Hematopoietic Stem Cell Transplantation
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Abstract

**Background:** One of the major changes in transplantation has been the development of multiple new sources of stem cells (bone marrow, peripheral blood stem cells, and cord blood) for transplant. Because of this proliferation, many now use the term stem cell transplantation (SCT) instead of bone marrow transplantation (BMT) to encompass these various types of transplantation. The aim of the present study is introducing this treatment protocol.

**Materials and methods:** In the present review literature, a broad search of the English and Persian-language literature was performed incorporating both electronic and manual components from 1999 to 2010.

**Results:** Hematopoietic stem cell transplantation (HSCT) is becoming an increasingly common treatment for many sever types of cancer, blood disorders, and immunological disorders. This procedure involves the use of very high dose of chemotherapy, radiation, or both to treat cellular deficiency or disease. This paper argues about HSCT, three types of transplants, phases of HSCT process and side effects of this treatment.

**Conclusion:** To conclude, due to increase of HSCT for malignant and non malignant diseases, it is imperative that nurses have the knowledge about this protocol when working with these patients. Such knowledge as this will assist health care providers in offering support to the patients, so quality of life in patients will improved.

**Keywords:** Allogeneic, Autologous, Bone marrow transplantation, Hematopoietic stem cell transplantation, peripheral blood stem cells transplantation, stem cell, Syngeneic