بسم الله الرحمن الرحيم

HOSSAM MAGHRABY

شبكة المعلومات الجامعية

شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

HOSSAM MAGHRABY

شبكة المعلومات الجامعية

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

HOSSAM MAGHRABY

شبكة المعلومات الجامعية

بعض الوثائق الأصلية تالفة

HOSSAM MAGHRABY

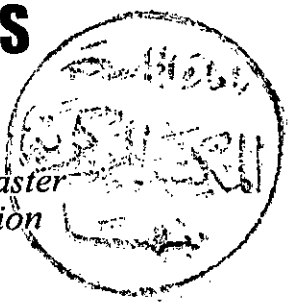
شبكة المعلومات الجامعية

بالرسالة صفحات

لم ترد بالأصل

HOSSAM MAGHRABY

STUDY OF PULMONARY FUNCTIONS AND EXERCISE TOLERANCE CHANGES IN ANKYLOSING SPONDYLITIS



Thesis

Submitted for Partial Fulfillment of The Master Degree in Rheumatology and Rehabilitation

By

AHMED TAHA OMAR ABOU-GHANIMA
M.B.B.Ch.
Benha Faculty of Medicine
Zagazig University

Supervised By

PROF. DR. MOHAMAD ZAKAREIA ERAKI
Prof. And Head of Rheumatology and Rehabilitation Dept.
Benha Faculty of Medicine
Zagazig University

PROF. DR. ABD EL-WAHHAB MOHAMAD SHAMS
Ass. Prof. of Rheumatology and Rehabilitation
Benha Faculty of Medicine
Zagazig University

DR. REFAAT MOUSTAFA EL-TANAWY
Lecturer of Rheumatology and Rehabilitation
Benha Faculty of Medicine
Zagazig University

DR. HOSAM EL-DIN MOUSTAFA HAMZA
Lecturer of Chest Medicine
Benha Faculty of Medicine
Zagazig University

Benha Faculty of Medicine
Zagazig University

2002

بسم الله الرحمن الرحيم

﴿قالوا سبحانك لا علم لنا إلا ما علمتنا إنك أنت العليم الحكيم﴾

صدق الله العظيم

" البقـــرة ٣٢ "

CONTENTS

ACKNOWLEDGMENT

"First and for most I feel indebted to Allah; the most kind and the most merciful"

I would like to express my deepest appreciation to ***Prof. Dr. Mohamad Zakaria Eraki****; Professor and Head of Rheumatology and Rehabilitation Department, Benha Faculty of Medicine, Zagazig University, for his valuable suggestions and continuous encouragement during his supervision and revision of this work. I would like to express my deepest gratitude and sincere thanks to him.*

I am greatly honourd to express my appreciation and gratitude to ***Prof. Dr. Abd El-Wahhab Mohamad Shams****; Assistant Professor of Rheumatology and Rehabilitation, Benha Faculty of Medicine, Zagazig University, for his participation, remarkable help, brilliant ideas and follow up from the start to the end of this work.*

I am particularly greatful to ***Dr. Refaat Moustafa EL- Tanawy****; Lecturer of Rheumatology and Rehabilitation, Benha Faculty of Medicine, Zagazig University, for his close supervision, generous support, his great experience had added much to my knowledge through adding valuable suggestions and remarks.*

I would like to express my special thanks for ***Dr. Hosam El-Din Moustafa Hamza****; Lecturer of Chest Medicine Benha Faculty of Medicine, Zagazig University, for his great effort, Cooperation and his continous advices.*

I would also like to thank all my professors, colleagues and staff of Rheumatology and Rehabilitation Department, Benha Faculty of Medicine, Zagazig University, for their assistance and kind care.

Ahmed Taha

LIST OF ABBREVIATION

AS	: Ankylosing spondylitis
AT	: Anaerobic threshold
BAL	: Bronchoalveolar lavage
BASFI	: Bath ankylosing spordylitis functional index
BMI	: Body mass index
BSA	: Body surface area
$C_{(a-v)}O_2$	: arterio-venous oxygen content difference
$\hat{C}O_2$	: Carbon dioxide
CPET	: Cardiopulmonary exercise testing
CRP	: C reactive protein
CT	: Computed tomography
CTL	: Cytotoxic T lymphocytes
DICO	: Diffusion capacity for carbon monoxide
ECG	: Electrocardiography
ERV	: Expiratory reserve volume
ESR	: Erythrocyte sedimentation rate
FEF	: Forced expiratory flow
FEV_1	: Forced expiratory volume in the first second
FRC	: Functional residual capacity
FVC	: Forced vital capacity
Hb%	: Haemoglobin concentration
HLA	: Human leukocytic antigen
HR	: Heart rate
HRCT	: High resolution computed tomography
HRR	: Heart rate reserve
IC	: Inspiratory capacity

IgA	: Immunoglobulin A
IgG	: Immunoglobulin G
IgM	: Immunoglobulin M
IRV	: Inspiratory reserve volume
L	: Liter
LAT	: Lateral
LPS	: Lipopolysaccharides
LT	: Lactate threshold
MCH	: Major Histocompatibility complex
MET	: Metabolic equivalent
mph	: Mile per hour
MVV	: Maximal voluntary ventilation
NSAID	: Non Steroidal anti-inflammatory drugs
O2	: Oxygen
PA	: Postero-Anterior
PEFR	: Peak expiratory flow rate
PG	: Peptidoglycan
PG- PLs	: Peptidoglycan-polysaccharids
RBCs	: Red blood cells
RPE	: Rating of perceived exertion
RV	: Residual volume
SBP	: Systolic Blood pressure
SD	: Standard deviation
SV	: Stroke volume
TAP	: Transporter associated with antigen processing gene
TCR	: T-Cell receptor
TLC	: Total lung capacity
TNFα	: Tumor necrosis factor alpha

TV	: Tidal volume
VC	: Vital capacity
VCO2	: Carbon dioxide consumption
VE	: Minute ventilation
VO2	: Oxygen consumption
VO2 max	: Maximal oxygen consumption
W	: Watt
WBCs	: White Blood Cells
WR	: Work rate

LIST OF TABLES

LIST OF FIGURES

Introduction