



بسم الله الرحمن الرحيم

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ملاحظات:

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- بعض الصفحات الأصلية تالفة
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*Myocardial Perfusion Imaging and Functional
Assessment for The Efficacy of
Rehabilitation Program Post
Myocardial Infarction*

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Thesis

Submitted in Partial Fulfillment for
Doctoral Degree in Physical Therapy

By

Amany Raafat Mohamad
MSc Physical Therapy

Supervisors

Prof. Dr. Naguib M. Salem

Prof. and Chairman of Physiotherapy

Department for Cardiopulmonary and

Geriatric Disorders

Faculty of Physiotherapy- Cairo University

Prof. Dr. Alia H. Abd El-Fattah

Prof. of Critical Care Medicine

Critical Care Medicine

Faculty of Medicine

Cairo University

Prof. Dr. Awny F. Rahmy

Assistant Prof. of Physiotherapy

Department for Cardiopulmonary

and Geriatric Disorders

Faculty of Physiotherapy-Cairo University

Faculty of Physical Therapy

Cairo University

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بسم الله الرحمن الرحيم

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

صدق الله العظيم
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Amany Raafat Mohamad El-Dash

Myocardial perfusion imaging and functional assessment for the efficacy of rehabilitation program post myocardial infarction

Amany Raafat Mohamad

Supervisors: Prof. Dr. Naguib M. Salem, Prof. Dr. Alia H. Abd El-Fattah, Prof. Dr. Awny F. Rahmy. Cairo University – Faculty of Physical Therapy – Physiotherapy Department for Cardiopulmonary and Geriatric Disorders

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The effect of cardiac rehabilitation on patients in the recovery stage within 2 weeks after the first attack of acute myocardial infarction were assessed in this study. A total of 16 pts with mean age 52 yrs. Admitted to the Critical Care Department, Cairo University. All pts subjected to clinical, laboratory investigations and myocardial perfusion imaging prior and post the intervention of cardiac rehabilitation that included gradual treadmill exercises for 10 weeks with frequency 3 sessions a week. The results of the study revealed the ability of the cardiac rehabilitation to improve the myocardial perfusion and exercise tolerance in our patients even in pts with anterior MI over the age of 50 years.

Keywords: Acute myocardial infarction – myocardial perfusion – cardiac rehabilitation.

Abstract

Cardiac rehabilitation is currently recommended for patients post myocardial infarction; however, the effect of regular exercise training on the patients in the recovery stage within 2 weeks after the first attack of acute myocardial infarction was assessed in this study.

A total of 16 pts (15 male and 1 female) with mean age (52.1 ± 8) yrs admitted to the Critical Care Department, Cairo University with first attack of uncomplicated AMI were studied. All patients subjected to clinical, laboratory investigations and myocardial perfusion imaging prior and post the intervention of cardiac rehabilitation program that included graduated treadmill exercise training for 10 weeks with frequency 3 sessions a week. The results of this study revealed the ability of the cardiac rehabilitation program to improve the myocardial perfusion reflected as significant decrease in mean stress score in post study (15.2 ± 8.0 vs 20.6 ± 8.8), rest score (10.5 ± 6.9 vs 12.4 ± 6.5), and difference score (4.7 ± 3.2 vs 8.2 ± 4.2) compared with pre study value, LVEF as significant higher value post study (55.5 ± 11.4 vs 50.6 ± 11.7) compared to pre study value, and exercise tolerance in our patients even in pts with anterior MI over the age of 50 years as there was significant higher value of exercise time post study (9.5 ± 2.2 vs 7.7 ± 2.3) and lower value of resting HR (79.7 ± 11.5 vs 86.9 ± 11.3) compared with the pre study value.

Conclusion : It was confirmed that cardiac rehabilitation in patients post AMI is effective in adjunct to medical treatment for those patients without any further adverse reaction or myocardial damage.

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List of Abbreviation

AMI:	Acute myocardial infarction
BRS:	Baro reflex sensitivity
CAD:	Coronary artery disease
CRP:	C-reactive protein
DBP:	Diastolic blood pressure
DM:	Diabetes mellitus
EDV:	End diastolic volume
EF:	Ejection fraction
ESV:	End systolic volume
FH:	Family history
HDL:	High density lipoprotein
HL:	Hyperlipidemia
HR:	Heart rate
HRV:	Heart rate variability
HTN:	Hypertension
LDL:	Low density lipoprotein
LVH:	Left ventricular hypertrophy
MI:	Myocardial infarction
MPI:	Myocardial perfusion imaging
NO:	Nitric oxide
SBP:	Systolic blood pressure
SPECT:	Single photon emission computed tomography