

Nursing Care of the Cancer Patient

Nursing 101

Physical Impact of Cancer

Regardless of treatment type, cancer ALWAYS affects a person's physical and psychological functioning

- Nursing care is related to:
 - Diagnosis
 - Treatment modality
- Stressful time
- Physiological Effects:
 - Local – result of the tumor
 - Systemic – metastasis; treatment modality

Physical Impact of Cancer is from the disease itself or side effects of treatments or combination

- Pain
- Reduced Immunity
- Altered Body Systems
 - GI – distress from mouth to anus
 - Cardiac
 - Respiratory
 - Skin
 - Neurological – fatigue is number one complaint of cancer patients
- Body Image Disturbances

Pain

- Pain affects every aspect of a person's life
- Pain control strategies
 - Analgesics/Narcotics
 - Guided Imagery
 - Distractions
 - Alternative & Complementary Methods (massage, therapeutic touch, herbal, etc.)

Bone Marrow Suppression

- Bone marrow is blood cell factory. Rapidly dividing immature cells most affected by chemo/Rad.
 - Causes:
 - Cancer – cancer cells pack bone marrow crowding out normal cell production
 - Chemotherapy – kills immature blood cells forming in bone marrow
 - Radiation – kills immature blood cells forming in bone marrow
 - Combination
 - Anemia – (12-14) low hemoglobin. Affects oxygen carrying capacity. Low oxygen = hypoxia
- NDx: Activity Intolerance

- Thrombocytopenia – (130-386) low platelets. Risk of hemorrhage. Teach safety:
NDX: r/f bleeding, r/f injury
- Leukopenia or neutropenia – * most common, low white blood cells. Infection. Fever in the setting of neutropenia = medical emergency
NDx: r/f infection
- Pancytopenia – ALL blood counts are low.
- Colony stimulating factors – “turn on” bone marrow to produce cells quicker (Procrit, Neupogen, Neumega)
- Infection – life threatening when immunity is reduced; sepsis
- Neutropenic precautions – protect patient with reduced immunity; hand hygiene, avoid crowds, stay away from ill persons, children with live vaccines (MMR, varicella, flumist)
Reverse Isolation: no raw fruits, veggies, cut flowers or potted plants
- Nadirs – times when counts are lowest. Usually between 7-10 days after initiation of therapy

Altered Body Systems

Gastrointestinal – rapidly dividing cells affected by treatment

- Nausea and vomiting – monitor dehydration & electrolytes. Metabolic alkalosis may result, small frequent meals, avoid odors, hard candies, fluids, crackers, anti-emetics – anticipatory nausea

NDx: nausea, imbalanced nutrition: less than body requirements

- Mucositis/stomatitis/esophagitis – very painful, saline rinses, magic mouthwash, TPN, PEG tubes

NDx: impaired oral mucous membranes, imbalanced nutrition

- Diarrhea – dehydrate quickly, medications, IVF, bowel rest, BRAT diet- bland, low residue; antidiarrheal 's

NDx: deficient fluid volume

- Constipation – from disease or treatment. Be proactive in preventing. Stool softeners, laxatives, fluids, fiber diet

NDx: constipation

- Rectal irritation – mucositis of rectal tissue, sitz baths, reduce pressure on area; prevent constipation/diarrhea

- Anorexia – bowel disturbances, mucositis, taste alterations, N/V; small frequent meals- high protein, high calorie, nutritional supplements

Nutritional Problems – caused by disease, treatment, emotional aspects.

- Multiple causes
- Anorexia
- Impaired food ingestion – PEG tube
- Nausea and vomiting – dehydration
- Fluid and electrolyte imbalances

- Malabsorption
- Sensory impairment – metallic taste, negative nitrogen balance, metabolites of chemo
- Multiple physical effects
- Weakness
- Weight loss
- Impaired wound healing
- Susceptible to infections
- Emotional effects
- Socialization
- Guilt

Management of Nutritional Problems

- Very complex
- Personal beliefs and values
- Social and emotional significance – socialization, guilt,
- Assessment
- Interventions
- Small frequent meals
- Nutritional supplements
- PEG tube
- Calorie dense foods - make food count
- Consult nutritionist

Cardiac

- Some chemotherapy drugs weaken heart muscle
- Cardiomyopathy
- Decreased ejection fraction
- Congested Heart Failure
- Hypoxia

Baseline and periodic ECHO's

NDx: Decreased cardiac output

Respiratory Problems – disease, metastases, treatment, anemia

- Dyspnea – difficulty breathing, tumors in lung, some chemo agents.
- Cough
- Pleural effusion
- Pulmonary fibrosis- may develop, with or without pneumonitis; late effect of therapy

NDx: activity intolerance, ineffective breathing pattern, impaired gas exchange

Interventions: treat cause; oxygen; inhalers; bronchodilators; trach & ventilator

Bladder Problems

- Hemorrhagic cystitis – chemo & radiation are bladder irritants
- Bladder incontinence
- Bladder spasms

**reproductive effects: when repro organs in line of radiation or use of alkylating chemo agents : potential infertility*

NDx: impaired urinary elimination; incontinence

Interventions: hydration; catheter; bladder training – Kegel exercises; antibiotics; pyridium; incontinence training

Motor and Sensory Deficits

Fatigue

- Caused by disease process, side effects of treatment, and anemia
- Management and Treatment
 - Use peak energy times
 - Schedule rest periods
 - Mild exercise – releases endorphins, elevates mood, feel more energetic.
 - Prioritize activities –
 - Nutritious diet - red meat, dark, green leafy vegetables, limit empty calories
 - Suspect anemia

NDx: activity intolerance, fatigue, self-care deficit

Chemo Brain – many causes involved; medications, cancer itself, age, stress, low blood counts, lack of sleep, depression, emotional stress; **short term or last for years**

- Mild cognitive impairment
- Mental cloudiness
 - Memory lapses
 - Trouble concentrating
 - Trouble multi-tasking
 - Slower to think and process
 - Can't recall names or words

Peripheral Neuropathy - damage to peripheral nerves

- Pain, burning, tingling, numbness, balance problems, stumbling, tripping, falls
- Muscle atrophy
 - Weakness, dysphagia, constipation, incontinence, BP changes, dyspnea, organ failure, death

Sleep Problems

- Emotional/Stress
- Fatigue
- Pain
- Hot flashes
- Neuropathies
- GI distress
- Multiple causes

Body Image Disturbances

- Loss – external or internal changes
- Depression
- Grief
- Sexuality

Alopecia – treatment damages DNA in hair follicles. Lose hair all over body (chemo).

- Causes: treatment
- Physically non-threatening
- Emotional aspects
- Interventions: prepare client

Lymphedema

- Build-up of lymph fluid in tissue
- Impairs normal circulatory function – risk for cellulitis
- Difficult to treat – exercise, wraps

Radiation Skin Problems: prevent infection and facilitate healing

- Erythema – wet or dry
- Blistering
- Burns
- Dryness
- Internal burns
- Dysphagia
- Diarrhea
- Urinary incontinence

Emotional Impact of Cancer

- Anxiety
- Anger
- Depression
- Hopelessness

Resources

- Continuous contact with healthcare team
- Telephone consultations
- Support Groups
- One-to-One Support
- Professional counseling
- American Cancer Society
- Hospice

Complications of Cancer

- Malnutrition
 - Characterized by fat, muscle depletion
 - Supplements when 5% weight loss noted or if potential exists
- Altered taste sensation
 - Teach to experiment with spices, seasonings to mask alterations
- Infection
 - Primary cause of death in client with CA
 - Death related to neutropenia

Oncological Emergencies

- Superior vena cava syndrome
 - Obstruction by tumor
 - Symptoms: facial edema, JVD, seizures, HA

- Spinal cord compression
 - Presence of malignant tumor in epidural space
 - Symptoms: persistent back pain, motor weakness and dysfunction, sensory paresthesia and loss, change in bowel and bladder function

- Third space syndrome
 - Shifting of fluid from vascular space to interstitial space - signs of hypovolemia (low BP, tachycardia, low UO)
 - Treat: plasma

- Syndrome of Inappropriate ADH – SIADH
 - Cancer cells manufacture, store, release ADH
 - Symptoms: water retention and hyponatremia, no edema, weakness, anorexia, N/V, seizures, decreased reflexes, oliguria

- Hypercalcemia:
 - Occurs with bone mets or multiple myeloma
 - Treat : bisphosphonates & IVF
 - Symptoms: wt gain, weak, N/V, seizures, coma, apathy, depression

- Tumor lysis syndrome
 - Results from rapid destruction of tumor cells; trigger = chemo; results in renal failure 24-48 hours after chemo, lasts 5-7 days
 - Results in: *hyperuricemia, hyperphosphatemia, hyperkalemia, hypocalcemia*
 - Symptoms: muscle cramps, weakness, diarrhea, N/V

- Cardiac tamponade
 - Fluid accumulation in the pericardial sac, constriction of pericardium, or pericarditis > secondary to rad to chest
 - Symptoms: dyspnea, tachycardia, anxiety, pulsus paradoxus, distant heart sounds

- Carotid artery rupture
 - Invasion of artery wall by tumor or erosion following surgery or radiation

Gerontologic Considerations

- Clinical manifestations may be mistaken for age-related changes.
- Vulnerable to complications of cancer and cancer therapy
- Functional status considered in treatment. Age alone is not a predictor of tolerance

Psychological Aspects

Coping/Defense mechanisms:

Avoidance – knows something is wrong, avoids confirmation

Denial – subconscious rejection

Conversion – stress into physical symptoms

Repression – ‘forgetting’ it happened

Transference – taking emotions out on someone else

- Factors affecting adjustment to cancer diagnosis:
 - Personality
 - Family relationships
 - Age
 - Financial situation
 - Past hospital experiences
 - Knowledge & attitude toward cancer
 - Severity of diagnosis
 - Emotional support
 - Use of coping mechanisms (avoidance & denial)

- Initial reactions of newly diagnosed cancer patients:
 - Shock
 - Numbness
 - Fear
 - Panic

- Grief – Multiple losses with disease & treatment

- Response to loss is influenced by:
 - Patient’s & family’s history of loss
 - Previous coping of losses
 - Presence of current losses
 - Availability of support systems
 - Patient’s social, cultural, & religious background

- Common fears of the cancer patient:
 - Fear of loss of self-respect

 - Fear of pain

 - Fear of disfigurement

 - Fear of financial depletion

 - Fear of death

 - Shock, Denial, Anger, Bargaining, Depression, Helplessness, Hopelessness

Psychological Aspects – Nursing Care

- Foster independence
- Provide emotional support
 - Examples:

- Maintain hope

Psychological Aspects – Nurses’ Attitudes

- Examine own feelings regarding cancer.
- Our attitudes may influence patient’s response.
- Goal is to meet the daily physical & psychological needs of the cancer patient.

Psychological Aspects

- Recurrence of cancer
- Survivorship (no disease in 5 years)
- Those who have overcome & been cured of their cancer & also those living with cancer as a chronic disease.

Advanced Cancer

- Nursing care goal: assist with achievement of a healthy death
- Healthy versus unhealthy death
- Nurses can assist patients to accomplish a healthy death
(normal grieving, viewing life as satisfactory, achievement of goals, resolving psycho-social-& spiritual conflicts, communication)
- Dying Person’s Bill of Rights
- Palliative Care
 - Focus on **comfort, peacefulness, contentedness, & meaningfulness until death**
 - “intensive caring” vs intensive care
- Physical areas of focus with palliative care:
 - Pain control versus pain relief
 - Pain-free state
 - Need continuous assessment
 - Not concerned with addiction
 - Opioids are primary analgesics
 - Control of symptoms
 - *Constipation*
 - *Nausea / vomiting*
 - *Dyspnea*
 - *Insomnia*
 - *Incontinence*
 - *Skin breakdown*
 - *Pruritus*
- Psychological areas of focus with palliative care:

- Psychological pain
- Coping mechanisms
 - *Adaptive coping: seek self-awareness, nurture hope*

Nutritional Management

- Malnutrition progressing to cachexia **contributes to the morbidity & mortality** of cancer patients.
- **Cachexia** – complex metabolic problem in advanced cancer patients; classified by anorexia, altered taste & smell, dry mouth, early satiety, weight loss, electrolyte & water abnormalities, & weakening of vital functions
- Characteristics of cancer-related malnutrition:
 - Change in organ function
 - Weight loss
 - Immune system dysfunction
 - Muscle wasting
 - Behavior changes
 - Lab abnormalities
 - Altered metabolism
 - Fluid & electrolyte imbalances
- Causes of cancer-related malnutrition:
 - Disease process
 - Treatments & side effects of treatments
 - *Radiation, chemotherapy*
 - Patient's response to stressors
- Cancer patient needs diet high in protein & calories.
- Sources of protein:
 - Animal products (red meat, poultry, fish, eggs, milk, cheese)
 - Legumes
 - Nuts
 - Beans
- Dietary adjustments for common problems:
 - Nausea / vomiting:
 - Eat foods that are quickly digested; avoid spicy & sweet, room temp, small frequent meals, no liquids at mealtimes, antiemetic's*
 - Diarrhea / abdominal cramps
 - Avoid raw fruit & veggies, whole grains & nuts; avoid extreme temperatures of foods*

- Anorexia / taste changes
Find other sources of protein, small frequent meals, eat by the clock vs appetite
- Dry or sore mouth
Liquid or moist foods, bland foods, mouth rinses before and after meals
- Constipation
Increase fluids, increase exercise, increase bulk, stool softeners
- Patient education
- Good dental care
- Encourage family involvement
- Nutritional support
 - IV fluids
 - Enteral tube feedings
 - TPN (total parenteral nutrition)

Cancer Pain Management

- Cancer/ Tumor Invasion – puts pressure on other structures that causes pain
- Surgical
- Spinal Cord Compression – tumor presses on spinal cord causing pain. Paralysis possible.
- Bone – many cancers metastasize to bone.
- Phantom – pain where body part has been removed.
- Pain from Side Effects from Treatment include peripheral neuropathy, stomatitis, radiation tissue injury, others.
- Physical changes causing pain:
 - Bone destruction
 - Obstruction
 - Nerve involvement
 - Pressure
 - Inflammation, infection, or necrosis of tissue
 - Treatment-related
- Psychological changes causing pain:
 - Patient's perception of threat
- Sociological effects
 - Decreased initiation & participation in ADLs
- Analgesic drug therapy
 - Mild pain

- *Non-opioid analgesics, NSAIDs, adjuvant meds*
 - Moderate pain
 - *Mild opioid analgesics, adjuvant meds*
 - Severe pain
 - *Strong opioid analgesics, adjuvant meds (Morphine – standard drug of choice)*
- Addiction – psychological dependence; opioids used for euphoria or sedative effects, not for pain relief – rare for addiction to occur in cancer patient
- Tolerance – occurs when a larger dose of opioid is required to maintain the same level of analgesia for the same level of pain
- Types of cancer pain:
 - Acute pain-
 - Chronic pain-
 - Intermittent pain-
- Physical Modalities
 - Heat / cold
 - TENS unit
 - Massage (contraindicated for bone cancer)
- Cognitive Modalities
 - Stress reduction
 - Hypnosis
 - Muscle relaxation
 - Guided imagery
 - Biofeedback

Families in Crisis

- Stages a family goes through during the cancer experience:
 - Living with cancer
 - Restructuring during the living – dying interval
 - Bereavement
 - Reestablishment

Families in Crisis – Stage 1

- Living with Cancer
 - Family informed of cancer diagnosis
- Phases experienced:
 - *Impact*
 - *Functional disruption*
 - *Inform others*
 - *Emotions*

Families in Crisis – Stage 2

- Restructuring during the living-dying interval
 - Roller coaster ride
 - Caregiver roles
 - Family issues
 - *Physical fatigue & exhaustion*
 - *Decreased nutritional intake*
 - *Decreased physical & psychological health*

Families in Crisis – Stage 3

- Bereavement
 - Coincides with imminent death & continues through death event & period of time following death.
 - Mourning begins with the death & is completed when the memory of the patient is internalized.
 - Nurses' role – Listen

Families in Crisis – Stage 4

- Reestablishment
 - Completes the grieving process
 - Reestablish lives without the presence of the deceased family member
 - Nurses foster social interaction
 - *Support groups*

Community Resources and Agencies - ACS

- American Cancer Society (ACS)
- “The ACS is the nationwide, community-based, voluntary health organization dedicated to eliminating cancer as a major health problem by preventing cancer, saving lives, and diminishing suffering from cancer through research, education, advocacy, & service.”

Hospice

- An organized institution designed to provide palliative & supportive care to terminally ill patients & their families.
- For the family: explains nursing care, assists with respite resources, assists with bereavement care
- Focus on symptom control: pain, nutrition, etc
- 24 hour on call care
- Bereavement follow-up

Special Help Groups

- Ostomy groups
- Make-a-Wish Foundation
- Ronald McDonald houses
- ACS special help groups:
 - Reach to Recovery, I Can Cope

Local Organizations

- Nurses need to explore options available in own community.

- Fraternal organizations - Elks Club, Shriners, Lions, Kiwanis
- Church affiliations
- Extended care facilities - respite for weekend
- Services through city or county welfare departments
- Agencies of assistance – VNA

Other Resources

- Financial assistance
- Transportation assistance
- Housecleaners
- Sitter services
- Nursing services
- Durable medical equipment
- Hospitals / Social Services