NCM 114 - Care of the Older Person (MIDTERM) [SOPHIA LAYLAY]

SKIN CANCER

Skin Cancer

It is the abnormal and uncontrolled growth of skin cells.

- Usually develops in areas exposed to sunlight.
- Main cause: long-term exposure to ultraviolet (UV) radiation
- It can occur at any age but is more common in older adults

Three main types of skin cancer:

1. **Basal Cell Carcinoma (BCC)**
   - Develops from basal cells, which are found in the deepest layer of the epidermis.
   - Usually grows slowly and rarely spreads to other parts of the body, but it can damage nearby tissues if untreated.

   Why does it happen?

   - Mainly caused by long-term exposure to ultraviolet (UV) radiation from the sun.

2. **Squamous Cell Carcinoma (SCC)**
   - Develops from squamous cells in the outer layer of the skin.
   - Unlike BCC, SCC has a higher chance of spreading, especially when untreated.

3. **Melanoma**

It starts in melanocytes, the cells that give our skin its color. It is considered the most dangerous type because it can spread to other organs.

Look for changes in a mole using ABCDE:

A – Asymmetry: one side looks different.

B – Border: edges are irregular.

C – Color: different colors are present.

D – Diameter: becomes larger.

E – Evolving: changes in size, shape, or color.

Pathophysiology:

Why older adults are more prone to skin cancer?

Many years of sun exposure

⇩

UV rays damage skin cells

⇩

DNA becomes damaged

⇩

Damage builds up over many years

⇩

Older skin repairs itself less effectively

⇩

Abnormal cells grow

⇩

SKIN CANCER

- Older adults have a higher risk of skin cancer because of many years of sun exposure.
- UV rays damage skin-cell DNA over time.
- Aging skin becomes less effective at repairing this damage.
- The accumulated damage can cause abnormal cells to grow and develop into skin cancer.

Signs and Symptoms

- New growths: Moles, bumps, or scabs that appear suddenly.
- Non-healing sores: Wounds that don't heal or keep coming back.
- Changes in moles: Growth in size, irregular shape, or new colors.
- Itching or pain: Around suspicious lesions.
- Rough patches: Scaly or crusty areas that persist**.**

Diagnostic Test

1. Skin Examination

-The healthcare provider checks the skin for unusual lesions.

2. Dermoscopy

-A special instrument is used to look closely at the lesion.

3. Biopsy

-A small piece of the skin is removed and examined in a laboratory.

4. Imaging Tests

-CT, MRI, PET, or other tests may be used if the cancer may have spread.

Most important: Biopsy confirms the diagnosis of skin cancer.

Treatment

- Skin cancer treatment depends on the type and stage of the disease

Common treatment includes:

1. **Surgery**
   - Removes the cancerous skin
2. **Mohs Surgery**
   - Removes cancer little by little while saving as much healthy skin as possible
3. **Cryotherapy**
   - Freezes and destroys some abnormal skin cells.
4. **Radiation therapy**
   - Uses radiation to destroy cancer cells.
5. **Immunotherapy/Targeted thera**py
   - Helps the immune system fight cancer or targets specific cancer cells

Pharmacologic Treatment

Imiquimod (Aldara)

- Immune response modifier cream for superficial basal cell carcinoma.

Fluorouracil (Efudex, 5-FU)

- Topical chemotherapy cream for actinic keratosis and superficial cancers.

Immunotherapy

- Helps the body's immune system fight cancer.

Targeted therapy

- Directly targets a specific part of the cancer cell.

Nursing Management

Assessment

- Check the skin and lesion.
- Observe changes in size, color, and appearance.
- Assess pain and bleeding.
- Check for signs of infection.

After surgery

- Keep the wound clean.
- Change dressings as ordered.
- Monitor for bleeding and infection.
- Give prescribed pain medicine

Patient Teaching

- Avoid too much sun exposure.
- Use sunscreen.
- Wear protective clothing.
- Check the skin regularly.
- Report unusual or changing lesions

PRESSURE ULCER

Introduction
A pressure ulcer is a wound or damaged area of the skin caused by constant pressure or friction, usually over bony areas such as the back, hips, heels, elbows, and tailbone.

The skin is not open, but there is a persistent area of redness or discoloration that does not disappear when pressed. The area may feel warmer, cooler, harder, softer, or more painful than the surrounding skin.

Stages of Pressure Ulcer
Stage 1-Intact skin
There is partial loss of the skin. It may look like a shallow open wound or blister. Fat tissue is not visible, and there is no exposed muscle, tendon, or bone.

Stage 2-Partial-thickness skin loss

The wound goes through the full thickness of the skin, and fat may be visible. There may be dead tissue or drainage. However, muscle, tendon, cartilage, or bone is not exposed.

Stages of Pressure Ulcer

Stage 3-Full thickness skin loss
The wound is very deep, with extensive tissue damage. Muscle, tendon, cartilage, or bone may be exposed or directly palpable.

Stage 4-Full thickness skin and tissue loss

BRADEN SCALE
The Braden Scale is a nursing assessment tool used to determine a patient's risk of developing a pressure ulcer.

Signs and Symptoms
Redness or discoloration – The skin may become red, purple, or darker, especially over bony areas.
Skin feels different – The affected area may feel warmer, cooler, harder, or softer than the surrounding skin.
Pain or tenderness – The patient may feel pain, burning, itching, or tenderness in the area.
Swelling – The area may become swollen.
Blister or shallow wound – The skin may develop a blister or an open, shallow sore.
Skin breakdown – The skin may become damaged or develop an open wound.
Drainage – More advanced ulcers may produce fluid or pus.
Dead tissue – Yellow, brown, or black dead tissue may appear in deeper wounds.

Deep wound – Severe ulcers may expose or involve deeper tissues such as fat, muscle, tendon, or bone.

Diagnostic Tests

Physical Skin and Wound Assessment –

- The nurse or doctor checks the location, size, depth, color, drainage, odor, and condition of the surrounding skin and determines the stage of the ulcer.

Braden Scale –

- Used to assess the patient's risk of developing a pressure ulcer. It evaluates sensory perception, moisture, activity, mobility, nutrition, and friction/shear. A lower score means higher risk.

Wound Culture –

- A sample of wound drainage or tissue may be collected when infection is suspected. It helps identify the bacteria causing the infection and guide antibiotic treatment.

Blood Tests –

- Tests such as CBC, blood glucose, and albumin/protein-related tests may be ordered to check for infection, anemia, or nutritional problems that can affect healing.

Imaging Tests –

- X-ray, MRI, or other imaging may be used when a deep pressure ulcer is suspected of affecting the bone or deeper tissues, such as in possible osteomyelitis.

Treatment

Pharmacologic

1. Pain Medications
2. Topical Medications
3. Antibiotics-Systematic Antibiotics
4. Antiseptics/Antimicrobials
5. Nutritional Supplements

Non-Pharmacologic

1. Repositioning
2. Pressure-Relieving Devices
3. Wound Cleansing
4. Wound Dressing
5. Debridement
6. Skin Care
7. Good Nutrition
8. Improve Mobility
9. Patient and Caregiver Educatio

Nursing Responsibilities

- Assess the skin and wound
- Relieve pressure immediately
- Keep the skin clean and dry
- Provide proper wound care
- Monitor for infection
- Support nutrition and hydration
- Promote safe mobility
- Manage pain
- Educate the patient and caregiver
- Document and evaluate

Medication

Medicine for pressure ulcer (bedsores) do not cure the wound on their own; instead, Doctors use them to manage pain, treat infection, or remove dead tissue.
Triderma-Pressure Sore Relief
Regen-D Ointment

OSTEOARTHRITIS AND GOUTY ARTHRITIS

OSTEOARTHRITIS AND GOUTY ARTHRITIS IN GERIATRIC PATIENTS

OSTEOARTHRITIS

- Osteoarthritis (OA) is a chronic, progressive joint disease in which cartilage and other joint structures gradually deteriorate, causing pain, stiffness, reduced range of motion, and difficulty with movement. For older adults, OA is especially important because age-related joint changes, years of mechanical stress, and previous joint injuries can lead to decreased mobility, difficulty performing daily activities, increased fall risk, and loss of independence.

PATHOPHYSIOLOGY OF OSTEOARTHRITIS

- Articular Cartilage Breakdown
- Cartilage Breakdown
- Subchondral Bone Changes
- Osteophyte Formation
- Subchondral Cysts
- Joint-Space Narrowing

SIGNS AND SYMPTOMS OF OSTEOARTHRITIS

- Joint pain, usually worsened by activity or weight-bearing
- Pain may improve with rest
- Morning stiffness, typically lasting less than 30 minutes
- Crepitus or a grating sensation
- Decreased range of motion
- Joint tenderness
- Bony enlargement
- Joint deformity in advanced disease
- Difficulty walking or climbing stairs
- Reduced ability to perform activities of daily living

TREATMENT OF OSTEOARTHRITIS

PHARMACOLOGIC

- **DICLOFENAC TOPICAL GEL** — Provides local pain relief with less systemic exposure than oral **NSAIDs**
- **ACETAMINOPHEN** — May be considered for selected patients when NSAIDs are unsuitable, although its analgesic benefit in OA is generally modest.
- **CORTICOSTEROID INJECTIONS** — May provide short-term pain relief for symptomatic joints.

NON-PHARMACOLOGIC

- Exercise
- Muscle strengthening
- Low-impact aerobic activity
- Weight management when appropriate
- Physical therapy
- Joint-protection strategies
- Assistive devices when indicated
- Patient self-management education

NURSING MANAGEMENT OF OSTEOARTHRITIS

NURSING MANAGEMENT

- Encourage regular low-impact exercise, proper joint protection, and prescribed pain-management measures while monitoring mobility and medication effects to reduce pain, maintain function, and preserve the older adult's independence. Key strategies include managing discomfort with thermal therapies and medications, encouraging safe physical activity, and educating patients on joint protection.

GOUTY ARTHRITIS

GOUTY ARTHRITIS

- Gouty arthritis is a form of inflammatory arthritis caused by the buildup and deposition of monosodium urate (uric acid) crystals in a joint, leading to a sudden inflammatory response that causes severe pain, redness, warmth, swelling, and tenderness.

PATHOPHYSIOLOGY OF GOUTY ARTHRITIS

- *INCREASED URIC ACID (HYPERURICEMIA)*
- *FORMATION OF MSU CRYSTAL*
- *IIMMUNE SYSTEM ACTIVATION*
- *NEUTROPHIL RECRUITMENT*
- *INFLAMMATION AND TISSUE DAMAGE*

- *RESOLUTION OF ACUTE ATTACK*
- *CHRONIC GOUT*

SIGNS AND SYMPTOMS OF GOUTY ARTHRITIS

- Sudden, severe joint pain, often beginning at night
- Redness, warmth, and swelling of the affected joint
- Extreme tenderness, even with light touch or pressure
- Limited range of motion due to pain and inflammation
- Commonly affects the big toe, but may also involve the ankle, knee, wrist, or fingers
- Recurrent attacks (flares) that may become more frequent over time
- In chronic gout: tophi (hard urate crystal deposits) and possible joint deformity

DIAGNOSIS AND TREATMENT OF GOUTY ARTHRITIS

DIAGNOSIS

- **SYNOVIAL FLUID OR TOPHI EXAMINATION —** A sample of joint fluid is examined under a microscope.
- **SERUM URIC ACID** — Measures uric acid levels in the blood. High levels may indicate hyperuricemia, but elevated uric acid alone does not confirm gout.
- **X-RAY** — May show bone erosions, joint-space changes, and tophi, especially in long-term or advanced gout.
- **ULTRASOUND —** Can detect urate crystals, tophi, and the double-contour sign, especially when joint fluid cannot be obtained.
- **DUAL-ENERGY CT (DECT) —** Uses advanced imaging to detect urate crystal deposits and is useful when the diagnosis is uncertain or joint aspiration is not possible.

TREATMENT

1. TREATMENT OF ACUTE GOUT ATTACK

- Colchicine
- NSAIDs
- Corticosteroids

2. PREVENTION OF FUTURE ATTACKS

- Low-dose colchicine may be used to prevent attacks, especially when starting uric acid-lowering treatment.
- Uric acid-lowering medications help prevent crystal formation. The usual target is serum uric acid <6 mg/dL.

3. URIC ACID-LOWERING MEDICATIONS

- Allopurinol
- Febuxostat
- Uricosuric medicines

4. Monitoring — Regular tests may be needed to monitor serum uric acid, kidney function, liver function, and medication side effects.

5. Arthroscopy — In severe or complicated cases, arthroscopy may be used to examine, clean, or remove crystal deposits from the joint. It is not a routine treatment for ordinary gout attacks.

NURSING RESPONSIBILITIES FOR GOUTY ARTHRITIS

- The nurses play a vital role in managing gouty arthritis by controlling acute pain and inflammation, monitoring joint function and uric acid–related complications, promoting adequate hydration and appropriate diet, administering prescribed medications safely, and educating older adults on long-term lifestyle changes to prevent recurrent attacks and preserve mobility and independence.

OSTEOPOROSIS IN GERIATRIC PATIENTS

Understanding Bone Health, Prevention, and Nursing Care in Older Adults

OSTEOPOROSIS

Osteoporosis is a common bone disorder in older adults.
• Bones become weak, thin, and fragile.
• It increases the risk of fractures, especially in the hip, spine, and wrist.

SIGNS AND SYMPTOMS

• Often asymptomatic until a fracture occurs
• Fractures from minor falls or trauma
• Difficulty walking or reduced mobility
• Decreased independence in daily activities
• Kyphosis
• Back pain
• Loss of height
• Joint pain

DIAGNOSTIC TESTS

1. **Bone Mineral Density (BMD) Test**
• DEXA/DXA scan – most commonly used
• Measures bone mineral density
• T-score ≤ −2.5 = osteoporosis
2. X-ray
• Detects fractures and advanced bone loss

LaboratoryTests

• **Serum Calcium** – Serum Calcium Test checks calcium levels in the blood.
• **Vitamin D** – 25-Hydroxy Vitamin D [25(OH)D] Test checks if there is enough vitamin D for bone health.
• **Kidney Function** – Serum Creatinine & BUN Tests check kidney health affecting bones.
• **Thyroid Function** – TSH & Free T4 Tests check thyroid problems that may cause bone loss.

PHARMACOLOGIC TREATMENT

Bisphosphonates – alendronate, risedronate, zoledronic acid
Slow down bone loss by reducing bone resorption; help prevent fractures.

Denosumab
Reduces bone resorption, helping maintain or increase bone density and prevent fractures.

Teriparatide / Abaloparatide
Stimulate new bone formation, increasing bone strength; used especially in patients at high fracture risk.

Romosozumab
Increases bone formation and decreases bone resorption, helping improve bone density and reduce fracture risk.

Calcium + Vitamin D
Provide nutrients needed for normal bone formation and maintenance; supplements are used when dietary intake is inadequate.

NON-PHARMACOLOGIC TREATMENT

• Weight-bearing exercises – walking, stair climbing
• Muscle-strengthening exercises
• Adequate calcium and vitamin D
• Maintain a healthy body weight
• Avoid smoking
• Limit alcohol intake
• Prevent falls
• Use assistive devices when needed
• Maintain a safe home environment

NURSING RESPONSIBILITIES

Assessment
• Assess pain, mobility, posture, and fracture history
• Assess fall risk and functional ability
• Monitor calcium and vitamin D intake
Interventions

• Encourage safe weight-bearing and strengthening exercises
• Implement fall-prevention measures
• Assist with ambulation and use of assistive devices
• Encourage adequate nutrition and hydration
• Administer medications as prescribed
• Monitor for medication side effects
• Provide pain management

Health Education

• Teach proper medication adherence
• Encourage regular follow-up and BMD testing
• Teach the patient and family about fracture prevention
• Promote independence and optimal level of functioning (OLOF)