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 → 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