

Nurses and chemotherapy

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plan

- objectives
- Nursing intervention
- Side effects of chemotherapy
- Manage popular complications
 - infection
 - septic shock
 - bleeding

objectives

- Describe a method to safely transcribe chemotherapy orders
- Discuss methods to safely administer chemotherapy
- Apply a multidisciplinary approach to analyze potential areas for error including physicians , pharmacy and nursing (administering and monitoring)

Chemotherapy

- **The treatment of cancer using specific chemical agents or drugs that are destructive to malignant cells and tissues.**
- **The term comes from two words that mean "chemical" and "treatment."**

Cytotoxic

- **literally translated means 'toxic to cells'.**

Chemotherapy may be used conventionally to:

- Cure patients
- Prolong survival
- Palliative care symptom control

- Chemotherapy administration is among the more hazardous and challenging activities in all of medicine
 - Chemotherapy can have toxic adverse effects
 - Oncology teams often work in different areas, hand off patients, and follow complex treatment regimens

Steps to Ensure Safety

Steps to Ensure Safety

- Preprinted order sets eliminate
 - Unacceptable abbreviations or abbreviations for chemotherapy drugs
- Orders will **ALWAYS** include:
 - Allergies
 - Height and weight to allow for calculation of body surface area (BSA)

Steps to Ensure Safety

- Protocols are kept:
 - Out-patient clinic
 - Inpatient unit
 - Pharmacy

Steps to Ensure Safety

- ADMINISTRATION and MONITORING
 - utilizing the orders, verify BSA and math corresponding to the drug they are administering
 - verify information on bag/bottle label to written order
 - Spelling patient's name
 - Medical record number
 - Drug name, amount, and rate of infusion

Steps to Ensure Safety

- ADMINISTRATION and MONITORING
 - verify
 - Rate of infusion
 - Pump settings

- Chemotherapy drugs are high cost, high risk

- Systems for safe and high quality medications need organisational support and executive and clinical leadership to be successful

- The medication history is used as the basis for therapeutic decision making, for ensuring continuity of regular medicines while a patient is in hospital and to identify adverse medicines events.

Nursing Intervention

Nursing Intervention

- MAINTAIN TISSUE INTEGRITY
- Handle skin gently
- Do NOT rub affected area
- Lotion may be applied
- Wash skin only with SOAP and Water

Nursing Intervention

- MANAGEMENT OF STOMATITIS
- Use soft-bristled toothbrush
- Oral rinses with saline gargles/ tap water
- Avoid ALCOHOL-based rinses

Nursing Intervention

➤ MANAGEMENT OF ALOPECIA

Alopecia begins within 2 weeks of therapy

➤ Regrowth within 8 weeks of termination

➤ Encourage to acquire wig before hair loss occurs

➤ Encourage use of attractive scarves and hats

➤ Provide information that hair loss is temporary
BUT anticipate change in texture and color

Nursing Intervention

- PROMOTE NUTRITION
- Serve food in ways to make it appealing
- Consider patient's preferences
- Provide small frequent meals
- Avoids giving fluids while eating
- Oral hygiene PRIOR to mealtime
- Vitamin supplements

Nursing Intervention

- RELIEVE PAIN
- Mild pain- NSAIDS
Moderate pain- Weak opioids
- Severe pain- Morphine
- Administer analgesics round the clock with additional dose for breakthrough pain

Nursing Intervention

- DECREASE FATIGUE
- Plan daily activities to allow alternating rest periods
- Light exercise is encouraged
- Small frequent meals

Nursing Intervention

- IMPROVE BODY IMAGE
- Therapeutic communication is essential
- Encourage independence in self-care and decision making
- Offer cosmetic material like make-up and wigs

Nursing Intervention

- Nutritional assessment and weights
- Dentition – oral checks
- Monitor for signs of suprainfection, low grade temperatures, rash, etc...
- Vital signs before, during, and after treatments
- Assess pain level

- **Educate patients and family members:**
- side effects of treatments, meds
- care of port and IV sites
- oral hygiene
- symptoms to report, shortness of breath or signs of infection
- Increase fluid intake

Nursing Intervention

- ASSIST IN THE GRIEVING PROCESS
- Some cancers are curable
- Grieving can be due to loss of health, income, sexuality, and body image
- Answer and clarify information about cancer and treatment options
- Identify resource people
- Refer to support groups

Nursing Intervention

- MANAGE COMPLICATION: INFECTION
- Fever is the most important sign (38.3)
- Administer prescribed antibiotics
- Maintain aseptic technique
- Avoid exposure to crowds
- Avoid giving fresh fruits and veggie
- Handwashing
- Avoid frequent invasive procedures

Nursing Intervention

- **MANAGE COMPLICATION:** Septic shock
- Monitor VS, BP, temp
- Administer IV antibiotics
- Administer supplemental O2

Nursing Intervention

- MANAGE COMPLICATION: Bleeding
- Thrombocytopenia ($<100,000$) is the most common cause
- $<20,000 \rightarrow$ spontaneous bleeding
- Use soft toothbrush
- Use electric razor
- Avoid frequent IM, IV, rectal and catheterization
- Soft foods and stool softeners

Side effects of Chemotherapy

Side effects of Chemotherapy

- Alopecia
- Fatigue
- Anemia
- Leukopenia
- Thrombocytopenia
- Always – Nausea, Vomiting, Diarrhea
- Neurotoxicity & neuropathies
- Capillary leakage
- Headaches
- Fluid and electrolyte imbalances

- **Side effects of Chemotherapy**
- Anorexia – change in taste buds
- Back aches
- Joint aches
- Blood clots
- Oral mucositis – (reduced significantly by L-glutamine amino acids orally)
- Supra opportunistic infections
- Septic DIC
- Tumor lysis syndrome
- Edema or pulmonary edema

Nursing Diagnoses

Nursing Diagnoses

- Disturbance in self esteem, body image
- Altered nutrition, less than body requirements
- Risk for fluid volume excess or deficit
- Impaired skin integrity
- Pain, chronic
- Decreased cardiac output
- Self-care deficit

Nursing Diagnoses

- Alteration in tissue perfusion
- Knowledge deficit
- Risk for injury
- Impaired physical mobility
- Sensory perception alterations
- Alterations in bowel patterns
- Alterations in mucous membranes
- Anxiety and Fear

Nursing Diagnoses

- Depression
- Grief
- Respiratory compromise
- Spiritual distress
- Impaired social interactions
- Sleep pattern disturbance
- Altered family roles

Pharmacological interventions

- Megace, Marinol – for appetite stimulation
- **Premedications** for nausea, vomiting, edema, headaches: usually on the protocol for chemo

Antiemetics;

Zofran – 24 hour control

Tigan, Kytril, ativan, anzamet, Compazine, benadryl, reglan

Corticosteroids

Pharmacological interventions

- **Analgesics**
- **IV electrolytes** and fluid replacement
- Stool softeners to counteract constipation
- **Leukine/Prokine** for leukopenia
- **Neupogen** for neutrophilia
- **Neumega** for thrombocytopenia
- **Diuretics** for edema

Key points

- Chemotherapy is a major treatment in curing or to prolong survival in cancer patients
- It has a wide range of side effects depending on the drugs given.
- Nurses have a key role to play in caring for a patient receiving chemotherapy
- Safety issues are paramount in administration.

Conclusion

- The Basis for improving the chemotherapy administration process is to help achieve one of the most important patient safety goals: Medication management from prescribing through dispensing to administration.

Thank you