

**Effect of Educational Guidelines on Patients'
Outcomes Post Esophageal
Varices Management**

Thesis

*Submitted in Partial Fulfillment of the Requirement
of the Doctorate Degree*

*In
Nursing Science
Medical surgical Nursing*

By

Nermen Abd Elftah
(B. Sc. N., 2007- M. Sc. N., 2014)

*Medical- Surgical Nursing Faculty of Nursing
Ain Shams University*

2018

**Effect of Educational Guidelines on Patients'
Outcomes Post Esophageal
Varices Management**

Thesis

*Submitted in Partial Fulfillment of the Requirement
of the Doctorate Degree*

In

*Nursing Science
Medical surgical Nursing*

Supervised by

Dr. / Ola Abd Elaty Ahmed

Ola Abdelaty
*Prof. of Medical surgical Nursing
Faculty of Nursing – Ain Shams University*

Dr./ Naglaa Elsayd Mahdy

Naglaa Elsayd
*Assist. Prof. of Medical surgical Nursing
Faculty of Nursing – Ain Shams University*

Dr./ Asmaa Mohamed Mahmoud

Asmaa Mohamed Mahmoud
*Lecturer of Medical Surgical Nursing
Faculty of Nursing – Ain Shams University*

Dr./Hesham Saad Mohammed

Hesham Saad Mohammed
*Head of Endoscopy department
Faculty of Nursing
Ain Shams University*

2018

Manal H

Naglaa Elsayd

Acknowledgements

First, and foremost, my deepest gratitude and thanks should be offered to "**ALLAH**", the most kind and most merciful, for giving me the strength to complete this work

I wish to express my deep appreciation and gratitude to **Professor Dr. Ola Abd Elattay Ahmed**; professor of Medical surgical Nursing, faculty of Nursing, Ain Shams University, words cannot describe how grateful I am for her guidance, valuable support, constructive criticism, and continuous, unlimited help. I would not have been able to start and reach perfection of this work without her.

I am deeply grateful to **Assist. Professor. Naglaa Mahdy**, assistant professor of Medical surgical Nursing, faculty of Nursing, Ain Shams University, for her supervision, help and valuable support and guidance, I am deeply affected by her noble character, perfection, care and consideration.

I am deeply grateful to **lecturer. Asmaa Mahammed**, lecturer of Medical surgical Nursing, faculty of Nursing, Ain Shams University, for her help and valuable support and guidance, I am deeply affected by her noble character, perfection

I would like to take the opportunity to express my deepest thanks to **Dr/Hesham Saad** who had assisted me in the completion of this thesis

Last but not least, I am grateful to my family, my husband **wael** and my daughter **reem and roaa** to give me the loves that support me to fulfill this work,

Nermen Abd elftah Mohamed

List of Contents

<i>Subject.</i>	<i>Title</i>	<i>Page No.</i>
List of Tables.....		i
List of Figures		iii
List of Abbreviations.....		v
Abstract		v
Introduction		1
Aim of the study.....		7
Review of Literature		8
Subjects and Methods		65
Results.....		80
Discussion		113
Conclusion and Recommendations.....		133-134
Summary		136
References		144
Appendices		
Protocol.....		
Arabic Summary		

List of Tables

<i>Table No.</i>	<i>Title</i>	<i>Page No.</i>
In Review		
Table 1:	Classification and grading of varice	17
In Results		
Table 1:	Comparison between study and control group of patients demographic characteristics	81
Table 2:	Comparison between study and control group patient regarding patients' past history	83
Table 3:	Comparison between study and control group patients' present history	84
Table 4:	Comparison between study and control group regarding' Family history.....	87
Table 5:	Comparison between study and control group regarding patients' health habits	88
Table 6:	Comparison between study and control group regarding patient level of knowledge about definition and causes of esophageal varices	90
Table 7:	Comparison between study and control group regarding patient level of knowledge about management method of esophageal varices.....	92
Table 8:	Comparison between study and control group regarding patient level of knowledge about Causative factors of esophageal varices.....	93

List of Tables (Cont...)

<i>Table No.</i>	<i>Title</i>	<i>Page No.</i>
Table 9:	Comparison between study and control group regarding patient level of knowledge about precaution for endoscopy of esophageal varices.....	94
Table 10:	Comparison between study and control group regarding patient level of knowledge about proper nutrition of esophageal varices	95
Table 11:	Comparison between study and control group regarding patient level of knowledge about complications of esophageal varices	96
Table 12:	Comparison between study and control group regarding total satisfactory level of knowledge of esophageal varices.....	97
Table 13:	Comparison between the study and control group regarding level of fatigue pre, post and follow up implementation of educational guidelines	98
Table 14:	Comparison between the study and control groups regarding mean and standard deviation of vital signs pre, post and follow up implementation of educational guideline e.....	100
Table 15:	Comparison between the study and control groups regarding mean and standard deviation of laboratory data pre, post and follow up implementation of educational guideline	102

List of Tables (Cont...)

<i>Table No.</i>	<i>Title</i>	<i>Page No.</i>
Table 16:	Comparison between the study and control group regarding readmission rate and causes of esophageal varices management pre, post and follow of educational nursing guidelines	104
Table 17:	Comparison between the study and control group regarding intervention after recurrent bleeding post and follow up implementation of educational guidelines	105
Table 18:	Comparison between study and control groups regarding their pain level pre, post and follow up implementation of educational guidelines.....	106
Table 19:	Comparison between study and control group regarding dysphagia, syncope and cardiac failure after esophageal varices management pre, post and follow up of educational nursing guidelines	108
Table 20:	Relation and correlation between patient's total satisfactory level of knowledge and demographic characteristics of the study and control group	110
Table 21:	Correlation between patients' total satisfactory level of knowledge and level of fatigue of the study and control group.....	111
Table 22:	Relation between patient's total satisfactory level of knowledge and readmission rate and re-bleeding in the study and control group.....	112

List of Figures

<i>Figure No.</i>	<i>Title</i>	<i>Page No.</i>
<u><i>Review of Literature</i></u>		
Figure 1:	Pathophysiology of portal hypertension	10
Figure 2:	Pathophysiology of Esophageal Varices	12
Figure 3:	Degree of esophageal varice	18
Figure 4:	Methods of treatment	23

List of Abbreviations

ABG	Arterial blood gases
ADLs	Activities of Daily Livings
AVB	Acute Varices Bleeding
BUN	Blood Urea Nitrogen
CNS	Central Nervous System
EIS	Endoscopic Injection Scelerotherapy
EIT	Endoscopic Injection Therapy
ETB	Esophageal Tamponade Balloon
EVB	Esophageal Varices Bleeding
EVL	Esophageal Varices Ligation
FHVP	Free Hepatic Venous Pressure.
GCB	Gastric Chemical Burn
GIT	Gastro Intestinal Trac
HCV	Hepatitis C Virus
HgL	Hemoglobin level
HVPG	Hepatic Venous Pressure Gradient
HVPG	Hepatic Venous Pressure Gradient
INR	International normalized ratio
NPO	Nothing Per Os

NSAIDs	Non Steroid Anti-inflammatory Drug
NSBBs	Non-Cardioselective β -Blockers
PH	Portal Hypertension
PHGPH	Portal Hypertensive GastroPathy
PPOs	Possible Patient Outcomes
PT	Prothrombin Time
PTT	Partial Thromboplastin Time
SD	Stander Deviation
SEMS	Self-Expandable Metal Stents
SIADH	Syndrome of Inappropriate Antidiuretic Hormone
SVC	Splanchnic VasoConstrictors
TJIPS	Trans Jugular Intrahepatic Portosystemic Shunt
UK	United Kingdom
VBL	Variceal Band Ligation
VCE	Video Capsule Endoscopy

Effect of Educational Guidelines on Patients' Outcomes Post Esophageal Varices Management

Abstract

Background: Esophageal variceal bleeding remains a major complication of portal hypertension in patients with liver cirrhosis. Bleeding from esophageal varices occurs in approximately one third of patients with cirrhosis so the mortality rate from variceal bleeding is 20-40%. **The aim:** assess the effect of educational guidelines on patients' outcomes post esophageal varices management. **Setting** This study was conducted at Kafer El Sheikh Liver and Heart Institute affiliated to ministry of health Egypt. **Research Design:** Aquasi experimental design was used.. **Sampling:** purposive sample of 100 patients undergoing for esophageal varices management divided into two groups' study and control group. **Tools;** two tools were used for data, **Tool I:** Patients assessment tool **part 1:** Patients demographic assessment tool, **Part 2:** Patients clinical data assessment tool **Tool II:** Patients' outcomes assessment tool. **Part1** Patient's knowledge assessment questionnaire, **Part 2:** Fatigue Impact scale, **Part 3** Patient's complications assessment tool **Results:** the current study revealed that 78% of study group 10% for control group had satisfactory level of total patient knowledge during follow up of educational implementation and statistically significant differences between study and control group at follow up guidelines implementation. As regard to patient's' level of fatigue 46% of the study group and 60% of the control group had mild fatigue follow up educational guidelines with there is statistically significant difference between two groups post and follow up implementation of educational guidelines. Regarding patients vital signs there were statistically significant differences between the two groups regarding means of vital signs (pulse, respiratory rate, and temperature and pain intensity) at follow up. Also there were statistically significant differences between the two groups regarding means of laboratory patient's data (hemoglobin, red blood cells and albumin) at follow up. **Conclusion:** educational guidelines had remarkable improvement in study group patient ' knowledge, fatigue level and patient clinical data as patient vital signs, laboratory data, dysphagia and patient readmission after esophageal varices management. **Recommendations:** Applying health education programs among patients in different health care settings focusing on prevention of early esophageal bleeding.

Key words: Educational Guidelines, Esophageal Varices, patients Outcomes



Introduction



Introduction

Esophageal varices bleeding are the most life threatening complication of cirrhosis. Esophageal varices are dilated, engorged, tortuous veins in the mid- to distal esophagus. It occurs as a result from increased pressure in the portal veins, which results from a combination of increased intrahepatic vascular resistance and increased blood flow through the portal venous system with severe cirrhosis, the blood can no longer pass through the fibrotic liver and finds alternate pathways through the veins in distal esophagus. Being vein engorged, these veins are fragile and have attendance of bleeding (*Garbuzenko, 2015*).

When portal pressure increases, the patient may progress to having small varices with time and as the hyper dynamic circulation increases, blood flow through the varices will increase, thus raising the tension in the wall. Variceal hemorrhage resulting from rupture occurs when the expanding force exceeds the maximal wall tension. Varices symptom not appear until the varices start to bleed (*Ogilvie, Hicks & Kalloo, 2015*) .

Esophageal variceal bleeding is one of the most dreaded complications of cirrhosis because of its high mortality. The prevalence of varices in patients with cirrhosis is

approximately 60-80% and risk of bleeding from varices is 25-35%. The mortality rate from variceal bleeding is 20-40%. Recurrent bleeding occurs in 60% of esophageal varices patients within a week. So prevention and treatment of esophageal varices bleeding remains the major goal for liver cirrhosis management (*Werner & Perez, 2014*).

Varices rupture and bleed in response to ulceration and irritation include alcohol ingestion, swallowing of poorly masticated food, and acid regurgitation from the stomach, there are many factors that may increase esophageal bleeding as any conditions that increase the abdominal venous pressure such as muscular exertion due to lifting heavy objects, coughing and straining at stool. Esophagitis, irritation of vessels by poorly chewed foods or irritating fluids and reflux of stomach content also medications like non steroid anti-inflammatory drug that erode the esophageal mucosa (*Owid, 2014*).

When bleeding is occurred, many complications happened to patient that affected on his health causing death and threatening condition. Shock will produce causing decreased cerebral perfusion which affected on patient conscious level, diminished hepatic perfusion may develop and encephalopathy (*Triantos & Kalafateli, 2015*).

Also other serious complications occur, such as pneumonia and development of ascites, lower limb edema which often leads dehydration with increasing of patient body weight, low blood pressure, shortness of breath and bradycardia due to hypovolemia. Septic shock may occur as a result of endoscopy included fever, dysphagia and pulmonary atelectasis. Mucosal ulceration, abdominal pain, distention and chest pain as a result of perforation of the esophagus occurred in patients (*Luo et al, 2018*).

The best way to improve the mortality associated with variceal hemorrhage is to prevent bleeding. Several treatment modalities have been used; those treatments can lower the risk of vessel rupture or stop bleeding. There are many approaches for prevention and treatment of variceal hemorrhage included, pharmacotherapy, and endoscopic intervention, surgical and radiological shunts. Intensive medical investigation and treatments including laboratory tests restore hemodynamic stability through blood and fluid transfusion, and diagnostic, therapeutic strategies to identify and control bleeding (*Phillip & Bruce, 2016*).

The overall guidance for patients undergoing esophageal variceal ligation or injection to improve patients' understanding of the disease, preventing recurrence of bleeding and minimize risk of other complications so
