

Student Name: Ella Murray

Medical Diagnosis/Disease: Osteoarthritis

NCLEX IV (8): Physiological Integrity/Physiological Adaptation

Anatomy and Physiology
Normal Structures
 Articular cartilage, chondrocytes, synovial membrane & fluid, subchondral bone, ligaments, muscles, tendons
Physiology: Synoviocytes, osteocytes, chondrocytes

Pathophysiology of Disease
 • Chondrocytes fail to create resistant & elastic cartilage, making it more prone to destruction
 • In response, joints begin to produce new tissue
 • Over time, cartilage is lost & subchondral bone thickens
 • This creates bony growths @ the joint margins causing pain & loss of function

NCLEX IV (7): Reduction of Risk

Anticipated Diagnostics
Labs
 CBC, Various tests to rule out other conditions including: Rheumatoid factor, C-reactive protein, erythrocyte sedimentation rate, uric acid
Additional Diagnostics
 Radiographic imaging, Magnetic resonance imaging, renal/liver function tests

NCLEX II (3): Health Promotion and Maintenance

Contributing Risk Factors
 Aging, decreased estrogen production, congenital factors, trauma, repetitive stress, joint hemorrhage, infection

Signs and Symptoms
 Joint pain & stiffness, aching (in early stages), crepitus
 *Pain worsened by cool/rainy weather, periods of inactivity

NCLEX IV (7): Reduction of Risk

Possible Therapeutic Procedures
Non-surgical
 Physical therapy, joint protection, assistive devices
Surgical
 Reconstructive surgery

Prevention of Complications
 (What are some potential complications associated with this disease process)
 Maintain a healthy weight, engage in regular low impact exercise, manage pain and inflammation, check in with providers frequently

NCLEX IV (6): Pharmacological and Parenteral Therapies

Anticipated Medication Management
 • NSAIDs • Acetaminophen
 • Topical steroids
 • Corticosteroid injections
 • Disease modifying OA meds
 • Supplements for estrogen production

NCLEX IV (5): Basic Care and Comfort

Non-Pharmacologic Care Measures
 • Hot/cold therapy
 • Low impact exercise
 • Nutritional support

NCLEX III (4): Psychosocial/Holistic Care Needs

What stressors might a patient with this diagnosis be experiencing?
 Chronic pain, impaired mobility, low self esteem, anxiety, depression

Client/Family Education

List 3 potential teaching topics/areas
 • Verbal & written info about all medications and supplements
 • Importance of following up on lab tests for continuous monitoring
 • Importance of balancing rest & activity for joint protection

NCLEX I (1): Safe and Effective Care Environment

Multidisciplinary Team Involvement
 (Which other disciplines do you expect to share in the care of this patient)
 Physical therapy, occupational therapy, nutritionist, orthopedic specialist, PCP, pharmacist, psychologist, case manager, orthotist

Nursing Problem Worksheet

Name: Ella Murray

Anticipated Patient Problem and Goals	Relevant Assessments (Prewrite) What assessments pertain to your patient's problem? Include frequencies	Multidisciplinary Team Intervention (Prewrite) What will you do if your assessment is abnormal?
Problem: Impaired Physical Mobility Reasoning: due to Musculoskeletal impairment r/t osteoarthritis Goal: Pt demonstrates use of mobility device accurately during my time of care Goal: Pt has less difficulty ambulating within a week of my time of care	Assess Patient's ability to use assistive mobility devices Q Shift	Implement use of a different device that's better suited for Patient's abilities
	Assess range of motion in extremities ↳ ankles, knees, hips, etc Q Shift	Educate Pt on different types of stretches/exercises to improve ROM
	Assess if strength & muscle tone are within normal limits Q Shift	Educate Pt on exercises such as "arm chair pushups" to build muscle safely
	Assess level of fatigue during & after ambulation Q4 hrs	Encourage a balance between periods of rest & of activity
	Assess stiffness of joints Q2 hrs	Apply heat & cold therapy in combination with Pt

Anticipated Patient Problem and Goals	Relevant Assessments (Prewrite) What assessments pertain to your patient's problem? Include frequencies	Multidisciplinary Team Intervention (Prewrite) What will you do if your assessment is abnormal?
Problem: Chronic Pain Reasoning: due to changes in arthritic joints r/t osteoarthritis Goal: Pt will have pain ≤ 2 during my time of care Goal: Pt will be able to perform ADLs with minimum discomfort during my TOC	Assess level of pain using a numerical scale (self-reported) Q2	Ask client what they do at home to manage pain → implement in hospital
	Assess severity of pain using visual cues (grimacing, guarding, etc)	Administer simple (nonopioid) analgesics as ordered
	Monitor vital signs in relation to pain (rising HR & BP) Q2 hrs	Administer opioid analgesics as ordered
	Assess for redness & swelling at affected joints Q2 hrs	Administer anti-inflammatories as ordered
	Assess patient knowledge about OA and pain management/coping strategies Q Shift	Educate patient about non-pharmacological pain management strategies

ACTIVE LEARNING TEMPLATE: *Medication*

STUDENT NAME Ella Murray

MEDICATION Morphine Sulfate (IVP)

REVIEW MODULE CHAPTER _____

CATEGORY CLASS Opioid

PURPOSE OF MEDICATION

Expected Pharmacological Action

Binds to & activates opioid receptors in the brain and spinal cord to produce ~~the~~ Pain relief

Therapeutic Use

To relieve Pain severe enough to require Opioid treatment

Complications

Coma, delirium, increased ICP, seizures, bradycardia, cardiac arrest, hypotension, shock, laryngospasm, intestinal obstruction, toxic megacolon, thrombocytopenia, leukopenia, apnea, pulmonary edema, respiratory arrest

Medication Administration

IVP: 0.1 to 0.2 mg/kg
Q 4 hours, PRN

Contraindications/Precautions

Bronchial asthma, GI obstruction, respiratory depression, use of MAO inhibitors (in the past 14 days), increased ICP

Nursing Interventions

- Closely monitor vitals: HR, BP, RR
- Ensure availability of oxygen & opioid antagonist prior to admin
- Check dosage, concentration, & med
- Have naloxone readily available

Interactions

Drug-drug: CNS depressants (benzodiazepines, barbiturates, other opiates), antidepressants (SSRIs, MAOs), antihypertensives, muscle relaxers

Drug-naturals: Kava-Kava, Valerian root

Client Education

- Instruct on how to take as prescribed
- Emphasize importance of adhering to dosage orders
- Teach about Naloxone
- Advise to take before pain becomes severe

Evaluation of Medication Effectiveness

- Reduction in the severity & intensity of pain
- No significant changes in respiratory status or LOC

ACTIVE LEARNING TEMPLATE: **Medication**

STUDENT NAME Ella Murray

MEDICATION Oxycodone

REVIEW MODULE CHAPTER _____

CATEGORY CLASS Opioid

PURPOSE OF MEDICATION

Expected Pharmacological Action

Bind to opiate receptors in the CNS
Alters Perception & response to painful stimuli

Therapeutic Use

Moderate to Severe Pain Relief

Complications

Orthostatic hypotension, flushing/sweating, constipation, nausea/vomiting, urinary retention, confusion, sedation, dizziness, dysphoria/euphoria, hallucinations, headache, blurred vision, respiratory depression

Medication Administration

Adult (>50kg): 5-10mg PO, Q 3-4 PRN
Adult (<50kg): 0.2mg/kg PO, Q 3-4 PRN
Child ($\geq 11y/o$): 0.05-0.15mg/kg PO
Q 4-6 PRN
Adult: 10-40mg rectally, Q 3-4 PRN

Contraindications/Precautions

Contraindications: hypersensitivity, Significant respiratory depression, Paralytic ileus, bronchial asthma, Post-operative Pain
Precautions: Substance use disorder, head trauma, \uparrow ICP, Seizure disorder
 \uparrow risk for GI obstruction, undiagnosed ab pain, Severe renal or hepatic impairment, adrenal insufficiency, Prostatic hyperplasia

Nursing Interventions

- Closely monitor Patient Response
- Reasses Pain level
- Monitor vitals
- Assess bowel function
- Give with food or milk

Interactions

Mixed agonist/antagonist analgesics, CYP3A4 inducers, CYP2D6 inhibitors, drugs affecting Serotonergic Neurotransmitter Systems

Client Education

- Explain importance of taking the med as prescribed
- Educate about dependency risks & abuse potential
- Educate about signs of respiratory depression, calling 911, & using Naloxone

Evaluation of Medication Effectiveness

Decrease in Pain level without alteration of level of consciousness or respiratory status