmoid recess
TFH	Tear film height

## List of tables

n.	Title	Page
	Causes of epiphora in the presence of anatomical patency of the lacrimal drainage apparatus	28
	Indications and contraindications for dacryocystorhinostomy	43
3	Age distribution in studied cases	87
4	Distribution of studied cases according to their gender	88
5	Side of NLD obstruction in studied groups	89
6	Operative time in studied cases	90
7	Intraoperative bleeding in studied cases	91
8	Intraoperative complications in studied cases	92
9	Success rate in studied cases	93
10	Postoperative complications in studied cases	94