**MATRIC NUMBER: 16/MHS02/036**

**ASSIGNMENT TITLE:** ONCOLOGY AND NURSING CARE OF PATIENTS WITH CANCER

**COURSE TITLE:** ADVANCED MEDICAL/ SURGICAL NURSING II

**COURSE CODE:** NSC 408

**QUESTIONS**

1. Discuss your nursing responsibilities towards a patient scheduled to receive neoadjuvant treatment for the management of cancer.
2. Discuss your responsibilities towards a patient receiving radiotherapy on an oncology unit where you practice.
3. What precautions should you take while caring for a patient receiving chemotherapy on your unit?

**NURSING RESPONSIBILITIES TOWARDS A PATIENT SCHEDULED TO RECEIVE NEOADJUVANT TREATMENT FOR THE MANAGEMENT OF CANCER**

Neoadjuvant therapy refers to giving drug treatments before the surgery. This helps in shrinking the tumor and makes the surgery easier for the patient. Neoadjuvant therapy aims to reduce the size or extent of the cancer before using radical treatment intervention, thus both making procedures easier and more likely to succeed and reducing the consequences of a more extensive treatment technique, which would be required if the tumor were not reduced in size or extent.

**INDICATIONS**

Indications for neoadjuvant chemoradiotherapy includes

1. the presence of clinically node-positive disease in a patient with magnetic resonance imaging (MRI)-staged or transrectal endoscopic ultrasound (EUS)-staged cT1/2 rectal cancer
2. a distal rectal tumor for which an abdominoperineal resection (APR) is thought to be necessary,
3. a tumor that appears to invade the mesorectal fascia

**RESPONSIBILITIES**

* Assessment

1. Assess for anorexia, nausea, vomiting and diarrhea
2. Assess fluid and electrolyte balance
3. Assess for secondary neurologic impairment
4. Assess for patient nutritional status
5. Assess for any signs of irritation secondary to radiation
6. Monitor and assess heart rate and blood level

* Patient education

1. Educate patient on the treatment process
2. Communicate frequently with patient and encourage them to ask questions
3. Educate them on the importance of oral hygiene
4. Educate them on the importance of foods rich in proteins, fruits, and vegetables
5. Encourage them to eat smaller meals frequently

* Patient support

1. Ensure the patient is not infected by encouraging the use of PPE
2. Provide holistic and individualized care to the patients
3. Establish rapport to promote care
4. Provide supportive care like home visits

* Patient counselling

1. Promote hope
2. Be truthful in relating with patients and relatives
3. Prepare relatives on the anticipated loss of loved ones
4. Do not make promises
5. Counsel them on importance of follow up care

* Physical care

1. Use of PPE during administration of therapies
2. Oral mucosa of the patient must be intact by maintaining oral hygiene

* Patient continuity of care

1. Follow up care

**RESPONSIBILITIES TOWARDS A PATIENT RECEIVING RADIOTHERAPY ON AN ONCOLOGY UNIT WHERE YOU PRACTICE**

**TELETHERAPY**

The radiation source is exterior to the tumor such as the use of linear accelerator.

1. Remove all opaque objects such as pins, buttons and hairpins and replace clothing with a gown for body X-rays.
2. Have patient perfectly still; maintain position with the use of foam, plastic, plaster (material) devices and/or variety of other materials that can conform to the patient’s anatomy.
3. Tell the patient there will be no sensation or pain accompanying radiation therapy.
4. Advise the patient that he will be alone in the room for the protection of the technician, but will be in voice contact.
5. Determine from the physician what has been told to the patient about radiation therapy
6. If series of treatments are to be given, include the patient in the planning phase.

**BRACHYTHERAPY**

* The radiation source is used for surface, interstitial, or intracavity applications

1. The nurse should inform the patient that some skin reaction can be expected but that varies from patient to patient.
2. Do not apply lotions, ointments, cosmetics, etc. to the site of radiation unless prescribed by the physician. Cornstarch may be used when the skin is dry and or itchy. Discourage vigorous rubbing or scratching. It may destroy skin cells.

**TECHNIQUES WHILE WORKING WITH PATIENTS UNDERGOING RADIATION THERAPY:**

1. Put on shoe covers and protective gloves before entering patients room.
2. Work quickly but effectively and courteously. Minimize your time in the room.
3. Note: No matter how long you are in the room, you will not receive a radiation exposure large enough to cause adverse effects.
4. Leave all trash, linens, and food trays in the room
5. After leaving the room, wash your hands.
6. Personnel should not smoke, eat or drink in areas where unencapsulated radio active is used in patient treatment or if the possibilities of contamination of the hands persist.

**GENERAL PROCEDURES FOR OBTAINING SPECIMENS FROM THERAPY PATIENTS**

1. Read the instructions posted in the door.
2. Specimen containers must be labeled with radioactive material labels or tape to identify them as radioactive.
3. Put on a face mask if the patient has a tracheostomy or has symptoms of a respiratory infection.
4. Never use sink for handwashing/ use telephone/ cellphones while in the room.

**NURSING CONSIDERATIONS IN EXTERNAL RADIOTHERAPY:**

1. It is important that the patient receive an explanation of the procedure and precautions.
2. Orient the patient and his family in advance, answer their questions and reassure them that the treatments are well controlled and adequate protection is used.
3. Following the treatment, observe for possible reactions.
4. Instruct and suggest care of the skin
5. Avoid patient to contact with other persons with infections
6. General supportive care applicable to all patients receiving radiotherapy include extra rest, an increase fluid intake and a high calorie, high protein, high vitamin diet
7. When reaction develops, reassure that they are not unexpected and are not an indication of a recurrence or worsening of his cancerous disease.

**NURSING RESPONSIBILITIES IN INTERNAL RADIOTHERAPY:**

1. An explanation to the patient of the procedure and the precautions
2. Place the patient in isolation in a single room and indicate that no visitors are allowed
3. Provide a telephone and radio or television and reading materials
4. In close contact with patient always wear a lead apron or gown and rubber gloves
5. Wear a monitoring badge which records the amount of radiation received by the patient
6. Visit patient once in a while
7. Nurse should wash hands thoroughly after any contact with patient and other equipment
8. Linens, dishes, syringes, needles and other treatment equipment are monitored before being returned.

**FOR INFANTS AND CHILDREN**

* No cream, no lotion should be applied to radiation areas until the treatment series is completed.
* If creams contain any metal, these could distort or interfere with the entrance of radiation.
* If the head will be irradiated, a dental consult may be suggested. This can slow healing of a tooth extraction.

**DURING TREATMENT:**

* Require them to be still for a period of time possibly on an uncomfortable table.
* Assure patients and the child that during the treatment, just as there is no sensation from x-ray exposure, the child may will experience no sensation from radiation exposure.
* Infants are usually prescribed a sedative or conscious sedation before therapy to ensure that they be still during the procedure.
* To make this approach affective, keep the child fairly active early in the day and introduce activities after the sedative is administered.

**AFTER TREATMENT:**

* If head is involved in therapy, alopecia (hair loss) may result.
* Radiation to the head may reduce salivary gland function, leading to a constantly dry mouth.
* Tooth growth may be halted due to root therapy.
* Radiation to bone marrow may depress blood cell and platelet production.
* Children undergoing radiation therapy need their leukocytes and platelet counts monitored periodically for changes.

**FOR CLIENTS UNDERGOING RADIATION:**

* Clients with radioactive implants are a source of radiation to the immediate environment.
* The nurse who is in close contact with such clients also needs to wear a lead apron.
* Nurses must deal safely with radioactive body discharges by wearing gloves and in some instances placing excreta in containers for special disposal.
* The nurse must wash gloved hands well before and after removing the gloves and placed contaminated materials in a special containers for special disposal.
* Nurses must make sure they understand treatment and the precautions they need to take. Often such clients are restricted to bed or to a confined area to protect others.
* These clients need emotional support to deal with the precautions and will likely accept treatments and precautions better when they know what will happen, when and why.
* Exposure of the reproductive organs of mice and rabbits to X rays has caused gene mutations that resulted in malformed offsprings and geneticist believe that comfortable effects can occur in humans.
* Knowing these, great care is taken to protect both the nurse and patient from unnecessary exposure.
* Chemotherapy and radiation therapy: knowledge of the appropriate routes, doses and reactions is required.
* Infection control: nurses must be aware of standard infection control precautions.
* Nausea and vomiting are most likely to occur when the radiation dose is high or if the abdomen or another part of the digestive tract is irradiated. Sometimes nausea and vomiting occur after radiation to other regions, but in these cases the symptoms usually disappear within a few hours after treatment.
* Nausea and vomiting can be treated with antacids, Compazine, Tigan or Zafran.
* Fatigue frequently starts after the 2nd week therapy and may continue until about 2 weeks after the therapy is finished.
* Patients may need help to limit their activities, take naps and get extra sleep at night.

**WHAT PRECAUTIONS SHOULD YOU TAKE WHILE CARING FOR A PATIENT RECEIVING CHEMOTHERAPY ON YOUR UNIT?**

1. Appropriate protective Gear MUST be worn before start of procedure
2. Gloves should be changed every 30 minutes. In case of visible contamination, gloves must be changed immediately
3. Ventilation slots should be left uncovered
4. Work surfaces MUST be cleaned with water and afterwards with 70% alcohol.
5. All waste MUST be put in the appropriate waste reservoirs
6. After completing procedure, and removing protective equipment, staff should thoroughly wash hands and face

**SAFE HANDLING DURING ADMINISTRATION AND NURSING OF PATIENTS RECEIVING CYTOTOXICS**

* 1. Appropriate protective Gear MUST be worn before start of procedure.
  2. Cover skin completely
  3. Use swab or cotton pad when injecting into a cytotoxic drug solution
  4. When the application is finished, infusion system should not be removed or broken off the bottle
  5. Contaminated linen should be put immediately into the laundry bag
  6. Protective clothing should be worn when handling excreta

**STORAGE OF CYTOTOXIC MEDICINES**

1. There should be designated areas for storing cytotoxic medicines.
2. These designated areas will have clearly visible labels
3. The refrigerators for storing cytotoxic medicines will be those that are easy to clean

**HANDLING SPILLAGES**

1. After spillage of cytotoxic drugs, the contaminated area should be isolated and cleaned immediately
2. PPE should be worn during the cleaning
3. Spilled substances should be soaked up with sufficient quantities of absorbent material
4. The spill kit should be replaced immediately after use

**SAFE HANDLING OF ORALLY ADMINISTERED CYTOTOXIC DRUGS**

1. All packages containing cytotoxic drugs should carry clearly visible warning label
2. Powder free gloves should be worn while counting tablets
3. A dedicated counting tray and disposable tongue depressor should be used
4. When tablets have to be broken, a plastic bag should be used
5. Counted tablets should be placed in a separately labeled dosage box
6. Tweezers should be used for administration

**WASTE DISPOSAL & MANAGEMENT**

1. Cytotoxic waste includes all those materials which have come into contact with cytotoxic drugs during the process of reconstitution and administration
2. Cytotoxic waste must be segregated, packaged, and disposed of in a way that personnel and the environment are not contaminated.
3. Cytotoxic waste must be collected in clearly marked dedicated containers made from hard, robust material, which is shock-resistant and can withstand external pressure during transportation.
4. The containers should be of a dedicated colour and display a recognizable symbol for cytotoxics.
5. All sharps waste must be placed in puncture resistant containers.
6. All cytotoxic waste must be placed in secondary packaging and sealed to ensure that leakage cannot occur, and must be clearly labelled to indicate the presence of cytotoxic waste.
7. Cytotoxic waste should be clearly labelled & stored in easily identifiable and dedicated storage area (awaiting incineration)
8. Cytotoxic waste must be incinerated in a facility approved for the destruction of cytotoxic waste.