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# Clinical Outcomes and Patient Satisfaction Assessment among Upper Gastrointestinal Bleeding at Qena University Hospital at Upper Egypt

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***Abstract:*** *Acute GI bleeding is a medical emergency. Initial triage and assessment are generic with emphasis on identifying the sick patient with life threatening hemodynamic compromise and initiating appropriate resuscitation.*

***Aim:*** ***To assess the expected clinical outcomes and satisfaction of patients with upper gastrointestinal bleeding. Design****: A quasi experimental research design was utilized. A convenient sample of 54 patients (male and female) admitted in the emergency ward was included in the study at* ***Qena University Hospital in Upper Egypt****.* ***The study is supposed to be implemented from*** Hospital *from the first* ***of March (2016) to the end of August (2016) in the previously mentioned setting. Patients were met in emergency ward to fill out the questionnaire****. The subjects were selected randomly and divided equally into study and control groups, 27 patients in each group .Statistically significant differences were found between the study and control group after application of management regarding patients' clinical outcomes items ( bleeding attack, vital signs, laboratory tests, mental status and medical co-morbidities) at level P= 0.040, 0.000, 0.001, 0.066 and 0.045respectively, highly statistically significant differences were existed between the study and control group after application of assessment regarding level of patients' satisfaction as a total score recorded 77.20±4.24 for the study group while it was 57.68±10.6 for the control group, achievement of the average scores for the most of the checklist items which related to nurses' performance.*

***Conclusions:*** *Knowledge of the gastrointestinal lesions likely to affect elderly patients, thorough history taking, and a complete physical examination should help to determine whether the bleeding source is from the upper gastrointestinal tract been obtained.*

***Recommendation:*** *It is recommended that provision of in service training program for nurses on update of management for patient with upper gastrointestinal tract bleeding to refresh their knowledge, continuous supervision and assessment of patients with upper gastrointestinal tract bleeding*.

***Keywords:*** *Upper gastrointestinal bleeding, assessment, Patient satisfaction, Outcome*

## I. Introduction

Upper gastrointestinal bleeding, defined as bleeding from the esophagus, stomach, or duodenum, is responsible for 50% or more of these hospitalizations. **Lanas A, et al.,(2009).** The case fatality rate among hospitalized patients with upper gastrointestinal bleeding has decreased over the past 20 years and ranges from 2.1 to 2.5% in U.S.5 **Peery AFet al.,( 2015).** while the incidence of upper gastrointestinal hemorrhage in **Egypt** is approximately 100 patients per 100.000 populations per year. Bleeding from the upper gastrointestinal tract is approximately 4 times as common as bleeding from the lower GI tract **Longstreth & Feitelberg., (2008).**

Peptic ulcers). which are primarily due to Helicobacter pylori infection or the use of nonsteroidal anti-inflammatory drugs (NSAIDs), occur in the stomach or duodenum and are the most frequent cause of upper gastrointestinal bleeding. **Laine L et al., (2012) Brooks M. (2013.and Chason RD et al.,(2013)**.Erosions in the esophagus which are caused by gastroesophageal reflux disease or in the stomach or duodenum (which are frequently due to (NSAIDs) are also common sources of upper gastrointestinal bleeding. when hospitalized, less than 1% of such patients require intervention and less than 0.5% die **Laursen SB, et al.,(2015).** Hemoglobin levels should be monitored; however, unlike blood pressure and heart rate, they are a poor initial indicator of the severity of upper gastrointestinal bleeding Because patients bleed whole blood, the hemoglobin level does not drop immediately but takes hours to equilibrate as the intravascular volume is replenished with intravenous and interstitial fluid. Transfusion of red cells is generally recommended when the hemoglobin level decreases below 7 g per deciliter. A randomized trial showed lower rates of death (the primary outcome), rebleeding, and adverse events with a transfusion threshold of 7 g per deciliter than with a transfusion threshold of 9 g per deciliter **Villanueva C et al.,(2013**). For patients in hemodynamically stable condition who have preexisting cardiovascular disease, guidelines recommend transfusion at a hemoglobin level of less than 8 g per deciliter or in patients with symptoms. These guidelines are based on randomized trials that primarily involved patients without gastrointestinal bleeding who had undergone surgery **Carson JL etal.,(2012).** In patients with hypotension due to severe upper gastrointestinal bleeding, transfusion before the hemoglobin level decreases below 7 g per deciliter is reasonable to prevent the decreases to levels well below 7 g per deciliter that will occur

with fluid resuscitation alone. A meta-analysis of six randomized trials showed that a proton-pump inhibitor administered to patients with upper gastrointestinal bleeding soon after presentation did not significantly reduce the risks of further bleeding, surgery, or death **Abougergi MS et al.,(2015).** The use of this therapy was associated with a decrease in the frequency of high-risk endoscopic findings (active bleeding, a non bleeding visible vessel, or an adherent clot) and the need for endoscopic therapy **HwangJH et al.,( ,2012)$ Fujishiro M,et al.,(2016).** Although they are based on the same data, guidelines vary substantively regarding the use of proton-pump inhibitors before endoscopy **Nahon Set al.,(2012) .** Some recommend high-dose intravenous proton-pump inhibitors **Hwang JH, et al.,(2012) & Gralnek IM,(2015)** . Others indicate that proton-pump inhibitors "may be considered **Barkun AN,et al.,(2010). $ Laine L etal.,(2012).** And still others recommend that clinicians not administer proton-pump inhibitors. **National Institute for Health and Clinical Excellence (2012).** Erythromycin (at a dose of 250 mg) intravenously 30 minutes before endoscopy) increases gastric motility and improves visualization of the gastric mucosa at endoscopy. A meta-analysis of four randomized trials showed that the use of erythromycin decreased the need for blood transfusion and repeat endoscopy **Bai Y et al.,(2011).** A nasogastric tube is not required in patients with upper gastrointestinal bleeding.8 Most patients who are hospitalized with upper gastrointestinal bleeding should undergo endoscopy within 24 hours, after appropriate resuscitation and transfusion, as needed, to a hemoglobin level greater than 7 g per deciliter. Endoscopically, the lesion appears as a large sub mucosal vessel that has become ulcerated. Because of the large size of the vessel, bleeding can be massive and brisk. The vessel rupture usually occurs in the setting of chronic gastritis, which may induce necrosis of the vessel wall. Alcohol consumption is reportedly associated with the Dieulafoy lesion**Meltzer AC,et al.,(2013).**

In some observational studies, prompt endoscopy, as compared with endoscopy after 24 hours, has been associated with reductions in the need for surgery, length of hospitalization, and mortality **Lanas A etal.,(2009).Barkun etal.,(2010), Bai Y, G&uo JF.,(2011). Laine L,et al., $ Carson L et al.,(2012)**.

UGIB patients need special nursing care, and to assure quality of this care, it is important to apply specific nursing intervention that can entails knowledge and skills required by nurses in order to carry out care effectively, and ameliorate patient care, improve cost effectiveness, decrease patient's problems and complications as well as improve patient's clinical outcomes. Therefore, the application of nursing intervention for patients with UGIB aids in establishing basic quality of nursing care rendered. It also assists the profession of nursing in meeting its obligation for improving its practice and policies **(Othman, 2010).**

The role of the nurse in managing a patient with upper GI bleeding requires specific attention. In the first instance, the nurse must have a specific role in the nursing care that assists a patient in hypovolaemic shock; also patient comfort can be maintained by assessing the need for analgesia. The nurse should be confident in ABC (airway, breathing, circulation) resuscitation, will also be required to undertake ongoing assessment for the patient's fluid and electrolyte status **Smith ., (2012).** Patient satisfaction has also been recognized as an important issue for health care managers. Many previous studies have developed and applied to assess patient satisfaction as a quality improvement tool for health care providers **Young, Meterko &Desai, (2000); Jackson & Kroenke**, (**2007); Burroughs et al., (2009).** Following increased levels of competition and the emphasis on consumerism, patient satisfaction has become an important measurement also for monitoring health care performance of health **plans (Jatuli, Bundek & Legorreta., (2007).** This measurement has developed along with a new feature: the patient's perspective of quality of care **Ross, Steward & Sinacore**., (**2005); Kane, Maciejewski, and Finch, (2007); Hall & Dornan.,(2000**). Moreover, Patient satisfaction with care generally is viewed as an important component in assessing the quality of care. Quality of care traditionally is assessed under the headings of process, structure, and health outcomes measures **Robert et al., (2009).** Therefore having information about etiology is helpful for physicians in order to choose the best treatment techniques and set the ground to control and manage this disease and its consequences **Lanas A,et al.,(2005) & Zippi M,et al.,(2008).**

**Aim: assess on expected clinical outcomes and satisfaction of patients with upper gastrointestinal bleeding.**

## II. Research Hypothesis

There are differences with statistically significance between Statistically significant differences were found between the study and control group after application of management regarding patients' clinical outcomes items (bleeding attack, vital signs, laboratory tests, mental status and medical co-morbidities) at level P= 0.040, 0.000, 0.001, 0.066 and 0.045respectively

## III. Subjects and Methods

***Study Design and sample***

A quasi experimental research design was utilized. A convenient sample of 54 patients (male and female) admitted in the emergency ward was included in the study. The subjects were selected randomly and

divided equally into study and control groups, 27 patients in each group. Patient's age ranged from above 20 to below 65 years. Official written permissions to conduct the study was obtained from the Director at**Qena University Hospital in Upper Egypt**. Verbal explanation of the nature and the aim of the study were performed to medical and nursing staff in surgical wards. In addition for participants who met the inclusion criteria. Patients were given verbal and written information about the study and written consent was obtained from the participants. The study was conducted at the emergency ward, **atQena University Hospital in Upper Egypt.** Data were collected by using this questionnaire was developed by the researchers based on literature review and specialist opinion. **It was divided into five parts**

**1-First part:-***Patient's Sociodemographic data and Medical data* This comprised of data related to patient's age, sex, level of education, marital status and occupation. The medical information form included the information of patient's health history as, date of admission, present diagnosis, and episode of bleeding (recent and previous), previous hospitalization, past medical history, laboratory studies.

**2- Second part:-***Grady Coma Scale:* This part was utilized to assess the level consciousness of patients in else where. **The grade I** patient is only slightly confused. **The grade II** patient requires a light pain stimulus (such as sharp pin tapped lightly over the chest wall).**The grade III** patient is comatose but will ward off deeply painful stimuli such as sterna pressure or nipple twist with an appropriate response (Teasdale & Jennett, 1979).

## IV. Instruments

**Four instruments were used to collect data pertinent to study:**

***a-*** *Patient's Sociodemographic data and Medical data:-* This comprised of data related to patient's age, sex, and level of education, marital status and occupation. The medical information form included the information of patient's health history as, date of admission, present diagnosis, and episode of bleeding (recent and previous), previous hospitalization, past medical history, laboratory studies.

***b-*** *Grady Coma Scale:-* This part was utilized to assess the level consciousness of patients in elsewhere. The grade I patient is only slightly confused. The grade II patient requires a light pain stimulus (such as sharp pin tapped lightly over the chest wall).The grade III patient is comatose but will ward off deeply painful stimuli such as sterna pressure or nipple twist with an appropriate response (Teasdale & Jennett, 1979).

***Scoring System:*** Glasgow Coma Scale provides a score in the range 3-15.The Glasgow Coma Scale stated the normal state merits a score of 15, patients with GCS 13-15 Mild brain injuries can result in temporary or permanent neurological symptoms. Also GCS scores12-9 stated moderate state (impairments in cognition, physical skills, and/or emotional/behavioral functioning). While GCS scores of 3-8 are usually said to be in a coma .

***c-*** ***Clinical outcome sheet:-*** This tool was adapted by **(Kollef *et al,* 2007**) and used to assess UGIB patient's expected clinical outcomes after assessment. It includes medical co-morbidities, persistent or recurrent bleeding, mental status, laboratory investigations and vital signs

***d-*** ***Patient satisfaction structure interview:*** It was adapted by **Morsy, (2000)** and used to assess patient's satisfaction. It included 20 close ended questions arranged in four groups namely, communication (6 Question), continuity of care (5 Question), technical care (5 Question) and consideration of patients concerns (4 Question). Content validity was tested by ten experts in the field of nursing.**Reliability** for Tools was done by using test- re test. Patients' responses were ranked using five point rating scale ranging from 5 to 1 point as follows where "very satisfied (5 points), satisfied to some extent (4 points), in between (3 points), unsatisfied to some extent (2 points) and very unsatisfied (1 point). The level of patient's satisfaction were ranging from 100 to 20, in which 100 means very satisfied, while 20 means minimal satisfaction.

**Reliability and Validity:** The validity and reliability of satisfaction scales were checked. Measurement of the content and construct validity referred to the validation of the study. And also reassessed the reliability of the scales, internal consistency of rating scale was done by Cronbach's alpha coefficient. The reliability coefficient for perspectives scale was 0.87. .

***Study Procedures.***

- Official permission to conduct the study was obtained from the hospital administrative authority after explanation of the aim of the study. After a thorough review of literature, tool A was developed by the researcher; tool 2-and 3- was translated and adopted by the researcher to suit the Egyptian culture. This tools included (patient's relevant information sheet, patient's expected clinical outcome sheet, structured Interview patient satisfaction schedule,) were revised by 10 experts in the field of medicine and nursing at the Faculty of Medicine and Nursing at Qena University, as a jury to test its content validity and feasibility and necessary modification were done according to the opinions of the experts. The reliability of the

developed tools was estimated using the Cronbach's alpha test to measure the internal consistency of the tools. It was found to be 0.779. which indicate high reliability.

- Agreement of subjects to participate in the study was taken through written informed consent. The subjects were divided into two groups (study group and control group). The researcher started collection of data with control group on admission, using (patient's relevant information sheet and structured Interview patient satisfaction schedule) to avoid result contamination.
- **A pilot study** was carried out in order to assess the clarity and the applicability of patients' relevant tool (patient's relevant information sheet, structured Interview patient satisfaction schedule). It was conducted on 5 patients not included in the study. Analysis of the pilot study was done, and the necessary modifications were done.
- Data collection was carried out in three phases: preparatory phase, implementation phase and evaluation phase for upper gastrointestinal bleeding patient's out comes .

***Data were collected in 3 phases:***

***1st Preparatory phase:*** The preparatory phase of the study included review of literature was carried out regarding upper gastrointestinal needs and management approaches. Experts' advice was sought to ensure content comprehensiveness, clarity, relevancy and applicability. **The study is supposed to be implemented from** *Hospital* from the first **of March (2016) to the end of August (2016) in the previously mentioned setting. Patients were met in emergency ward to fill out the questionnaire. The time for each interview** ranged from 30-40 minutes.

***2nd Implementation Phase:*** The implementation phase was divided into two parts: first part was assessment phase for control group and the second phase for all items of care. While the control group received only the routine hospital assessment, in the second part of implementation phase, assessment was implemented for the study group only (30 subjects). The assessment also includes often monitoring intravenous hydration (weight, intake and output), delivering blood/blood products, give analgesic and closed observation for vital signs. Also knowledge about importance of complying with treatment, diet and follow up. The practical part of the management was lengthy and comprehensive to cover all the items and activities required to maintain compliance with assessment and proper care.

***3rd Evaluation Phase:*** Finally, the researcher collected data from the study group regarding their expected clinical outcomes using .Tool given at the end of the program for evaluating the effectiveness by comparing the results of the pre, and post assessment**.**

***Data Analysis***: - After data collection, statistical analysis was done using (SPSS) program to assess patient's expected clinical outcomes and satisfaction throughout assessment phase. Data was presented in tables; a statistical significant difference between variables of both groups was done. Also for analysis of quantitative data (mean and standards deviation) was used and t- Test also was used.

## V. Results

**Table (I)** distribution of the study and control groups according to socio demographic

| Socio demographic characteristics | Study group (B) 27 | | Control group (A) 27 | |
|---|---|---|---|---|
| | No | % | No | % |
| **Age (in years)** | | | | |
| 20-40 | 2 | 7.4 | 5 | 18.5 |
| 41-59 | 25 | 92.6 | 22 | 81.5 |
| **Sex** | | | | |
| Male | 20 | 74.1 | 19 | 70.4 |
| Female | 7 | 25.9 | 8 | 29.6 |
| **Marital status** | | | | |
| Single | 1 | 3.7 | 1 | 3.7 |
| Married | 26 | 96.3 | 25 | 92.6 |
| Widow | - | - | 1 | 3.7 |
| **Level of education** | | | | |
| Illiteracy | 7 | 25.9 | 6 | 22.2 |
| Read and write | 9 | 33.3 | 14 | 51.9 |
| Primary education | 6 | 22.2 | 4 | 14.8 |
| Secondary Education | 3 | 11,2 | 1 | 3.7 |
| University | 2 | 7.4 | 2 | 7.4 |
| **Occupation** | | | | |
| Work | 19 | 70.4 | 18 | 66.7 |
| Not work | 8 | 29.6 | 9 | 33.3 |

The findings of the study were presented in two parts; first part describes the distribution of the study and control group according to socio demographic characteristics and health information data (Table I&II). The second Part presents the comparison of findings (clinical outcomes and patient's satisfaction).

**Table I:-**distribution of the study and control groups according to socio demographic characteristics, this table showed that, 92.6% of the study group and 81.5% of the control group were between the age group of 41 and 59 years old. Also 74.1% of studied sample and 70.4% of the control group were males. As regards marital status, most of the study sample 96.3% was married. In relation to level of education, the results revealed that, the highest percentage of the control group 51.9 % was for the control group. As regards occupation, the table showed that, 70.4% of studied patients had manual work, and 66.7% for the control group.

**Table II.** Distribution of patients of both groups according to their health history immediately on admission

| **Health history immediately on admission** | Study group (B)27 | | Control group (A)27 | |
|---|---|---|---|---|
| | No | % | No | % |
| Previous attack | - | - | - | |
| Recurrent attack | 13 | 48.1 | 12 | 44.4 |
| No attack | 14 | 51.9 | 15 | 55.6 |
| **Past medical history** | | | | |
| Chronic liver disease | 7 | 26.0 | 11 | 40.7 |
| Diabetes mellitus | 18 | 66.6 | 11 | 40.7 |
| Ischemic heart disease | 2 | 7.4 | 3 | 11.2 |
| Renal failure /resp. disease | - | | 2 | 7.4 |
| **level of consciousness** | | | | |
| Conscious | 18 | 66.7 | 20 | 74.1 |
| Semi conscious | 8 | 29.6 | 6 | 22.2 |
| Un conscious | 1 | 3.7 | 1 | 3.7 |
| **Mobility status** | | | | |
| Mobile | 9 | 33.3 | 8 | 29.6 |
| Mobile with assistance | 12 | 44.5 | 7 | 26.0 |
| Immobile | 6 | 22.2 | 12 | 44.4 |
| **Smoking habit** | | | | |
| Smoke | 17 | 63.0 | 9 | 33.3 |
| Not smoke | 10 | 37.0 | 18 | 66.7 |
| **Dietary habit** | | | | |
| Fatty | 25 | 92.6 | 21 | 77.8 |
| Spicy | 1 | 3.7 | 5 | 18.5 |
| Salty | 1 | 3.7 | 1 | 3.7 |
| **Stress and anxiety** | | | | |
| Present | 10 | 37.0 | 15 | 55.6 |
| Not | 17 | 63.0 | 12 | 44.4 |

**Table II:-** Distribution of patients of both groups according to their health history immediately on admission, revealed that, the highest percentages 48,1% and 44.4% of the study group and control group respectively had recurrent attack of Hematemsis and Melina during hospitalization. In relation to past medical history the result showed that, the highest percentage of studied patients 66.6% had past medical history of diabetes mellitus while, non of patients had renal failure in the study group.,. As regards level of consciousness, the result showed that, the highest percentage 66.7% of the study group and 74.1% of the control group respectively was conscious. Regarding mobility status, the table showed that, 44.5% of the study group was mobility with assistance to be the highest percentage. While 44.4% of the control group were immobility. In relation to smoking habit, the result revealed that, 63.0% of the studied patients were smokers. While 66.7% of the control group were not smoked. As regards dietary habit, the table showed that, 92.6% and 77.8% of the study and control group respectively had fatty food intake. Regarding stress and anxiety, the result showed that, the highest percentage (63.0%) of the study group had neither stress nor anxiety. While 55.6%f of the patients of the control group complained of stress and anxiety.

**Table III** comparison between expected clinical outcomes for patients of the study groups before and after: -

| **Patient's clinical outcomes** | **Study group (B) Before Intervention** | | **Study group (B) After Intervention** | | **T-Test** | P-Value |
|---|---|---|---|---|---|---|
| **Bleeding attack:** | No | % | No | % | | |
| •Persistent attack | 13 | 48.2 | 6 | 22.2 | 9.791 | 0.044** |
| •Recurrent attack | 11 | 40.7 | 9 | 33.3 | | |
| • Not attack | 3 | 11.1 | 12 | 44.5 | | |
| **Vital signs:** | | | | | | |
| **Systolic Blood pressure** | | | | | | |
| •< 100mmhg | 21 | 77.8 | 8 | 29.6 | | |
| •> 100mmhg | 6 | 22.2 | 19 | 70.4 | 18.870 | 0.0003 |
| **Pulse rate** | | | | | | |
| •> 100 b/m | 18 | 66.7 | 12 | 44.4 | | 0.056 |
| •< 60 b/m | 9 | 33.3 | 15 | 55.6 | 4.669 | |
| **Hemoglobin** | | | | | | |
| •Within normal range | 19 | 70.4 | 18 | 66.7 | 1.75 | 0.082 |
| •Below normal | 8 | 29.6 | 9 | 33.3 | | |
| **Mental status:** | | | | | | |
| •Conscious | 14 | 51.9 | 26 | 96.3 | 2.887 | 0.026** |
| •Semi conscious | 13 | 48.1 | 1 | 3.7 | | |
| **Medical co- morbidities**: | | | | | | |
| •Yes | 17 | 63 | 20 | 74.1 | 9.658 | 0.028 |
| •No | 10 | 37.0 | 7 | 25.9 | | |

****= (statistically significant difference) ***=(highly statistically significant difference)**

**Table III** :- comparison between expected clinical outcomes for patients of the study groups before and after application of assessment, this table showed that, there was a statistically significant difference between the study group before and after application of assessment regarding bleeding attack, in which the lowest percentage 22.2% had persistent attack while 44.5% had no attack after application of assessment, comparing to study group before application of assessment where P value = (0.044). The table also presented highly statistically significant differences regarding systolic blood pressure, in which the result recorded highly percentage 77.8% of the study group had increased in systolic blood pressure than 100 mmhg after application of assessment, while it recorded 22.2% before application of assessment at P level = (0.000). Moreover, the table also revealed that, there was a statistically significant differences between the study group before and after application of assessment regarding laboratory tests (prothrombin time), mental status and medical co-morbidities where P value was (0.001, 0.026, and 0.028)respectively.

**Table IV** Comparison between both study and control groups in relation to patient's expected clinical outcomes after application of assessment:-

| Patient's expected clinical outcomes | Study group (B) | | Control group (A) | | **T-test** | **P-Value** |
|---|---|---|---|---|---|---|
| | No | % | No | % | | |
| **Bleeding attack:** | | | | | | |
| •Persistent attack | **5** | **18.5** | **12** | **44.4** | 9.669 | 0.040* |
| •Recurrent attack | **9** | **33.3** | **15** | **55.6** | | |
| • No attack | **13** | **48.1** | - | | | |
| **Vital signs:** | | | | | | |
| *Systolic Blood pressure* | | | | | | |
| •< 100mmhg | **8** | **29.6** | **22** | **81.5** | | 0.000* |
| •> 100mmhg | **19** | **70.4** | **5** | **18.5** | 14.026 | |
| *Pulse rate* | | | | | | |
| •> 100 b/m | **12** | **44.4** | **19** | **70.4** | | |
| •< 60 b/m | **15** | **55.6** | **8** | **29.6** | 9.251 | 0.001* |
| ***Hemoglobin:*** | | | | | | |
| •Within normal range | **18** | **66.7** | **17** | **63.0** | 2.636 | 0.001* |
| •Below normal range | **9** | **33.3** | **10** | **37.0** | | |
| ***Mental status:*** | | | | | | |
| •Conscious | **26** | **96.3** | **19** | **70.4** | 5.428 | 0.066a |
| •Semi conscious | **1** | **3.7** | **7** | **25.9** | | |
| • Unconscious | - | - | **1** | **3.7** | | |
| ***Medical co- morbidities*** | | | | | | |
| •Yes | **8** | **29.6** | **11** | **40.7** | 9.525 | 0.045* |
| •No | **19** | **70.4** | **16** | **59.3** | | |

***= (statistically significant difference) a = no statistical significance**

**Table IV:** comparison between both study and control group in relation to patient's expected clinical outcomes after application of assessment, this table presented that, there was a highly statistically significant differences between both study and control group regarding systolic blood pressure, in which the highest percentage70.4% of the study group had a systolic blood pressure more than 100mmhg after application of assessment, while 18.5% was for control group at level P= ( 0.000). at the same line, the table also revealed that, there was a statistically significant differences between both study and control group regarding pulse rate, in which 44.4% of the study group had tachycardia after application of nursing while 70.4% was control group .assessment comparing to 70,4% for the control group, with P value= (0.001). Also there was a statistically significant differences between both study and control group regarding bleeding attack and medical co-morbidities after application of assessment at level P= (0.040) and (0.045) respectively.

**Table V:-** Comparison between level of satisfaction for the study groups before and after application of assessment:-

| **Patient satisfaction** | Study G. N= 27 (X2±SD) | **%** | Study G. N=27 (X2±SD) | **%** | **T-test** | **P-Value** |
|---|---|---|---|---|---|---|
| | | | | | | 0.000*** |
| **• Communication** | 16.65±3.02 | 55.5 | 25.65±2.18 | 85.5 | 15.287 | 0.000*** |
| **• Continuity of care** | 10.04±1.91 | 40.17 | 17.16±1.65 | 68.64 | 14.025 | 0.000*** |
| **•Technical care** | 13.00±0.42 | 53 | 16.84±1.88 | 67.37 | 10.694 | 0.000*** |
| **• Consideration of patient concerns** | 10.21±1.69 | **52** | 17.28±1.76 | 86.6 | 11.915 | 0.000*** |
| **• Total scores** | 50.24±6.04 | 51.3 | 77.21±4.25 | 77.4 | 19.34 | 0.000*** |

*** = (highly statistically significant difference

**Table V:** comparison between level of satisfaction for the study groups before and after application of assessment, it can be observed from this table that, there was a highly statistically significant difference between the study group before and after application of the standards regarding Communication, Continuity of care, Technical care, Consideration of patient concerns, where P value was at levels (0.000, 0.000) respectively. In relation to the total score of patient's satisfaction level, it can be observed that, there was a highly statistically significant difference between the study group before and after application of the standards at level 50.2400 ± 6.04 and 77.21 ± 4.25 respectively where, P value was found to be (0.000).

**Table VI** Comparison between both study and control groups in relation to level of patients' satisfaction after application of assessment:-

| Patient satisfaction | Study G. N= 27 (X2±SD) | % | control G. N= 27 (X2±SD) | % | T-test | P-value |
|---|---|---|---|---|---|---|
| • Communication | 25.64±2.17 | 85.6 | 20.00± 4.41 | 66.4 | 5.727 | 0.000*** |
| • Continuity of care | 17.16± 1.65 | 68.63 | 11.80±3.57 | 47.5 | 6.814 | 0.000*** |
| • Technical care | 16.84±1.88 | 67.38 | 13.84±3.09 | 55.38 | 4.143 | 0.000*** |
| • Consideration of patient concerns | 17.28±1.76 | 86.5 | 12.60±2.38 | 65 | 7.892 | 0.000*** |
| • Total scores | 77.20±4.24 | 77.4 | 57.68±10.6 | 57.6 | 8.51 | 0.000*** |

*** = (highly statistically significant difference)

**Table VI:-** comparison between both study and control groups in relation to level of patients' satisfaction after application of assessment, this table presented that there was a highly statistically significant difference between study group and control group after assessment regarding Communication, Continuity of care, Technical care, Consideration of patient concerns, P value was significant at level (0.000) respectively. In relation to the total score of patient's satisfaction level, there was a highly statistically significant difference between control group and study group after assessment at level 57.68 ± 10.6 and 77.20 ± 4.24
respectively where P value was significant at level (0.000)

## VI. Discussion

Acute upper gastrointestinal bleeding (UGIB) is a common, potentially life threatening medical emergency. It is associated with higher rates of hospitalization, morbidity and mortality in the elderly when compared with younger patients, most likely due to higher prevalence of multiple co-morbidities. Age is an independent risk factor for mortality in UGIB, with Helicobacter pylori infection and the use of non-steroidal anti-inflammatory agents and anticoagulants being the most prevalent causal risk factors **Brooks M (2013**)$ **Monteiro S, et al.,(2016).** These patients require early risk assessment, resuscitation and an attempt to identify and treat the bleeding source. In the majority, this involves early endoscopy and endotherapy as required to achieve haemostasis, with radiological intervention or surgery needed in the minority with ongoing severe bleeding **Jairath V, et al.,(2015).** In this article, we discuss UGIB in the elderly, focusing on aetiology, risk factors and management**M.Aquarius,et al.,(2015)&Fujishiro M,et al.,(2016).**

Upper gastrointestinal bleeding (UGIB) presents a clinical problem in Egypt with a significant mortality rate which could be markedly reduced by providing the Hematemsis Unit with well trained and experienced staff. Cooperation between the medical and nursing staff is mandatory for the proper management of hematemsis patients, so the nurse at the Hematemsis Unit faced challenging responsibility in evaluating **El Ouali S et al.,(2014**)., . diagnosing the problem , instituting prompt and appropriate nursing care. The quality of nursing care depends on comprehensive and intelligent determination of the impact of nursing intervention on the health status of the patient where the patients are the concern of this determination **Robert, (2005).&Gralnek IM et al.,(2015).** The majority of the studied patients suffering from Hematemsis, lies in the middle adult and their age ranged between fourth and fifth decade. This distribution is harmony with another study done by **Kaliamurthy et al. (2011).**stated that upper gastrointestinal bleeding tends to occur at an older age. The mean age of all patients was 55 years According to the present study, the highest percent of study and control group were male This finding coincides with another study carried out by **Yavorski, (2008) $ Amany M.et al.,(2013)** . who revealed that the incidence of UGIB is 2- fold greater in males than in females, in all age groups; however, the death rate is similar in both sexes. This may be explained by the high incidence of smoking and occupational stress among men rather than women in the Egyptian community. Regarding age, there were significantly males more than females, which is similar to study by **Longstreth & Feitelberg (2008)** in which there was a distinct male preponderance. Upper gastrointestinal bleeding tends to occur at an older age and the mean age of 55 years old. Most of the studied samples had recurrent attack of hematemsis on admission; this result comes in agreement with **Adler, (2009)** who explained that, most of hematemsis patients hospitalized with history of recurrent attack of bleeding episodes. The result of the present study revealed that, there was statistically significant difference between the study and the control group after application of nursing intervention regarding bleeding attack. Also it revealed that, more than two third of the control group present

with recurrent bleeding during hospital stay, compared to minority of the study group. This means that, the bleeding attack was improved after nursing intervention implementation in the present study This findings comes in agreement with **Zimmerman, (2005)** who reported that, patient with continued bleeding after admission is associated with high risk of intervention and up to a 50-fold increased mortality. Another studies done by **Blatchford**, **(2007)** revealed that, lack of emergent intervention for initial hematemsis doubles mortality. In the same line **Cameron, (2002)&Shahinpour,(2008)** emphasized that, determination of bleeding site is a key factor in successful emergency management of patient with bleeding and can prevent recurrent bleeding and adverse clinical out comes .The result of the present study showed also an increased in systolic blood pressure than 100 mmhg and normalized pulse rate for the study group after application of nursing intervention, comparing to the control group. This finding come in agreement with **Cameron, (2002) , Rockall, ( 2005)** and **Blatchford, (2007) .** they stated that, initial shock (hypotension and tachycardia) is associated with increased mortality and need for intervention. Moreover, the results of the present study revealed that, most patients of the study group were conscious after application of nursing intervention. This finding coincides with **Bashir, (2008).** who mentioned that, restoration of the circulatory blood volume and close observation of patients; as well as trials to establish the diagnosis of the exact cause of bleeding, are all improve patients' hemodynamic status as well as patient's clinical outcome. The result of the present study illustrated stability in medical co-morbidities of the study group after application of nursing intervention, which reflects an improvement in their clinical outcomes comparing with control group .This finding come in agreement with another studies which reported that, the absence of significant co morbidities is associated with good clinical outcomes and also associated with mortality as low as 4 %, even one co-morbidities almost doubles mortality and the presence of cardiac failure or malignancy significantly worsens prognosis **Blatchfordetal.,(2007). Camero., et al., (2002), Shahinpour etal., (2008) and Rockall,(2005**). Patient satisfaction in the present study is presented fewer than four main headings namely: communication, technical care, continuity of care and concern items. Result revealed that, the total mean score regarding level of satisfaction of the study group after application of nursing intervention was improved compared with the total score before application of nursing intervention. This finding in agreement with **Morsy, (2000)**. who reported that the overall level of patient satisfaction was two third Another study found that overall level of patient satisfaction was 87.4% **Lewis and Woodside.(2007).**The present study showed also that, level of satisfaction for the study group was increased in relation to communication after application of nursing intervention. In another study by **Shppard,(2003).** researcher found that patients satisfaction with community mental health service to be significantly related to many aspects of work undertaken by community psychiatric nurses and social workers. These findings are consistent also with **Morsy, (2000).** who reported similar findings about the patient satisfaction in relation to technical care. Recent study carried out by **Hinshow, (2004).** reported that, patients were highly satisfied. In another study by **Hinshaw, and Atwood (2004).** found a drop in patient satisfaction in relation to technical care. In relation to continuity of care, this study showed that more than half of the study patients were satisfied after nursing intervention implementation. This is in agreement with **Hjortdahl,(2009).** about continuity of care and has been found to be a significant factor in relation to patient satisfaction. **Nelson, (2003).** found also that, receiving attention & concern from nurses were a common source of satisfaction. This showed in agreement with the present study results. Acute gastrointestinal bleeding is an extremely common clinical condition affecting a large patient population. The diverse clinical presentations, etiologic factors and treatment modalities are important to understand, and early identification of the source of bleeding is, the essential component in reducing morbidity and mortality. So, the present study was carried out to document information on the clinical outcome of patients admitted with UGIH to a government hospital in Egypt with the intention of encouraging staff lead the provision of a protocol led service for these seriously ill patients who require urgent and skilled management. Management of patients with UGIH should include assessing the risk of gastrointestinal bleeding, minimizing the duration of exposure to anti platelet and antithrombotic agents in patients at high risk, and recognizing the early signs of bleeding **Mumtaz et al.,(2008).**

## VII. Conclusion

Assessment for patients with upper gastrointestinal bleeding had been proven to have a positive effect on the expected clinical outcomes of the study group which is reflected on improvement of patients' clinical outcomes and their satisfaction . Knowledge of the gastrointestinal lesions likely to affect elderly patients, thorough history taking, and a complete physical examination should help to determine whether the bleeding source is from the upper or lower gastrointestinal tract. In a patient with acute gastrointestinal bleeding hemodynamic stabilization should always precede endoscopic evaluation. In elderly patients with acute hemorrhage, urgent endoscopic evaluation can be undertaken, provided a risk-benefit assessment has been performed and informed consent has been obtained.

## VIII. Recommendation

It is recommended that provision of in service training program for nurses on update of management for patient with upper gastrointestinal tract bleeding to refresh their knowledge, continuous supervision and assessment of patients with upper gastrointestinal tract bleeding.

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