بسم الله الرحمن الرحيم

MONA MAGHRABY

شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

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شبكة المعلومات الجامعية

التوثيق الإلكتروني والميكروفيلم

جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

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MONA MAGHRABY

Nurses Performance for Patients undergoing Intra-Aortic Balloon Pump: Suggested Guidelines

Thesis

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

By

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Ahmed Ellithy

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List of Abbreviations

Abb.	Full Term
AC	Alternating Current
ACC	American College of Cardiology
ACC/AHA	American College of Cardiology/American Heart Association
AHA	American Heart Association
AMI	Acute Myocardial Infraction
BUN	Blood Urea Nitrogen
CABG	Coronary Artery Bypass Graft
CBC	Complete Blood Count
CCL	Cardiac Catheter Laboratory
CCU	Coronary Care Unit
CHF	Congestive Heart Failure
CO_2	Carbon Dioxide
CPB	Cardiopulmonary Bypass
CPR	Cardiopulmonary Resuscitation
CRP	C-Reactive Protein
DPTI	Diastolic Pressure Time Index
ECG	Electrocardiogram
IAB	Intra-Aortic Balloon
IABC	Intra-Aortic Balloon Counter-pulsation
IABP	Intra-Aortic Balloon Pump
ICU	Intensive Care Unit
LAD	Left Anterior Descending Coronary Artery
LV	Left Ventricle
MS	Milli-seconds

Abb.	Full Term
OR	Operating Room
PACU	Pediatric Acute Care Unit
PAMI	Primary Angioplasty in Myocardial Infraction
PAP	Pulmonary Arterial Pressure
PCI	Percutaneous Coronary Intervention
PTT	Activated Partial Thromboplastin Time
PVD	Peripheral Vascular Disease
STS	The Society of Thoracic Surgeons
TAMI	Thrombolysis and Angioplasty in Myocardial Infraction
TTI	Tension Time Index

Nurses Performance for Patients undergoing Intra-Aortic Balloon Pump: Suggested Guidelines

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Abstract

Background: Intra-aortic balloon pump (IABP) is the first and the most commonly used mechanical circulatory support for patients with acute coronary syndromes and cardiogenic shock. Therefore, critical care nurses not only have to know how to monitor and operate the IABP, but also to provide interventions for preventing possible complications. **Aim of the study:** to assess nurses' knowledge and practices regarding care of patients connected with IABP at the Intensive care units at Cardio Thoracic Academy (CTA) at Ain Shams University Hospitals. **Research design:** A descriptive exploratory design was utilized. **Subject:** A convenient subjects of 40 nurses were included in the current study. **Setting:** The current study was carried out at the adult intensive care units for cardiac surgery at the Cardio Thoracic Academy (CTA) at Ain Shams University Hospitals. **Tools of data collection:** Two tools: **a-** Self – administered nurses' knowledge assessment questionnaire, and **b-** IABP Nurses' practice observational checklist. Also, suggested guidelines were developed for nurses caring for patients undergoing Intra-Aortic Balloon Pump **Results:** The majority of the studied subject had unsatisfactory knowledge. Moreover, most of studied subject had unsatisfactory practice level about adjusting augmentation alarm setting, obtaining consent, checking inflation which occurs at the dicrotic notch and observing helium tank when low helium light illuminates. **Conclusion:** Critical care nurses (in the current study) had unsatisfactory knowledge and practice regarding caring for patients connected with IABP. **Recommendation:** updating knowledge and practice of ICU nurses through carrying out continuing educational programs about IABP; implementation of suggested guidelines for nurses caring for IABP patients'; strict observation of nurses' practice when caring for patients connected with IABP and providing guidance for correction of poor practices; and replication of this study on larger subject selected from different geographical areas.

Keywords: Nurses Performance, Intra-Aortic Balloon Pump, Suggested guidelines.

Introduction

The intra-aortic balloon pump (IABP) is a mechanical device that is temporarily used to improve cardiac function **(Hardin & Kaplow, 2010)**. IABP is a mechanical device that increases myocardial oxygen perfusion while at the same time increasing cardiac output. Increasing cardiac output increases coronary blood flow and therefore myocardial oxygen delivery **(Parissis & Dougenis, 2010)**.

Knowledge of the electromechanical events of the cardiac cycle and troubleshooting skills are essential when caring for hemodynamically compromised patients who require intra-aortic balloon pump support **(Curtis, et al., 2012).**

When the myocardium becomes damaged, cardiac output is insufficient to meet the oxygenation demands of the body. Blood pressure falls, and the myocardium continues to get weaker as it struggles to provide vital organs with oxygenated blood. Pharmacologic intervention may not be enough, and oftentimes places further demands on the myocardium. In situations such as acute myocardial infarction, cardiogenic shock, septic shock, and cardiac