



شبكة المعلومات الجامعية

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ



شبكة المعلومات الجامعية  
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# شبكة المعلومات الجامعية التوثيق الالكتروني والميكروفيلم





شبكة المعلومات الجامعية

# جامعة عين شمس

التوثيق الالكتروني والميكرو فيلم

## قسم

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



## يجب أن

تحفظ هذه الأفلام بعيدا عن الغبار

في درجة حرارة من ١٥-٢٥ مئوية ورطوبة نسبية من ٢٠-٤٠%

To be Kept away from Dust in Dry Cool place of  
15-25- c and relative humidity 20-40%

# بعض الوثائق الأصلية تالفة

# بالرسالة صفحات لم ترد بالاصل



**Weaning failure in artificially ventilated chronic  
obstructive pulmonary disease (COPD) patients**

18720

*Thesis*

*Submitted for partial fulfillment of  
the M.D. degree in chest diseases*

*By*

**Ahmed Abd El-Raheem Kamel**

**M.B.B.CH , Msc. ( chest )**

**Supervised by**

**Prof. Hosny Mahmoud Masoud**

**Professor of Chest Diseases**

**Faculty of Medicine -Cairo University**

**Dr. Ahmed El-Hosainy Ali**

**Assistant Professor of Chest Diseases**

**Faculty of Medicine - Cairo University**

*Faculty of medicine*

*Cairo university*

*2001*

the 1990s, the number of people in the UK who are aged 65 and over has increased by 1.5 million (1990-1999) and is projected to increase by a further 1.5 million by 2010 (Office of National Statistics 2000). The number of people aged 65 and over is projected to increase by 2.5 million by 2020 (Office of National Statistics 2000).

There is a growing awareness of the need to develop strategies to meet the needs of the ageing population. The Department of Health (1999) has identified the need to develop a 'new paradigm' for the care of the elderly. This paradigm is based on the principle of 'active ageing', which is the process of maintaining and enhancing the ability of older people to live independently and to participate in the community. The Department of Health (1999) has identified a number of key areas for action in order to achieve this paradigm, including: (1) promoting the health and well-being of older people; (2) ensuring that older people have access to the services and resources they need; and (3) ensuring that older people are able to participate in the community.

One of the key areas for action is the need to develop strategies to promote the health and well-being of older people. This includes the need to develop strategies to prevent the onset of chronic disease and to manage chronic disease when it does occur. The Department of Health (1999) has identified a number of key areas for action in order to achieve this, including: (1) promoting the health and well-being of older people; (2) ensuring that older people have access to the services and resources they need; and (3) ensuring that older people are able to participate in the community.

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خاطب الله تعالى نبيه (ص) بقوله :-

بسم الله الرحمن الرحيم

وأنزل الله عليّ الكتاب  
والأحكمة وعلمني ما لم  
تكن تعلم وحياني فضاء  
الله عليّ عظيمًا

صدق الله العظيم

سورة النساء الآية (١١٣)



أجتماع لجنة الحكم على الرسالة المقدمة من  
الطبيب / أحمد عبد الرحيم شحاته كامل

توطئة للحصول على درجة الماجستير / الدكتوراة

في الأمراض الصدرية

تحت عنوان : باللغة الانجليزية : Weaning failure in artificially ventilated COPD patients

: باللغة العربية : دراسة أسباب فشل النظام صم التنفس الصناعي عند مرضى الربو الرئوية المزمنة

بناءً على موافقة الجامعة بتاريخ ٢٤ / ١٢ / ٢٠١٠ تم تشكيل لجنة الفحص والمناقشة للرسالة المذكورة أعلاه على النحو التالي :-

(١) د. د. حسن محمد سعيد أستاذ الأمراض الصدرية رئيس اللجنة عن الشرفيين

(٢) د. خالد حسين محمد أستاذ الأمراض الصدرية (طبيب) متعن داخلي

(٣) د. أحمد عبد الرحمن أستاذ الأمراض الصدرية (طبيب) متعن خارجي

بعد فحص الرسالة بواسطة كل عضو منفردا وكتابة تقارير منفردة لكل منهم لمتعدت اللجنة مجتمعة ففى

يوم ١٩ / ١ / ٢٠١١ بتاريخ ١٩ / ١ / ٢٠١١ بقسم مركز المؤتمرات مدج

بكلية الطب - جامعة القاهرة وذلك لمناقشة الطالب فى جلسة علنية فى موضوع الرسالة والنتائج التى توصل

إليها وكذلك الأسس العلمية التى قام عليها البحث .

قرار اللجنة :

قبول الرسالة

توزيعات أعضاء اللجنة :-

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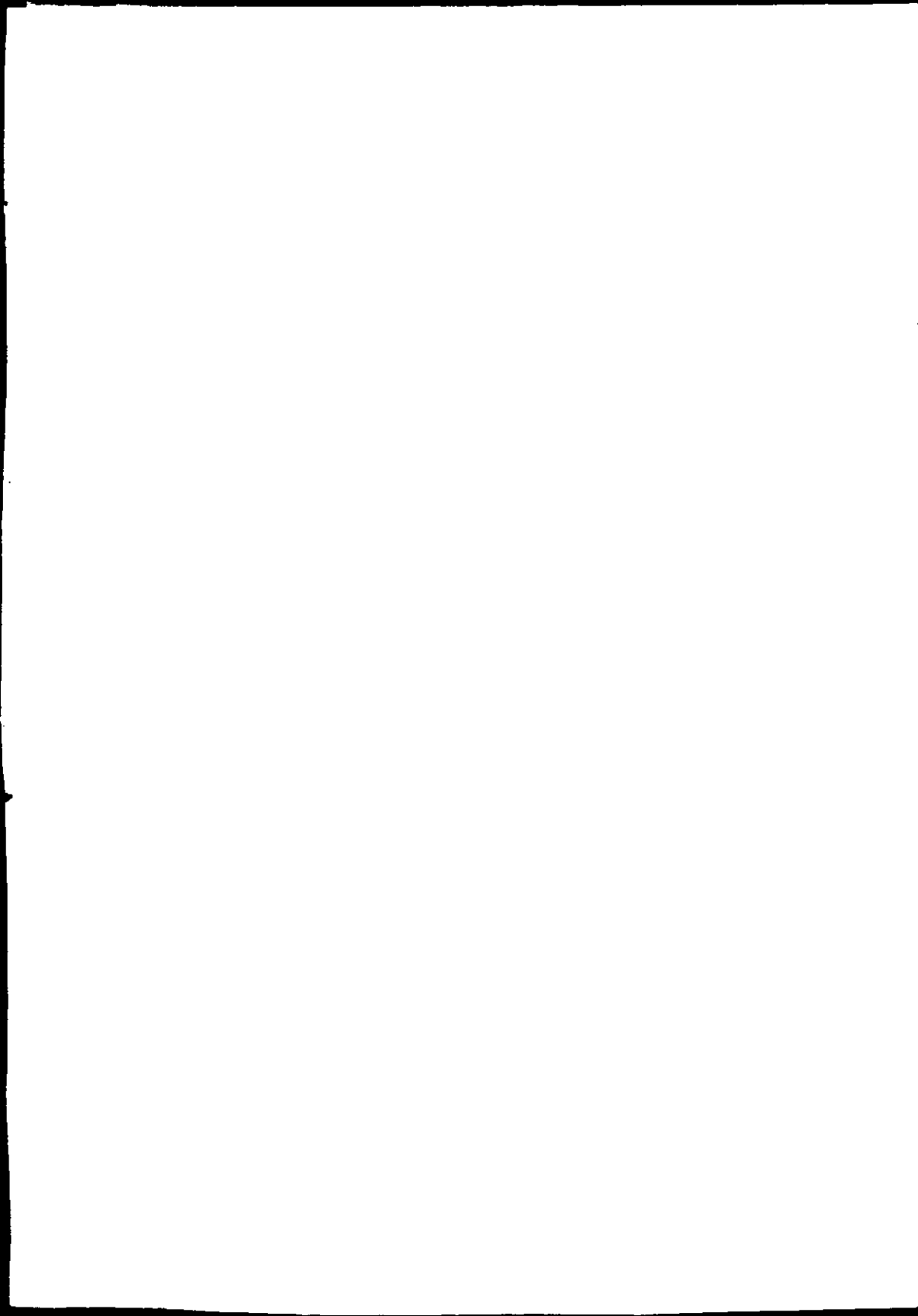
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## *List of abbreviations*

A	= Age .
ACCP	= American college of chest physicians .
A / C	= Assist / control .
ARDS	= Acute respiratory distress syndrome .
ARF	= Acute respiratory failure .
ATT	= A <sub>1</sub> - anti - trypsin .
CaO <sub>2</sub>	= Arterial oxygen content .
CCU	= Coronary care unit .
Cdyn	= Dynamic compliance .
CL	= Lung compliance .
CMV	= Continuous mandatory ventilation .
CNS	= Central nervous system .
COPD	= Chronic obstructive pulmonary disease .
C - PAP	= Continuous positive airway pressure .
CROP	= Compliance , rate , oxygenation , pressure .
Cst	= Static Compliance .
C - T	= Computerized tomography .
CVP	= Central venous pressure .
ERS	= European respiratory society .
FEV <sub>1</sub>	= Forced expiratory volume in the first second .
FIO <sub>2</sub>	= Fraction of oxygen in inspired air .
FRC	= Functional residual capacity .
FVC	= Forced vital capacity .
H	= Height .
HCO <sub>3</sub>	= Bicarbonate .
HRCT	= High resolution computed tomography .
ICU	= Intensive care unit .

I:E	= Inspiratory / Expiratory ratio .
IMV	= Intermittent mandatory ventilation .
IPPV	= Intermittent positive pressure ventilation .
K	= Potassium .
M	= Mean .
MIP	= Maximum inspiratory pressure .
LTMV	= Long term mechanical ventilation .
Na	= Sodium .
PO <sub>4</sub>	= Phosphate .
P(A-a)O <sub>2</sub>	= Alveolar - arterial oxygen gradient .
PaCO <sub>2</sub>	= Partial pressure of arterial carbon dioxide .
PACO <sub>2</sub>	= Partial pressure of Alveolar carbon dioxide .
PAO <sub>2</sub>	= Partial pressure of Alveolar oxygen .
PaO <sub>2</sub>	= Partial pressure of arterial oxygen .
PaO <sub>2</sub> / FIO <sub>2</sub>	= Arterial oxygen / oxygen fraction .
PaO <sub>2</sub> /PAO <sub>2</sub>	= Arterial oxygen / Alveolar oxygen .
PAE	= Pan - acinar emphysema .
PE max	= Maximum expiratory pressure .
PEEP	= Positive end expiratory pressure .
PEEPi	= intrinsic Positive end expiratory pressure .
PFR	= Peak flow rate .
PI max	= Maximum inspiratory pressure .
PIP	= Peak inspiratory pressure .
PO.1	= Mouth occlusion pressure .
PO.1/MIP	= Airway occlusion pressure /maximum inspiratory pressure
.PpL/ Paw	= Fractional transmission of airway pressure to intrapleural space.
PSV	= Pressure support ventilation .
PVO <sub>2</sub>	= Venous oxygen tension .
Q <sub>t</sub>	= Cardiac output .

$Q_s / Q_t$	= Shunt fraction .
R.B.S.	= Random blood sugar .
REE	= Resting energy expenditure .
RQ	= Respiratory Quotient .
R.R	= Respiratory rate .
$R.R / V_T$	= Rapid Shallow breathing index .
SatO <sub>2</sub>	= Oxygen saturation .
SD	= Standard deviation .
SGOT	= Serum glutamic oxalacetic transaminase .
SGPT	= Serum glutamic pyruvic transaminase .
SIMV	= Synchronized intermittent mandatory ventilation .
T.E.E	= Total energy expenditure .
TPN	= Total parenteral nutrition .
VA	= Alveolar ventilation .
VAP	= Ventilator - associated pneumonia .
VC	= Vital capacity .
VCO <sub>2</sub>	= Carbon dioxide production .
$V_D / V_T$	= Dead space / Tidal volume .
VE	= Minute ventilation .
VO <sub>2</sub>	= Oxygen consumption .
$V / Q$	= Ventilation / Perfusion ratio .
W	= Weight .
&	= and .
<	= Less than .
>	= More than .



## *\* Abstract \**

\* This study was conducted on (50) COPD patients who developed weaning failure after being attached to ventilator in respiratory intensive care unit .

\* Also (10) patients who developed successful weaning were taken as (control group) . The aim of the work was to study the causes of weaning failure in mechanically ventilated COPD patients .

\* After making several investigations including ABGs, lung mechanics monitoring and others, our study revealed that the causes of weaning failure were , respiratory muscle weakness , repeated accumulation of secretions , intractable bronchospasm, sudden cardiac arrest , respiratory center depression , hepatorenal failure , ventilator associated pneumonia , cerebrovascular stroke , iatrogenic pneumothorax & pneumomediastinum and lastly psychological disturbance due to ventilator dependence .

## *\* Key Words \**

COPD - Mechanical ventilation - weaning failure .

Acute respiratory failure - Modes of ventilation .