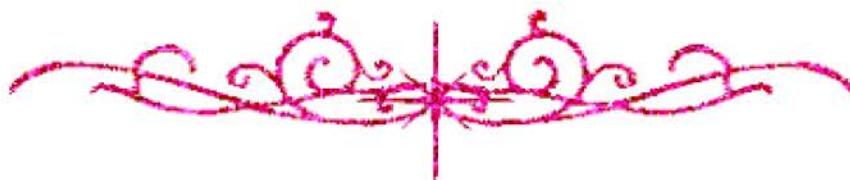




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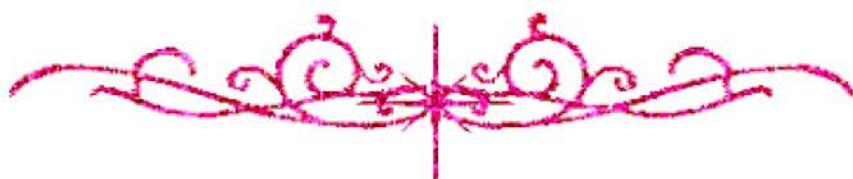
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# شبكة المعلومات الجامعية التوثيق الإلكتروني والميكروفيلم





شبكة المعلومات الجامعية

حسام مغربى

# جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

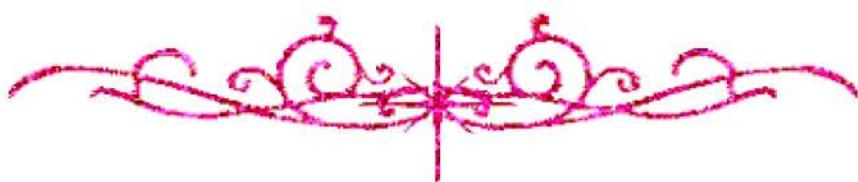
قسم

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



يجب أن

تحفظ هذه الأقراص المدمجة بعيداً عن الغبار





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بعض الوثائق

الأصلية تالفة



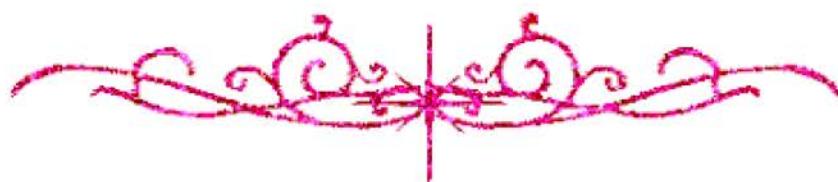


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بالرسالة صفحات  
لم ترد بالاصل



BIRIAA



# **Q WAVE REGRESSION AS A PREDICTOR FOR MYOCARDIAL VIABILITY**

## **THESIS**

**submitted in partial fulfillment of M.D. in Cardiology  
by**

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# TABLE OF CONTENTS

<b>Table of Contents .....</b>	<b>2</b>
<b>List Of Abbreviations .....</b>	<b>4</b>
<b>Introduction.....</b>	<b>6</b>
<b>Aim of the work.....</b>	<b>7</b>
<b>Review of Literature .....</b>	<b>8</b>
<b>Q-waves .....</b>	<b>8</b>
Non-infarction abnormal Q-wave.....	9
<b>Q-wave regression.....</b>	<b>16</b>
Definition of Q-wave regression: .....	16
Incidence of Q-wave regression: .....	16
Timing of Q-wave regression:.....	17
Mechanism of Q-wave regression: .....	17
Predictors of Q-wave regression:.....	19
Significance of Q-wave regression:.....	20
<b>Myocardial viability.....</b>	<b>26</b>
Definition of viable myocardium:.....	26
Prevalence of myocardial viability: .....	26
<b>Hibernating myocardium.....</b>	<b>27</b>
Definition of hibernating myocardium:.....	27
Pathophysiologic mechanisms of hibernation: .....	31
Treatment of hibernating myocardium.....	32
Clinical importance of hibernation: .....	33
<b>Myocardial stunning.....</b>	<b>35</b>
Mechanisms of myocardial stunning:.....	35
Clinical implication of myocardial stunning: .....	38
Treatment of myocardial stunning: .....	39
<b>Assessment of myocardial viability .....</b>	<b>41</b>
Indications for assessment of viability: .....	41
Methods for assessment of myocardial viability.....	41
Selection of a test to identify viable myocardium: .....	58
<b>Myocardial perfusion imaging .....</b>	<b>60</b>
Thallium-201 .....	60
Radionuclide angiography .....	73
<b>Patients and Methods .....</b>	<b>85</b>
Exercise Tl-201 scintigraphy:.....	86
Statistical analysis: .....	93
<b>Results.....</b>	<b>94</b>
Basic characteristics of total population )Table 3&5).....	94
Exercise data in total population) Table 3&6).....	95
Myocardial perfusion data in the total population (Table 4&7):.....	95
Functional data in total population )Table 4&8 ):.....	96
Follow-up data in total population )Table 9&10) : .....	97
Q-wave regression data in total population )Table 11&12 ):.....	98

<b>Discussion .....</b>	<b>134</b>
Clinical data: .....	134
Exercise ECG data.....	137
Myocardial perfusion scintigraphic data.....	137
Functional data.....	139
<b>Summary and Conclusion .....</b>	<b>146</b>
<b>References.....</b>	<b>150</b>
<b>الملاحق العربي.....</b>	<b>202</b>

## LIST OF ABBREVIATIONS

- <sup>11</sup>C-acetate= carbon 11-acetate  
<sup>13</sup>NH<sub>3</sub>= nitrogen 13 amonia  
<sup>201</sup>Tl= thallium-201  
<sup>82</sup>Rb = Rubidium-82  
<sup>99m</sup>Tc = technetium 99-m  
ACE= Angiotensin converting enzyme  
AMI= acute myocardial infarction  
ARD/BRD= ratio between alfa and beta adrenoreceptors  
ASV= average systolic peak velocity  
ATP= adenosine triphosphate  
BMIPP= Beta-methyl-iodophenyl-pentadecanoic acid  
Ca <sup>2+</sup>= calcium  
CABG= coronary artery bypass graft  
CAD= coronary artery disease  
cAMP= cyclic adenosine monophosphate  
CD= cluster designation  
DBP= diastolic blood pressure  
DDT= deceleration time of diastolic flow velocity  
DTI= Doppler tissue imaging  
EDWT= end-diastolic wall thickness  
EF= ejection fraction  
ERNA= Equilibrium radionuclide angiography  
FDG= fluorodeoxy glucose  
FGF= fibroblast growth factor  
FH= family history  
FPRNA= first pass radionuclide angiography  
GD-DTPA= gadolinium diethelene triamine pentaacetic acid  
GHRP-2= growth hormone secretagogue  
GMP= guanine monophosphate  
H <sub>2</sub>O<sub>2</sub>= hydrogen peroxide  
IPPA= <sup>123</sup>I- iodophenyl pentadecanoic acid  
KATP= adenosine triphosphate dependent potassium channels  
LAO= left anterior oplique  
LL= left lateral  
LPO= left posterior oplique  
LV= left ventricle  
LVED= left ventricular end diastole  
LVEF= left ventricular ejection fraction  
LVES= left ventricular end systole  
MBF= myocardial blood flow  
MCE= myocardial contrast echocardiography  
MI= myocardial infarction  
MIBI= methoxyisobutyl isonitrile  
MPI= myocardial perfusion imaging  
MRI= magnetic resonance imaging

mRNA= messenger ribonucleic acid  
MRS= magnetic resonance spectroscopy  
MUGA= multigated acquisition  
O<sup>-2</sup>= superoxid anion  
OH= hydroxyl radical  
PET= positron emission tomography  
PTCA= percutaneous transluminal coronary angiography  
RAO= right anterior oblique  
rhGH = recombinant human growth hormone  
RV= right ventricle  
RVEF= right ventricular ejection fraction  
RWMA= regional wall motion abnormality  
SBP= systolic blood pressure  
SPECT= single photon emission computed tomography  
TGF= tumor growth factor

# ***INTRODUCTION***

***And***

***Aim of The Work***

## INTRODUCTION

Since the advent of fibrinolytic therapy, the mortality of myocardial infarction was shown to decrease substantially. Left ventricular (LV) dysfunction is the single most important predictor of mortality after myocardial infarction. The prognosis of patient with severe LV dysfunction is poor, but may be improved by revascularization if the impaired myocardium is viable. Cardiac transplantation is limited by the availability of grafts and medical treatment is plagued by limited efficacy. There is strong evidence of an increased event rate (myocardial infarction, death, unstable angina) in one fourth of patients with viable myocardium who are treated medically compared with only one sixteenth after revascularization (**Al-Khoury and Narula, 2000**).

Documentation of the presence of viable myocardium best allows identification of patients who are most likely to benefit from coronary revascularization as evidenced by postoperative improvement in LV systolic function, exercise capacity or survival. On the other hand, identifying patients who would not demonstrate significant improvement is equally important in view of the high morbidity and mortality rates associated with surgery in such patients (**Costanzo et al., 1995**).

The most frequently used diagnostic method for detection of viable myocardium are echocardiographic or scintigraphic techniques. Unfortunately, these techniques are either operator sensitive or expensive. Selection of patients for further investigation by simple, objective and economic means would be of considerable value. One possible candidate is the surface ECG (**Mobilia et al., 2000**).

The presence of Q-waves does not always imply irreversible transmural necrosis. Q-waves may be transient and represent intense but still reversible myocardial damage, reflecting a state of stunned or even hibernating myocardium (**Heusch and Schulz, 1997, and Wijns et al., 1998**).

The precise significance of Q-wave regression in the course of myocardial infarction is still not clear.

## AIM OF THE WORK

In this study we investigated the use of the surface ECG as a predictor of viability by evaluating the relation between Q-wave regression after Q-wave myocardial infarction and myocardial viability using stress-reinjection thallium scintigraphy.

Also, we aimed in this work to study the impact of Q-wave regression on left ventricular function assessed by resting gated equilibrium radionuclide angiocardiography (ERNA).

***Review***

***of***

***Literature***