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

- Cancer is a complex disease with complex treatments that affect the patient multiple ways

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

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

- 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)

Guidelines for Nutrition & Physical Activity for Cancer Prevention (ACS)

- Eat a variety of healthful foods, with an emphasis on plant sources.
- Adopt a physically active lifestyle.
- Maintain a healthful weight throughout life.
- If you drink alcoholic beverages, limit consumption.

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.
- Focus on symptom control
- 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