

**Nurses' Performance Regarding Pain
Management of Patients with Acute
Myocardial Infarction**

Thesis

*Submitted for Partial Fulfillment of Master
Degree in Critical Care Nursing*

By

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وَقُلْ اَعْمَلُوا فَسَيَرَى اللَّهُ
عَمَلَكُمْ وَرَسُولُهُ وَالْمُؤْمِنُونَ

عَلَيْهِ
الصلوة
والسلام



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To soul of my father
Esraa Hamdy Hassan Ali



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List of Abbreviations

a PTT	: Activated Partial Thromboplastin
ACE	: Angiotensin Converting Enzyme
AMI	: Acute Myocardial Infarction
AV	: Atrioventricular
BP	: Blood Pressure
CABG	: Coronary Artery Bypasses Grafting
CAD	: Coronary Artery Disease
CCC	: Concordance Correlation Coefficient
CCU	: Coronary Care Unit
CHF	: Congestive Herat Failure
CK	: Creatine Kinas
CO	: Cardiac Output
CVD	: Cardiovascular Disease
DM	: Diabetes Mellitus
ECG	: Electrocardiography
Echo	: Echocardiography
HDL	: High Density Lipoprotein
HR	: Heart Rate
HTN	: Hypertension
IV	: Intravenous
LAD	: Left Anterior Descending Artery
LBBB	: Left Bundle Branch Block

List of Abbreviations (Cont.)

LCX	: Left Circumflex Artery
LDL	: Low Density Lipoprotein
LMCA	: Left Main Coronary Artery
LMWH	: Low Molecular Weight Heparin
MI	: Myocardial Infarction
MR	: Mitral Regurgitation
NSTEMI	: Non ST Segment Elevation Myocardial Infarction
O₂	: Oxygen
PCI	: Percutaneous Coronary Intervention
PDA	: Posterior Descending Artery
ROM	: Range of Motion
SA	: Sinoatrial
SD	: Standard Deviation
SpO₂	: Peripheral capillary Oxygen Saturation
SPSS	: Statistical Package for Social Sciences
STEMI	: ST Segment Elevation Myocardial Infarction
UFH	: Unfractionated Heparin
V-Fib/VF	: Ventricular Fibrillation
V-tack/VT	: Ventricular Tachycardia

Abstract

An acute myocardial infarction (AMI) is a leading cause of morbidity and mortality. The most common symptom of AMI is sudden onset of severe chest pain. The nurse should determine the appropriate pharmacological and non-pharmacological pain relief methods. **The aims** of the study 1- assessment of the nurses' level of performance regarding pain management of patients with acute myocardial infarction 2-identifying the factors affecting the nurses' performance regarding pain management of patients with acute myocardial infarction. **Study design:** a descriptive study was used to achieve the aim of this study. **Subject:** A purposive subject of (55) registered nurses caring for patients with AMI. **Tools:** two tools were used for data collection; self-administered questionnaire sheet and the nurses' practice observational checklist. **Results and conclusion** the results of this study showed that, (75%) of the studied nurses were having unsatisfactory total level of knowledge regarding pain management of patients with AMI, while all of them had got unsatisfactory level of practice and negative attitude. Many factors affecting negatively on their performance; job satisfaction related factors, work organization related factors and professional support related factors (96.4%, 87.3% &78.2%) respectively, while communication related factors affecting positively on their performance (93.9%). **Recommendation** In-service training program must be developed based on need assessment for nurses in relation to pain assessment and management associated with AMI and evaluating the effect of its implementation on their performance and patients' outcome.

Keywords: AMI, pain, knowledge, practice, attitude

Introduction

An AMI remains a leading cause of morbidity and mortality worldwide. It is defines as the necrosis (death) of a portion of the heart muscle due to prolonged ischemia. The AMI can occur as a result of increased myocardial metabolic demand, decreased delivery of oxygen (O₂) and nutrients to the myocardium via the coronary circulation, or both. Coronary artery stenosis is the main cause of AMI that caused by atherosclerosis or coronary vasospasm (***De Souza et al., 2015***).

Risk factors for an AMI classified into non-modifiable and modifiable. Non modifiable includes age, sex, race and family history while modifiable risk factors includes cigarette smoking, alcohol intake, physical inactivity, obesity, hypertension (HTN), diabetes mellitus (DM) and high blood cholesterol. The initial evaluation of a patient with a suspected AMI should include evaluation of chest pain, physical examination, Electrocardiography (ECG), cardiac marker and Echocardiography (Echo) (***Bagai, Dangas, Stone & Granger, 2014***).

The most common symptom of AMI is sudden onset of severe chest pain. It is described as a heavy, squeezing, tightness, crushing, stabbing or burning pain. It is usually

retrosternal and radiates to the left arm, back, epigastrium, jaw and neck. It lasts more than 30 minutes and unrelieved by rest or nitroglycerin. Other symptoms may include as anxiety, cyanosis, diaphoresis, dyspnea, nausea, vomiting, palpitation, sense of impending doom and weakness (**Matthys, De Backer, De Backer & Stichele, 2014**).

Chest pain is one of the major symptoms in ischemic heart disease. It accounts for up to 50% of all acute medical admissions to a coronary care unit (CCU) with a suspicion of AMI. The intensity and duration of chest pain is thought in part to reflect the extent of the ischemic damage. The early and correct diagnosis of cardiac chest pain and initiation of appropriate therapies have been shown to significantly reduce both morbidity and mortality (**Youssef, Ali & Samy, 2014**).

The nurse should determine the appropriate pharmacological and non-pharmacological pain relief methods. Non-pharmacological methods are used to increase the individual control feeling, reduce stress and anxiety, reduce the pain behavior and reduce the needed dosage of analgesic drugs thus decreasing the side effects of the treatment. They include cognitive-behavioral strategies as the use of a mental picture, distraction techniques and relaxation exercises techniques (**Ali, Ibrahim & Mohamed, 2013**).