



شبكة المعلومات الجامعية

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ





شبكة المعلومات الجامعية



شبكة المعلومات الجامعية

التوثيق الالكتروني والميكرو فيلم

جامعة عين شمس

التوثيق الالكتروني والميكرو فيلم

قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
علي هذه الأفلام قد اعدت دون أية تغيرات



يجب أن

تحفظ هذه الأفلام بعيداً عن الغبار

في درجة حرارة من 15 – 20 مئوية ورطوبة نسبية من 20-40 %

To be kept away from dust in dry cool place of
15 – 25c and relative humidity 20-40 %



شبكة المعلومات الجامعية



بعض الوثائق الأصلية تالفة



شبكة المعلومات الجامعية



بالرسالة صفحات
لم ترد بالأصل

VOICE CHANGES AFTER THYROIDECTOMY WITH INDIVIDUAL LIGATION OF SUPERIOR THYROID VESSELS WITH AND WITHOUT USE OF NERVE STIMULATOR

THESIS

Submitted for the Partial Fulfillment
of M.D. Degree in General Surgery

By

Dr. EL-SAID RIZK EL-SAYED LEALA
M.Sc. (General Surgery)
Ain Shams University



Supervised By :

Professor Dr.
ADEL ABDEL-KADER
Professor of General Surgery
Faculty of Medicine
Ain Shams University



Professor Dr.
MOHAMED BARAKA
Professor and Head of Phoniatic Unit
Faculty of Medicine
Ain Shams University

Professor Dr.
MOEMEN SHAFEK ABO SHLOU
Professor of General Surgery
Faculty of Medicine
Ain Shams University

Professor Dr.
TAREK ISMAEL AHMED
Assistant Professor of General Surgery
Faculty of Medicine
Ain Shams University

**FACULTY OF MEDICINE
AIN SHAMS UNIVERSITY**

B 91111

2001



بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

"قالوا سبحانك لا علم لنا إلا ما علمتنا

إنك أنت العليم الحكيم"

صدق الله العظيم

سورة البقرة الآية ٣٢

Acknowledgment

First of all, thanks to Allah, whose help is the main factor in accomplishing this work.

*I would like to express my sincere thanks and great appreciation to **Prof. Dr. Adel Abd El-Kader**, Prof. of General Surgery, for his great help and support, unforgettable guidance, kind supervision and continuous encouragement. I am truly grateful for him, and whatever have been said, is little to express my respect and thanks for him.*

*I would like to express my sincere thanks to **Prof. Dr. Mohamed Ali Saad Baraka**, Prof. of Phoniatics and Head of the Phoniatic Unit, for giving me the privilege of being under his supervision in this work. His constant encouragement, constructive guidance, remarkable effort, considerable help, and continuous supervision and guidance were of paramount importance for the initiation and progress of this work.*

*I would also like to express my sincere gratitude and deep thanks to **Prof. Dr. Moemen Shafek Abo Shlou**, Prof. of General Surgery, for his valuable suggestions, kind assistance and unforgettable advice.*

*Words stand short when coming to express my deepest thanks and appreciation to **Prof. Dr. Tarek Ismael Ahmed**, Assistant Prof. of General Surgery, his valuable remarks, vast knowledge and continuous, meticulous supervision have been of great value to complete this work. I owe him a lot for his kindness, guidance and fruitful advice.*

*Last but not least, I would like to thank all my colleagues in General Surgery Unit 6 & 7 and in the Unit of Phoniatic, Ain Shams University Specialized Hospital, specially **Dr. Nirvana Gamal** and **Dr. Sabah Hassan**, for their help and support. They saved no time or effort in helping me in this work*

El-Said Rezk

List of Abbreviations

CBC	: Complete blood count.
dB	: Decibel.
EBSLN	: External branch of superior laryngeal nerve.
F₀	: Fundamental frequency.
GE	: Glottal efficiency.
GR	: Glottal resistance.
H T	: Hemithyroidectomy.
HNR	: Harmonic to noise ratio.
Hz	: Hertz.
Jit	: Jitter.
K Hz	: KiloHertz.
m Amp	: milli Ampere.
M.P.T	: Maximum Phonation time.
MAPL	: Minimal associated pathological lesions.
MFR	: Mean flow rate.
N.T.T	: Near total thyroidectomy.
P sub	: Sub glottic pressure.
P supra	: Supra glottic Pressure.
P t_g	: Transglottal pressure.
P.O	: Postoperative
PQ	: Phonatory quotient.
RLN	: Recurrent laryngeal nerve.
RSR	: Retrosternal resection.
S T	: Semitone.
SFF	: Speaking fundamental frequency.
Shim	: Shimmer.
SPL	: Sound Pressure level.
ST	: Subtotal thyroidectomy.
V.C	: Vital capacity.
V.c_(s)	: Vocal cord (s)
V.F_(s)	: Vocal fold (s).

CONTENTS

	Page
* INTRODUCTION.	1
- Historical back ground.	1
* AIM OF THE WORK.	4
* PART (I):	
(I) Surgical Anatomy of Superior Thyroid Vessels and Superior Laryngeal Nerve.	5
(1) The superior laryngeal nerve.	5
(2) The superior thyroid vessels.	12
(3) Aberrant course of the external laryngeal nerve.	12
(II) Voice Disorders Secondary to Thyroidectomy Operation.	17
(1) Non laryngeal causes of voice disorders.	19
(2) Laryngeal causes of voice disorders.	21
(3) Laryngeal findings in superior laryngeal nerve paralysis.	23
(III) Aerodynamic and Acoustic Findings Following Thyroidectomy Operation.	27
(1) Aerodynamic analysis of voice disorders.	27
(2) Acoustic analysis of voice disorders.	34
(3) Laryngeal findings of cricothyroid muscle paralysis.	38
(IV) Functional Identification of (EBSLN) During thyroidectomy (or Use of the Nerve Stimulator).	42
(IV) The Continuing Development of the Technique of Thyroidectomy.	55
* PART (II):	
(I) MATERIALS AND METHODS.	65
(II) RESULTS AND STATISTICAL DATA.	72
(IV) DISCUSSION.	110
(V) SUMMARY AND CONCLUSION.	124
(VI) REFERENCES.	128
ARABIC SUMMARY.	

INTRODUCTION

