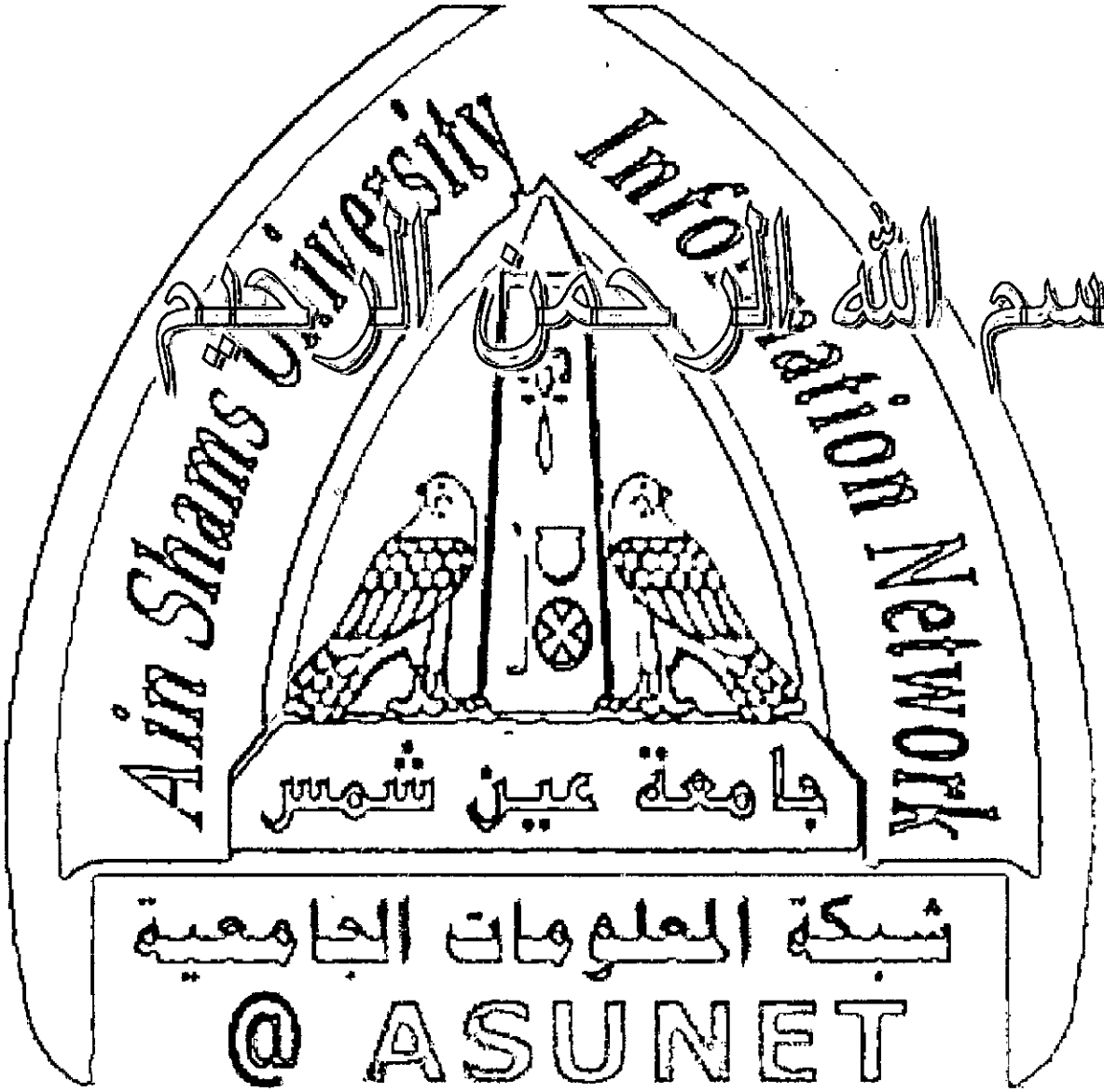

شبكة المعلومات الجامعية

بسم الله الرحمن الرحيم




# شبكة المعلومات الجامعية

# التوثيق الالكتروني والميكروفيلم

شبكة المعلومات الجامعية

# جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

## 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%

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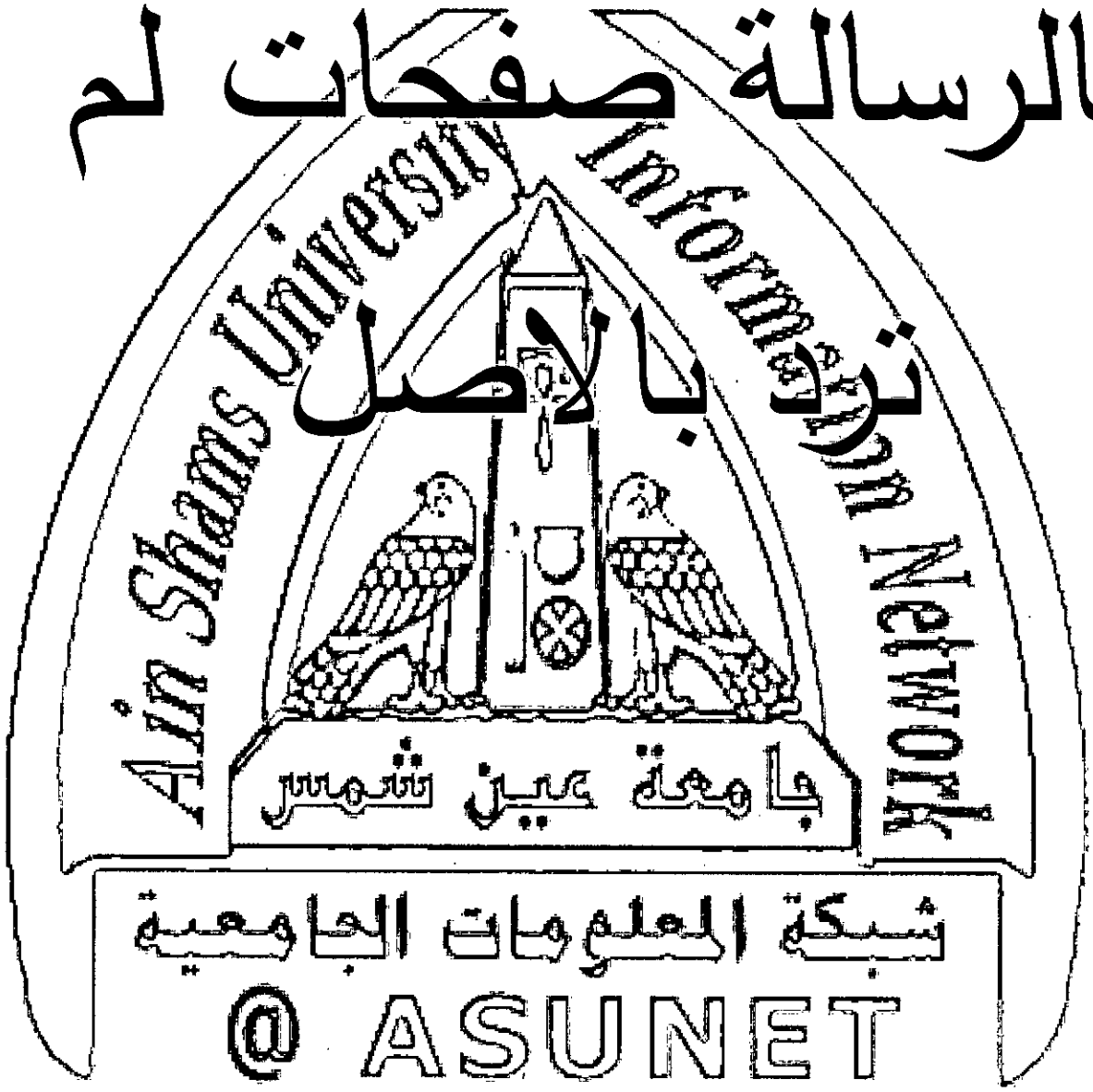


# بالرسالة صفحات لم ترد بالأصل

# RELATIONSHIP BETWEEN TERMINAL QRS DISTORTION ON THE ADMISSION ECG AND THE LEFT VENTRICULAR WALL MOTION IN ANTERIOR WALL ACUTE MYOCARDIAL INFARCTION

**Thesis**

Submitted for Partial Fulfillment of the Master Degree of Cardiology


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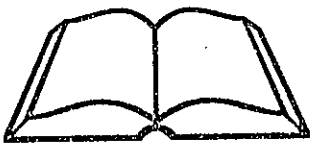
FACULTY OF MEDICINE

BENHA UNIVERSITY

2006



بسم الله الرحمن الرحيم

قالوا سبحانك لا علم لنا إلا ما علمتنا إنك

أنت العليم الحكيم

صدق الله العظيم

## ***Acknowledgement***

Above all thanks to GOD

I would like to express a generous gratitude to Prof.Dr. Osama Sanad Arafa, Professor of Cardiology, Faculty of Medicine, Benha University, who gave me his time, knowledge and experience to prepare this work.

Special acknowledgement is also extended to Prof.Dr. Elsayed Abdel Khalek Mahmoud, Assistant Professor of Cardiology, Faculty of Medicine, Benha University, for his excellent instructions, continued support and active participation.

I would like also to thank Dr. Ali Ibrahim Attia, Lecturer of Cardiology, Faculty of Medicine, Benha University, for his great help, continous encouragement, support and advice.

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# LIST OF ABBREVIATION

| | |
|---|---|
| AL | Left Amplatz . |
| AMI | Acute Myocardial Infarction . |
| amp | amplitude. |
| AV | Atrioventricular valves . |
| BARI | Bypass Angioplasty Revascularization Investigation . |
| B.Pr | Blood Pressure . |
| CABG | Coronary Artery Bypass Graft . |
| CAD | Coronary Artery Disease . |
| CASS | Coronary Artery surgery study . |
| CHD | Coronary Heart Disease . |
| CHF | Congestive Heart Failure . |
| CK-MB | Creatine Phosphokinase MB fraction . |
| CRP | C-Reactive Protein . |
| CVD | Cardiovascular Disease . |
| 2D | Two- Dimensional . |
| Diast. | Diastole . |
| DM | Diabetes Mellitus . |
| dur | duration . |
| ECG | Electrocardiography . |
| EF | Ejection Fraction . |
| fr | French size . |
| HR | Heart Rate . |
| HTN | Hypertension . |
| JL | Left Judkins . |
| LAD | Left Anterior Descending . |
| LAO | Left Anterior Oblique . |
| LBBB | Left Bundle Branch Block . |
| LDL | Low Density lipoprotein . |
| L V | Left Ventricle. |
| LVEF | Left Ventricle Ejection Fraction. |
| MI | Myocardial Infarction. |
| NO | Number |

# LIST OF ABBREVIATION (cont.)

| | |
|---|---|
| PCI ------- | Percutaneous Coronary Intervension. |
| PTCA ------- | Percutaneous Transluminal Coronary Angioplasty. |
| RAO ------- | Right Anterior Oblique. |
| RV -------- | Rightg Ventricle. |
| RWM -------- | Regional Wall Motion. |
| SEI -------- | Subendocardial Ischemia. |
| Syst -------- | Systole . |
| TEE -------- | Transesophageal Echocardiography . |
| TIMI -------- | Thrombolysis In Myocardial Infarction . |
| TMI -------- | Transmural Ischemia . |
| TTE -------- | Transthoracic Echocardiography . |

# INTRODUCTION

# INTRODUCTION

The prognosis of patient with ischemic heart disease has improved markedly with the introduction of reperfusion therapy and with aggressive efforts to modify risk factors.Consequently, the rate of cardiovascular events after myocardial infarction has decreased to approximately 5% over a period of 2 years as compared with 20% to 30% reported in the prethrombolytic era *(Gersh et al;2002)*.

Studies have demonstrated that the identification of subgroups of patients at high risk and the search for new risk markers can significantly improve survival of patients who are at high risk despite reperfusion therapy *(Gersh et al;2002)*.

Many studies have tried to clarify the value of the admission ECG for predicting infarct size or prognosis in patients with anterior wall acute myocardial infarction (AMI) by the magnitude of ST segment elevation , such as the sum of ST segment elevations , or the number of leads with ST segment elevation *(Arnold and Simoons;1997)*.

In contrast, the QRS morphology on the admission ECG in patients with AMI has been paid lettle attention, but was recently investigated by *Birnbaum et al;1999* who found that distortion of the terminal portion of the QRS complex is independently associated with increased in-hospital mortality in these patients *(Tamura et al;2001)*.

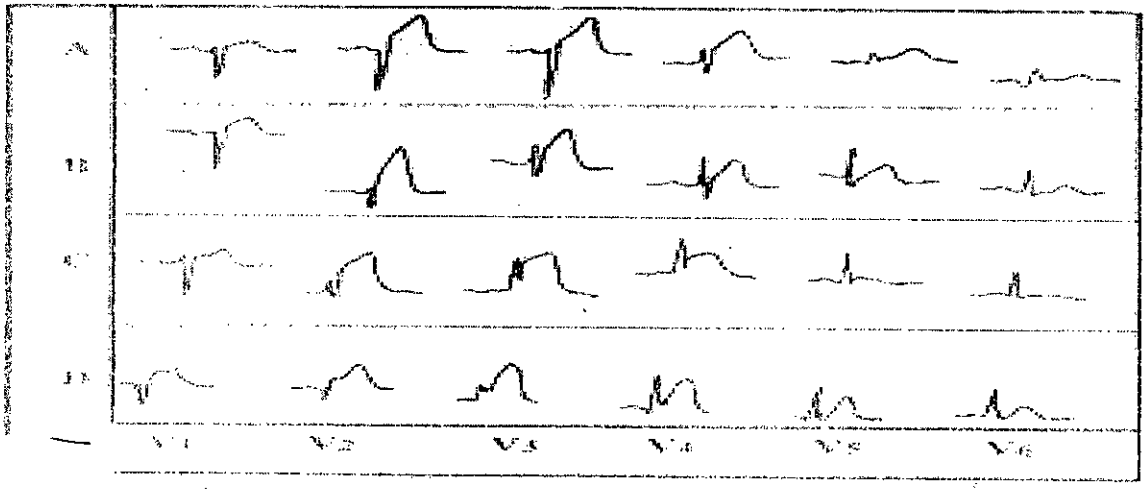
## ***Mechanism of Terminal QRS Distortion*** :

The 5 major insertion sites of the proximal Purkinje conduction system into the ventricular subendocardial myocardium are at the distal extremity of the coronary circulation and are therefore affected by ischemia . The electrical excitation of both ventricles from these insertion sites is a combination of rapid spread throughout the endocardial peripheral Purkinje network and the slower spread from the endocardium through the mural myocardium .

Severe regional ischemia with electrical conduction delay through any of the endocardial sites of Parkinje insertion would affect initial and terminal QRS morphology .

In particular , right septal conduction delay , combined right and left septal conduction delay , and anterosuperior , right septal and left septal conduction delay would be expected to produce a decrease in the amplitude of the S wave ***(Selvester ; 1988)*** .

Thus , terminal QRS distortion is thought to reflect the conduction delay caused by severe regional ischemia ***( Tamura et al;2001 )*** .



Precordial Leads with ST segment elevated MI.
Panel A & B without terminal QRS distortion.