

✎ INTRODUCTION ✎

Bone marrow transplantation (BMT) is a relatively new medical procedure being used to treat diseases once thought incurable. Since its first successful use in 1968, BMTs have been used to treat patients diagnosed with leukemia, a plastic anemia, lymphomas such as Hodgkin's disease, multiple myeloma, immune deficiency disorders and some solid tumors such as breast and ovarian cancer (*Tavil , et al., 2007*). In 2006, more than 7, 500 patients underwent BMTs nationwide. Although BMTs now save thousands of lives each year, 70 percent of those needing a BMT using donor marrow are unable to have one because a suitable bone marrow donor cannot be found (*National Marrow Donor Program,2011*).

The World Health Organization estimated that total number of patients with BMT in firstly of 2011 has reached 150.000 patients allover the world. The success rate for BMT becomes 97% for B – Thalassemia patients and decrease to 58% for patients diagnosed with cancer in late phases. In Egypt, the number of patients undergoing BMT has noticeable yearly increasing as the number range from 300 to 550 patient (*Egypt Demographic Health survey, 2010*).

The main primary goal of performing BMT is destroying the patients' own diseased blood- producing bone marrow and replacing it with hematopoietic cells from healthy donors. Physicians and scientists are using many techniques to fight cancer. One of those is bone marrow transplantation, because it is a fairly new procedure between 10 and 15 years old (*Larsen, and Lubkin, 2009*) .

There are five possible sources for BMT ; autologous (client receive BMT from self), allogeneic (BMT is from a histocompatible donor but unrelated donor), syngeneic (BMT is from an identical twin), stem cell transplant and Umbilical cord blood of newborns (*Livestrong, 2009*).

Patients with BMT usually go to medical centers for treatment and stay there from 4 to 8 weeks to decrease the chance of exposure to infection. (*Cowan, 2005*) During the hospitalization period the patient will need close monitoring of blood pressure and vital signs, taking antibiotics, antifungal medications and may need many blood transfusions (*Abd- El Azem, H.M. 2000*).

Nursing assessment is a systematic method of collecting data about a patient for the purpose of determining the patient's health status and identify any actual or potential health problems (*Carpenito, 2006*). Assessment data are gathered through the complete health history and health assessment. In addition, ongoing monitoring is crucial to remain aware of patient needs and the effectiveness of the nursing care that the patient receives (*Lewis et al., 2005*).

The nurse plays an vital role in caring for patients with BMT through assessing patient's condition to determine patient's needs related to physical, social, socioeconomic, psychological and spiritual needs which have an impact on patient's health. Thus, the nurse who working in BMT units must possess abroad of knowledge, practice or skills and attitude for different nursing care delivery for those patients (*American Cancer Society , 2007*).

Significant of the study:

Over the past 25 years the field of BMT in Egypt has shown a tremendous progress and consequently, there has been an exponential growth of the number of transplanted patients as well as the number of indications for BMT from April 1998 to September 2009, "1250-1300" patients were transplanted in BMT centers in Egypt. 75% of those patients were adult. The main indications for BMT were chronic myelogenous leukemia (CML) 35% , Acute myelogenous leukemia (AML) 18% , Acute lymphocytic leukemia (ALL) 11%, Solid tumors 10% and lymphoma 5% (*Egypt Demographic Health survey, 2010*).

Bone marrow transplantation can be life – saving procedure, but it can also cause premature death due to the multitude of side effects that can arise from complications which may be the firstly cause of mortality of patients after BMT. Nurses should provide more helpful and specialized care in treating the post- BMT complications (*Wochna,2004*).

So the current study will be carried out in an attempt to assess nurse performance in caring for patients with bone marrow transplantation, through assessing nurses` knowledge, practice and attitude in this approach.