Nursing Performance Regard Caring For Patients Undergoing Blood Transfusion

Thesis

Submitted for fulfillment of the requirement of the master degree

In

Nursing Science

(Medical-Surgical Nursing)

By

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Clinical instructor at Alazhar University

Faculty of Nursing
Ain Shams University
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Under Supervision of

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وأنزل الله عليك
الكتاب والحكمة
وعلَّمَكَ مَا لَمْ تَكُن
تَعْلَمُ وكَانَ فَضْلُ
اللَّهِ عَلَيْكَ عَظِيماً
صدق الله العظيم
سورة النساء الآية (١١٣)

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Eman Abd Elmoety Mohammed Hendy

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List of Abbreviations

Abbr.	Full-term
AHF	: Antihaemophilic Factor
ATRs	: Acute Transfusion Reactions
BP	: Blood Pressure
Ca	: Calcium
CO2	: Carbon Dioxid
CRYO	: Cryoprecioitate
DHTRs	: Delayed Haemolytic Transfusion Reactions
DIC	: Dissemenated Intravascular Coagulopathy
e.g	: For examples
ECG	: Electo-cardio-gragh
FFP	: Fresh Frozen Plasma
FNHTRs	: Febrile Non Haemolytic Transfusion Reactions
Hb	: Haemoglobin
HIV	: Human Immune Virus
HRs	: Hours
ID	: Identification
IM	: Intramascular
INR	: International Normalization Ratio
IV	: Intravenous
K	: Potassium
LVF	: Left Ventricular Failure

MBTP : Massive Blood Transfusion Protocol

NA : Sodium

O2 : Oxygen

P : Pulse

PT : Prothrombin Time

PTT : Partial Prothrombin Time

R : Respiration

RBCs : Red Blood Cells

SD : Solvent Detergent

So2 : Oxygen saturation

T : Temperature

TACO : Transfusion Associated Circulatory Over load

TRALI : Transfusion Related Acute Lung Injury

UO : Urinary output

vWF : von Willebrand Factor

WB : Whole Blood

WBCS : White Blood Cells

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Abstract

Nursing management of patient undergoing blood transfusion is important. A comprehensive understanding of blood transfusion process and areas requiring special attention would be important to reduce the complications arising from blood transfusion. All staff must be aware of all aspect of care and the principles of safe effective patient identification, using aseptic technique during transfusion, proper documentation and adequate management of adverse reactions. ***The aim of this study*** was to assess the nurses' performance (knowledge& practice) regarding management of patient undergoing blood transfusion and factors affecting nurses' performance during blood transfusion. **Design**: An exploratory descriptive study. **Setting**: the study was carried out at surgical and hematology departments at Ain Shams University Hospitals. **Study subjects:** A convenient sample of all available nurses (n=60) were included in this study, their mean age 31.6± 5.7 . **Data collection tools:** a) self administered questionnaire sheet. b) nurses' practice observational checklist. **Results & conclusion:** 70% of nurses had unsatisfactory knowledge regarding to management of patient undergoing blood transfusion and 80% of them showed unsatisfactory level of practice regarding to management of patients undergoing blood transfusion. Furthermore, there were many factors affecting nurses' performance as: nurses' related factors, work' related factors and patient' related factors. **Recommendations:** This study recommends the importance of in-service training courses to enhance the nurse's knowledge and practice and to avoid complications of blood transfusion.

Keywords: *Nursing, performance, patient, Blood transfusion.*

Introduction

Blood transfusion is a highly effective and potentially life-saving treatment for many patients and an essential component of modern health care. Red cell transfusions are the backbone of blood transfusion therapy as they account for the majority of components issued to patients. Blood is very valuable especially in saving lives of patients. Blood components are expensive and their preparation is limited. Therefore, they should be correctly selected and used for patients by all means. The aim of blood and blood components transfusion in medical treatments is to provide suitable and safe blood products to achieve best clinical outcomes ***(Taylor , Lillis, & Lemone, 2014).***

In spite of its vital role in saving lives, blood transfusion is associated with risks, serious hazards of transfusion reported that approximately one wrong blood transfusion occurred in every 13,000 transfusions. Most transfusion errors are due to human factors, which are preventable through training and revision of transfusion protocols. Making mistakes in blood transfusion and insufficient control of patients who receive blood during the transfusion are among causes of death for such patients. Since there is no substituting product for human blood, the need for blood transfusion is still continuing. More than 50% of patients hospitalized in intensive care units and 50% to 70% of patients in surgical and orthopedic wards need blood transfusion ***(Serious Hazards of Transfusion Committee, 2012).***

Annual reports in Britain show serious risks of blood transfusion such as neglect in identification of blood type and its components, wrong identification of patients, and neglect in controlling patients during transfusion as main causes of mistakes. Therefore, considering the severe need for blood and blood components, along with limited sources and limited possibility of preparing each blood product, it is crucial to try by all means to increase the knowledge of medical personnel and providing necessary education to reduce consumption of complete blood and to use just the components necessary for patients' health, in order to reduce blood waste and transfusion complications ***(Dzic*, *2014).***

Adequate Knowledge about blood transfusion is very essential to help the staff involved in the transfusion chain to give the right blood to the right patient at the right time and hopefully for the right reason. Transfusion is a complex process that requires everyone, from senior doctors to porters and telephonists, to understand the vital role they play in safely delivering this key component of modern medicine. Training and appropriate technological and managerial support for staff is essential for safe effective blood transfusion ***(World Health Organization, 2015)***.

Nurse role starting before collecting blood from blood bank as she/he should positively identify the patient to avoid

errors that may occur from incompatibility, she plays a critical role in ensuring that the transfusion of blood products is safe and that the patient is monitored adequately for complications of blood transfusion ***(Donaldson, Seaman &park, 2014).***

Significance of the study:

The safe supply of blood and blood products is vital to Egypt's health system as it is used in medical and surgical procedures, the management of cancer and hematological diseases. When safe practices are not followed, transfusion of blood and blood products can create life-threatening risks leading to the spread of infectious diseases. In Egypt the high rate of viral hepatitis poses a particular threat **.**

Blood transfusions are common in clinical practice. In 2014/2015 National Health Service concerned with blood issued transfusion of 1.7 million units of red blood cells, 275,000 units of platelets, 215,000 units of fresh frozen plasma and 165,000 units of cryoprecipitate to hospitals in England and North Wales, despite considerable efforts to ensure the safety of blood transfusions, they are associated with significant risks, ***(Serious Hazards Of Transfusion, 2015).***

World Health Organization, (2013) reported that the main bulk of errors, 80% can be due to human error and 42%