بسم الله الرحمن الرحيم

MONA MAGHRABY

شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

MONA MAGHRABY

شبكة المعلومات الجامعية

التوثيق الإلكتروني والميكروفيلم

جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
علي هذه الأقراص المدمجة قد أعدت دون أية تغيرات

يجب أن

تحفظ هذه الأقراص المدمجة بعيدا عن الغبار

MONA MAGHRABY

A comparative study between the use of Resonance Tube Voice Therapy and Smith-Accent Voice Therapy in rehabilitation of hyperfunctional dysphonia

Thesis

Submitted for the Partial Fulfilment of the M.D. degree in Phoniatrics

By

Nashwa Mahmoud Mohamed Othman

Assistant Lecturer of Phoniatrics, ENT Department.
Faculty of Medicine, Ain-Shams University

Supervised by

Prof. Dr. Mohammed Ali Saad Baraka

Professor of Phoniatrics, ENT Department
Faculty of Medicine, Ain-Shams University

Prof. Dr. Nahla Abdel-Aziz Rifaie

Professor and head of Phoniatric Unit, ENT Department
Faculty of Medicine, Ain-Shams University

Dr. Mariam Salah Shadi

Lecturer of Phoniatrics, ENT department
Faculty of Medicine, Ain-Shams University

Faculty of Medicine
Ain-Shams University
Cairo, Egypt
2021

سورة البقرة الآية: ٣٢

Acknowledgment

*First and foremost, I feel always indebted to **ALLAH**, the Most Kind and Most Merciful.*

*I'd like to express my respectful thanks and profound gratitude to **Prof. Dr. Mohammed Ali Saad Baraka,** Professor of Phoniatrics, Faculty of Medicine, Ain-Shams University for his keen guidance, kind supervision, valuable advice and continuous encouragement, which made possible the completion of this work.*

*I am also delighted to express my deepest gratitude and thanks to **Prof. Dr. Nahla Abdel-Aziz Rifaie,** Professor and head of Phoniatric unit, Faculty of Medicine, Ain-Shams University, for her kind care, continuous supervision, valuable instructions, constant help and great assistance throughout this work.*

*I am deeply thankful to **Dr. Mariam Salah Shadi,** Lecturer of Phoniatrics, Faculty of Medicine, Ain-Shams University, for her great help, active participation and guidance.*

No word could describe my acknowledgment, love and grate fullness to my family. Without their support in the critical moments and the never ending encouragement and help, this work could not be completed.

Nashwa Mahmoud Othman

List of Contents

List of Abbreviations

Abb.	Full term
AM	Accent Method
A-P	anterior to posterior
APA	Auditory Perceptual Assessment
BRAT	behavior readjustment technique
CONSORT	Consolidated Standards of Reporting Trials
COVID 19	Coronavirus disease 2019
CQ	Contact quotient
CT	Computerized tomography
CT	Cricothyroid
EGG	Electroglottography
FVF	False vocal fold
IL	injection laryngoplasty
MADR	Maximum area declination rate
MAPLs	Minimal Associated Pathological Lesions
MFDR	Maximum flow declination rate
MLS	Micro-laryngeal surgery
MRI	Magnetic resonance imaging
MTD	Muscle tension dysphonia
OQ	Open quotient
QOL	Quality-of-life
RCT	Randomized controlled trial
RTVT	Resonance Tube voice therapy
SA	Smith-Accent
SOVTE	Semiocludded vocal tract exercises
SPL	Sound pressure level
SPR	singing power ratio
TA	Thyroarytenoid

List of Abbreviations Cont…

Abb.	Full term
TPA	Tube phonation with the distal end in air
UVFP	Unilateral vocal fold paralysis
VDQOL	Voice disorder quality of life
VFE	Vocal function exercises
VHI	Voice Handicap Index
VLP	Vertical laryngeal position
WRT	Water resistance therapy

List of Tables

List of Tables Cont…

List of Tables Cont…

Table No.	Title	Page No.

List of Figures

INTRODUCTION

Voice is the complex, dynamic product of vocal fold vibration that allows us to vocalize (i.e. make sound) and verbalize (i.e. produce language through speech) ***(Justice, 2006).*** The basic task of the voice is to act as a carrier wave of speech communication ***(Vilkman, 2000).*** Control of voice is an essential component in the individual's ability to adjust the social situation, to make good contact and maintain equilibrium in relation to the audience. It serves as the melody of speech and provides expression, feeling, intent and mood of the articulated thoughts ***(Greene and Mathieson, 1989).***

Voice disorders are characterized by abnormalities in pitch, loudness, and/or quality of the voice that can limit the effectiveness of oral communication ***(Ramig and Verdolini, 1998; MacKenzie et al., 2001 and Simberg et al., 2006)*** and cannot fulfill the speaker's social and occupational requirements ***(Aronson, 1985; Stemple, et al., 1995 and Sataloff and Abaza, 2000).*** Therefore, dysphonia is defined as any "deviation in the vocal quality, pitch, loudness, and vocal effort that affect communication or produces a negative impact on the voice-related quality of life". In other words, it is an individual's reduction of the self-perceived physical, emotional, social or economic status due to a voice problem ***(Schwartz et al., 2009).***

Voice disorders can be classified into: *(Kotby et al., 2016)*

I: Organic voice disorders: These are voice disorders where there are detectable morphological changes in the vocal apparatus, usually the vocal folds, e.g:

1) Congenital: congenital laryngeal web, sulcus glottides, larygomalacia, posterior laryngeal cleft and congenital vocal fold paralysis.

2) Traumatic (glottic trauma):
   - Mechanical trauma [blunt trauma with possible fracture of laryngeal cartilages and affection of the joints, sharp trauma "cut throat", surgical complications of phonosurgery, endotracheal intubation].
   - Physical trauma [thermal burns, irradiation].
   - Chemical trauma [caustics, fumes, acid from gastroesophageal reflux].
   - Acute or chronic vocal trauma.
   - Tussive trauma.

3) Inflammatory [Acute/ chronic laryngitis].

4) Neoplastic; Dysplastic

5) Neurological [spasmodic dysphonia].

6) Endocrinopathies [thyroid gland, pituitary gland, suprarenal gland, gonad disturances].

7) Status Post-laryngectomy.