Nurses Malpractices during Blood Samples Withdrawal from Neonates

Thesis

Submitted for Partial Fulfillment of Master Degree in ***Pediatric Nursing***

By

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The Candidate

Nessma Mohamed Atia

Dedication

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List of Abbreviations

Abb.	Full term
ABG	Arterial Blood Gas
ANTT	Aseptic Non Touch Technique
CBGs	Capillary Blood Gases
CL	Central Line
CLSI	Clinical Laboratory Standards Institute
CS	Cesearean Section
CVADs	Central Venous Acess Devices
CVCs	Central Venous Catheteres
e.g	For example
EDTA	EthyleneDiamineTetraacetic Acid
FVCs	Femoral Venous Catheters
INS	Infusion Nursing Society
IV	Intravenous
Lab	Laboratory
NICU	Neonatal Intensive Care Unit
O2	Oxygen
PCO2	Partial Pressure of Carbon Dioxide
PH	Acid Base Balance
PICCs	Peripherally Inserted Central Catheters
PPE	Personal Protection Equipment
RD	Respiratory Distress
UACs	Umbilical Arterial Catheters
UCs	Umblical Catheters
UVCs	Umblical Venous Catheters
WHO	World Health Organization

Operational Definitions

Specimen

Specimen is a sample of something, like a blood or body tissue that is taken for medical testing ***(Pagana et al., 2015).***

Blood Sample

Blood sample is an amount of a person's blood taken from their body for use in medical tests ***(Basten, 2013).***

Blood sampling

Collection of blood for the purpose of diagnostic, therapeutic, monitoring and provision of across match sample for blood transfusion ***(Infection Prevention Management Committee, 2017)***

Blood culture

Collecting of blood for culture to determine presence of microrganisms in the blood**.** Blood cultures are taken to isolate and identify microorganisms causing infection and often to identify the specific antibiotics to which the organisms are sensitive ***(Jacob et al., 2017).***

The pre-analytical phase

It describes all actions and aspects of the medical laboratory diagnostic procedure that occurs prior to the analytical phase ***(Loeffen et al., 2012).***

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Abstract

Aim of the work: To assess nurses malpractices during blood samples withdrawal from neonates at Neonatal Intensive Care Units. **Design**: A descriptive study design. **Settings**: This study was conducted at Neonatal Intensive Care Units (NICUs) at Children's Hospital affiliated to Ain Shams University Hospitals, NICU at Children's Hospital affiliated to Zagazig University Hospitals and NICU at Hehia Central Hospital affiliated to Ministry of Health. **Subject:** Composed of all available nursing staff (100 nurses) and (100 neonates). **Tools:** Composed of self administrative questionnaire sheet, observational checklist and attitude assessment sheet. **The results**: Showed that more than three quarters of the studied nurses had a satisfactory level of knowledge, more than half of nurses had incompetent level of practice during blood samples withdrawal and nearly half of them had apositive attitude about blood samples withdrawal. **Conclusion:** Based on the results of the present study, it could be concluded that, there were significant relation and positive correlation between total knowledge, practice and attitude of the studied nurses regarding withdrawal of blood samples in neonates. **Recommendations:** The content and process of training courses need to be revised with focus on practice. Further researches with intervention program are required involving larger study sample of nurses at different study setting all over Egypt. Designing and carrying out measures and precautions to prevent the nurses malpractices during blood sampling withdrawal and enhancement nurses knowledge, practice and attitude.

INTRODUCTION

Accurate laboratory results are vital for neonatal safety and improving the medical diagnosis of neonates. Many studies have shown that 70% of medical diagnostic decisions depend on the accuracy of laboratory tests. Despite advanced automation in diagnostic laboratories, there are still considerable error rates at clinical diagnostic labs ***(Baron et al., 2012).***

Blood tests are a part of almost every hospitalization experience and many times must be done in other settings to help with diagnosis and monitoring health ***(Hatfield, 2015).*** Blood samples from critically ill neonates are routinely collected via arterial, peripheral venipuncture, heal/finger prick and central venous access devices to detect and measure various factors in the blood ***(Ullman et al., 2016)***.

Venipuncture is the process of obtaining a sample of blood generally from vein. Venipuncture is a learned skill that requires completion of a training course, generally organized by the training section of the hospital**.** Venipuncture may be necessary, on occasion, to obtain blood from an existing vascular access device such as an intravenous line or a central line. If an IV line is present, the sample site selected is distant from the line ***(Moore et al., 2010).***

Capillary blood sampling is a medical procedure aimed at assisting in neonatal diagnosis, management and treatment. It