

## **SUMMARY**

The bone marrow in the human body serves as the main factory for formation of blood and its components such as red blood cells, white blood cells, platelets and plasma. Bone marrow transplantation has become one of the most important treatment plans to overcome many diseases such as leukemia and B-Thalassemia and lymphoma that were difficult to be treated before. The nurse who care for patients with BMT should covers all aspects of critically nursing care. Physiological, psychological and emotional support should be provided. Nurses should play great role in providing optimal care for these patients during all phases of the bone marrow transplant.

### **Aim of the study**

The aim of this study was to assess nurses` performance in caring for patients with bone marrow transplantation.

### **Research questions**

- 1- Does the nurse have satisfactory knowledge regarding care for patients with bone marrow transplantation ?
- 2- Does the nurse have satisfactory practice regarding care for patients with bone marrow transplantation?
- 3- Does the nurse have positive attitude regarding care for patients with bone marrow transplantation?

### **Subject and Methods**

#### **Setting:**

This study was conducted at the bone marrow transplantation units at the following Hospitals: Cairo university hospitals (EL-Manial hospital), Ain shams university hospital, Nasser institute for research and

treatment and Dar El-fouad hospital. Four hospitals were selected for collecting appropriate, reasonable and representative numbers from the nurses caring for patients with bone marrow transplantation in the previous mentioned settings.

### **Subjects:**

A convenience sample of ( 60 Nurses) working in bone marrow transplantation units at the previous mentioned hospitals as the following; Cairo university hospitals (EL-Manial hospital) (15 nurses) , Ain shams university hospital (15 nurses), Nasser institute for research and treatment (23 nurses) and Dar El-fouad hospital (7 nurses).

### **Implementing this study required three tools:**

#### **(A) Interview questionnaire sheet (Appendix II, A):**

It was developed by the researcher after reviewing relevant literature to assess nurses` knowledge regarding nursing care for patients with bone marrow transplantation. It was written in simple Arabic language in the form of multiple choice questions. It consisted of two parts:

##### **Part (1) Socio Demographic Data Sheet:**

That was included socio-demographic characteristics such as; (age, marital status, educational levels, experiences years and attendance of training program.

##### **Part (2): Nurses Knowledge questionnaire sheet:**

It was concerned with nurse's knowledge regarding nursing care of patients with bone marrow transplantation. This part includes questions about definition of bone marrow, types, indications of bone marrow

transplantation, complications of bone marrow transplantation...etc. This part was covering the following:

- 1- 31 questions related to bone marrow [Definition, function, types, indications, types of bone marrow transplantation and complications].
- 2- 15 questions related to nursing intervention for patients with bone marrow transplantation.
- 3- " 9 questions" related to nursing role towards infection control for patients with bone marrow transplantation.
- 4- "5 questions" related to health education for patients with bone marrow transplantation.

**(B) Nurses performance observational checklist (Appendix II, B):**

It was developed to assess nursing practices in caring for patients with bone marrow transplantation. It was adopted from **Abd El-azem, (2000)** and **Mahdy, (2009)** and modified by the researcher. The tool was covered all procedures about nursing care for patients with bone marrow transplantation include the following:

- 1- Assessment of patients with bone marrow transplantation.  
(4 items with 13 sub items).
- 2- Nursing intervention for patients with bone marrow transplantation.  
(11 items with 205 sub items).
- 3- Nursing management for potential complications of bone marrow transplantation. (8 items with 51 sub items).
- 4-Health education for patients with bone marrow transplantation.  
(4 items with 15 sub items).

### **(C) Likert Scale (Appendix II, C):**

It was utilized to assess nurses' attitude toward care of patients with bone marrow transplantation. It is quoted from **Ahmed, (2008)**. It is consisting of (25) items. The scoring system of likert scale would be systematic as the following: each item was assigned a score of (5) if the participant response is strongly agree, (4) if agree "indicated positive attitude", (3) if undecided, (2) if disagree and (1) if strongly disagree "indicates negative attitude".

### **Results:**

#### **The main findings of this study were:**

- More than one third (33.3 %) of the studied sample were within age group of ( $20 < 25$ ) years with a mean age of  $25.47 \pm 5.68$  years. Concerning marital status, nearly half (51.7%) of the studied group were married, , (30.0%) of them had technical nursing institute and (38.4%) of them had years of experience ranged from ( $2 < 5$ ) years. As far as, more than one half (55.0%) of nurses had attended training courses about bone marrow transplantation.
- Regarding nurses` knowledge related to bone marrow transplantation. The majority of nurses were had satisfactory knowledge regarding function of bone marrow, definition of bone marrow transplantation, immune system and laboratory investigation needed for bone marrow (68.3%, 71.7% ,75.0% and 73.3%) respectively with highly statistically significant differences ( $P < 0.001$ ) .

- As regards total nurses` knowledge related to caring for patients with bone marrow transplantation, there (36.7%) of them had satisfactory knowledge and (63.3 %) had unsatisfactory knowledge with Statistical significant difference ( $P \leq 0.05$ ).
- As regards to the nurses` practice about assessment of patients with bone marrow transplantation , more than two third (68.3 %) of nurses had satisfactory practice regarding respiratory assessment . While the majority of them (93.3% and 80.0% ) had unsatisfactory practice related to cardiovascular assessment and Gastrointestinal assessment with highly statistical significant difference ( $P \leq 0.001$ ).
- The majority of nurses had unsatisfactory practice (96.7%) related to caring for patients with bone marrow transplantation where only (3.3%) of them had satisfactory practice with highly statistical significant differences ( $P \leq 0.001$ ).
- There was statistical significant differences between nurses regarding their attitude as more than two third of nurses (65.0%) had positive attitude (35.0%) of them had negative attitude toward caring for patients with bone marrow transplantation with highly statistical significant difference ( $P \leq 0.001$ ).
- There was statistically significant difference ( $p \leq 0.05$ ) between nurses knowledge in relation to socio-demographic characteristics such as age, qualification and experience years in BMT units.
- There was statistically significant differences ( $X^2 = 9.216$  ,  $P < 0.05$ ) between nurses` practice in relation to their experience years in BMT units.

- There was highly statistical significant difference ( $X^2=18.403$  ,  $P \leq 0.001$ ) between nurses attitude in relation to their age and There was highly statistical significant difference ( $X^2= 19.933$  ,  $P \leq 0.001$ ) between nurses attitude in relation to their experience years as (11.6 % ) of nurses had positive attitude whose had experience from  $5 < 10$  yrs.
- There was a positive correlation (1) between nurses knowledge and their practice, (2) between knowledge and attitude and (3) between practice and attitude ( 0.061, 0.046 and 0.161) respectively, with no statistically significant difference ( $P > 0.05$ ).

## **Conclusion:**

⇒ Finding of the this study revealed that almost two thirds of nurses caring for patients with BMT had unsatisfactory knowledge, The majority of nurses had unsatisfactory practice and Two thirds of them had positive attitude toward such group of patients.

## **Recommendations:**

**The following are the main recommendations:**

- 1- Standardized nursing procedures should be provided in BMT units order to guide the nurses caring of patients with BMT.
- 2- The importance of providing pamphlets, boosters and booklets for nurses caring of patients with BMT to gain adequate, satisfactory and optimal information about bone marrow transplantation.

3- ongoing in service training programs should be developed to prepare the new nursing staff before working in bone marrow transplantation units as specialty units.

4- Further researches are needed to study the effect of in service training program on nurses' performance and consequently on patient outcomes.

5- Nursing curriculums must be include specific caring of patients with BMT and nursing management with great emphasis on application through adequate training and supervision of students indifferent clinical setting, so that the student nurses are prepared to deliver quality care.

6-Employing only qualified and trained personal in health care setting, especially bone marrow transplantation units.