

Allogeneic Stem Cell Transplant. The nurse as patient educator. Prevention of tumor lysis syndrome

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CONFERENCIA

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Allogeneic Stem Cell Transplant

Indications for Stem Cell Transplant

Stem cell transplants are used for a variety of diseases, including leukemia, lymphoma and certain solid tumors. This therapy is reserved for patients seeking a cure of their disease, or with a high risk of recurrence after standard treatment protocols.

Nursing Interventions

In collaboration with other members of the health care team, the nurse is responsible for providing comprehensive supportive care and detecting and treating complications associated with the period of myelosuppression following transplantation.

1. Infection-early detection of infection is vital for the immunocompromised patient.
 - a. Signs and symptoms may be subtle in this population.
 - b. Risk factors include prolonged neutropenia, graft-versus host disease, hematologic malignancy, relapsed disease, higher doses of radiation, and colonization with organisms.
 - c. Role of protective isolation; colony stimulating factors
2. Thrombocytopenia
 - a. Common sites of hemorrhage
 - b. Assessment parameters
 - c. Transfusion parameters
3. Anemia
 - a. Symptoms
 - b. Complications
 - c. Indications for transfusion

The Nurse As Patient Educator

Purpose of Patient Education

Patient education is a series of experiences designed to help patients and families cope with a crisis, gain information, develop self-care skills, and use attitudes and strategies that promote optimal health.

Role of The Nurse

The nurse is responsible for creating and implementing a teaching plan that addresses the unique learning needs of the patient and family. Information that is provided must be consistent with the medical plan of care. The patient teaching plan must offer information in a form that is accessible to the patient and pertinent to the phase of their illness.

Designing A Successful Teaching Plan

1. Assess the patient's physical and medical status. Evaluate the patient's existing knowledge base, willingness, readiness and ability to learn.
2. Establish a prioritized list of learning needs.
3. Identify barriers and obstacles to learning.
4. Establish concrete measurable learning objectives.
5. Gather suitable teaching materials that are consistent with the patient's learning style.
6. Implement the teaching plan
 - a. Create the proper atmosphere and minimize distractions
 - b. Use multi-sensory teaching aides

- c. Provide adequate opportunity for questions and feedback.
 - d. Evaluate patient understanding
7. Document both the teaching process and outcome.

Prevention of Tumor Lysis Syndrome

Definition

Tumor lysis syndrome (TLS) is a metabolic imbalance characterized by the rapid release of intracellular potassium, phosphorus and nucleic acid into the blood after tumor cell kill. This event is most likely to occur during chemotherapy or radiation treatment for hematolymphatic malignancies.

Risk Factors

Patients with bulky tumors, or tumors with a high growth fraction, pre-existing renal dysfunction, increased uric acid and decreased glomerular filtration all have increased risk for TLS. Other risk factors include splenomegaly, lymphadenopathy, and leukocytosis.

Nursing Interventions

1. Evaluate for presence of risk factors prior to the start of therapy
2. Design a plan of care directed toward prevention of complications
 - a. Begin aggressive intravenous hydration 24 to 48 hours prior to the start of treatment.
 - b. Diuretic therapy
 - c. Allopurinol
 - d. Alkalinization of urine
3. Monitor carefully for evidence of complications during treatment and for at least 72 hours after completion of therapy to prevent renal failure; possible permanent renal damage..
 - a. Assess for signs and symptoms of volume overload, electrolyte abnormalities
 - b. Promptly report electrolyte imbalances to physician.
 - c. Measure intake and output at least every 4 hour to 8 hours.
 - d. Keep urine pH above 6 or 7
 - e. Avoid medications that block the excretion of uric acid, especially probenecid, thiazide diuretics, aspirin and radiographic contrast dye. Avoid medications containing phosphate or potassium.