بسم الله الرحمن الرحيم

MONA MAGHRABY

شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

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جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

قسم

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MONA MAGHRABY

Knowledge and Practice of Nurses Regarding Safety of Patients with Temporary Cardiac Pacemakers in the Critical Care Units

Thesis

Submitted for Partial Fulfillment of the Master Degree in Nursing Science (Medical-Surgical Nursing (Critical Care nursing))

Supervised By

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List of Abbreviations

Abb.	Full term
ACLS	Advanced Cardiac Life Support
AHA	American Heart Association
AMI	Acute Myocardial Infarction
AV block	Atrioventricular Block
AV	Atrioventricular
AVB	Atrioventricular Block
BP	Blood Pressure
BPEG	British Pacing and Electrophysiology
CCU	Critical Care Units
CHB	Complete Heart Block
ECG	Electrocardiographic
ICHD	Inter –Society Commission for Heart Disease
ICU	Intensive Care Unit
IV	Intravenous access
LBBB	Left bundle Branch Block
MCQ	Multiple Choices Questions
MI	Myocardial Infarction
mV	Millivolts
NASPE	North American Society of Pacing and Electrophysiology
RBBB	Right Bundle Branch Block
SA	Sinoatrial
TVTP	Temporary Cardiac Pacemaker
WHO	World Health Organization

INTRODUCTION

Cardiac pacing by an artificial pacemaker provides an electrical stimulation of the heart when its own natural pacemaker fails to provide synchronized atrial and ventricular contractions at rates and intervals sufficient for a patient's survival. Such antibradycardial pacing provides relief from symptoms and even life support for hundreds of thousands of patients. Cardiac pacing may also provide electrical overdrive stimulation to suppress or convert tachyarrhythmias, again supplying relief from symptoms and preventing or terminating arrhythmias that could lead to sudden cardiac death ***(Khairkhahan, Klenk& Eby, 2019).***

Temporary cardiac pacing is indicated in any situation in which bradycardia results in symptoms of decreased cerebral perfusion or hemodynamic compromise and doesn't respond to drug therapy. Signs and symptoms of hemodynamic instability are hypotension, change in mental status, angina or pulmonary edema ***(Hollinger & Mebazaa, 2019).***

Temporary pacing is also used to terminate some rapid tachycardias by briefly pacing the heart at a faster rate than the existing rate. When pacing is stopped, the sinus node may resume control of the rhythm if the tachycardia has been terminated. This type of pacing is termed overdrive pacing to distinguish it from pacing for bradycardic conditions ***(Hollinger & Mebazaa, 2019).***

Trans-venous temporary cardiac pacemaker (TVTP) implantation is a life-saving procedure in patients with severely symptomatic bradycardia and can be used as a bridge to permanent pacemaker implantation or resolution of a transient or reversible cause for the bradycardia. Nevertheless, TVTP implantation can be associated with potentially fatal complications such as cardiac perforation and tamponade, puncture site bleeding, pneumothorax, as well as lead malfunction and a need for repositioning ***(El Nasasra et al., 2018)***

Fluoroscopic guidance which is commonly used to guide TVTP implantation may improve procedural safety and reduce complication rate; yet, the delay in activation of the fluoroscopy room team and the need for in-hospital transfer may expose an already unstable patient to unnecessary life-threatening risks ***(El Nasasra et al., 2018).***

The rapid rise in technology has provided lifesaving advances in patients' care. On the other hand, it introduced a new complexities and increased risk of Patients' safety. Patients' safety was defined according to WHO (World Health Organization) as the prevention of errors and adverse effects to patients associated with health care, while health care has become more effective. It has also become more complex, with greater use of new technologies, medicines and treatments ***(Runciman,Merry & Walton, 2017).***