

Student Name: Suzette Commacore

Medical Diagnosis/Disease: Osteoarthritis

NCLEX IV (8): Physiological Integrity/Physiological Adaptation

Anatomy and Physiology
Normal Structures

- Bones are connective tissue that provide support, structure and protection. Skeletal system made up of 206 bones.
- 2 divisions axial and appendicular. Each bone is covered by periosteum containing BVs and osteogenic cells for repair/growth.
- Compact bone forms dense outer layer and spongy bone contains marrow. Production of osteoblasts build tissue while osteoclasts break joints cannot bone, cartilage cushions articulations and ligaments and tendons stabilize and move bone.

Pathophysiology of Disease

- Arthritis inflammation of joints.
- Osteoarthritis is a slow progressive non-inflammatory disorder of diarthrodial (synovial) joints.
- Gradual loss of articular cartilage w/ formation of bony outgrowths not a genetic defect. Inflammation is a defense.
- Genetic metabolic / local factors cause cartilage degradation becomes dull/yellow and granular. Body can't keep up with repair articular surfaces become eroded / worn thinner limiting fluid and distribution.
- Secondary synovitis may occur when phagocytes trying get rid of spurs causing early joint stiffness no cure.

NCLEX IV (7): Reduction of Risk

Anticipated Diagnostics
Labs

- History / Physical Assessment
- Synovial fluid analysis
- Erythrocyte sedimentation rate
- CBC
- Liver fx test

Additional Diagnostics

- X-ray
- CT scan
- MRI

NCLEX II (3): Health Promotion and Maintenance

Contributing Risk Factors

- Drugs
- Hematologic / endocrine problems
- Joint instability
- Mechanical stress
- Neurologic problems
- Skeletal deformities
- Trauma

Signs and Symptoms

- Pain, loss of fx
- Joint stiffness
- Joint pain (asymmetrical)
- Early morning stiffness
- Deformity
- Systemic fever, fatigue, organ involvement not present

NCLEX IV (7): Reduction of Risk

Possible Therapeutic Procedures

Non-surgical

- Drug Therapy

Surgical

- Reconstructive hip / knee replacement

Prevention of Complications
(What are some potential complications associated with this disease process?)

- Obesity
- Chronic Pain
- Joint deformity
- Falls / injury
- ↓ mobility

NCLEX IV (6): Pharmacological and Parenteral Therapies

Anticipated Medication Management

- NSAIDs, Analgesic → topical
- Intra-articular steroids
- Intra-articular injections
- Salicylate
- Topical

NCLEX IV (5): Basic Care and Comfort

Non-Pharmacologic Care Measures

- Heat/Cold Applications
- Nutrition therapy
- Exercise
- Rest/ Joint Protection
- Health Promotion
- Ambulatory care

NCLEX III (4): Psychosocial/Holistic Care Needs

What stressors might a patient with this diagnosis be experiencing?

- Impaired mobility
- Depression
- Financial cost
- Transportation
- Job

Client/Family Education

List 3 potential teaching topics/areas

- maintain healthy weight / conserve energy
- Use assistive devices
- Good posture body mechanics
- Avoid fatigue and joint pain
- Avoid both topical / oral NSAIDs

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?)

- Podiatry
- PT / OT
- Nutrition
- community resource
- case management

Surgical Procedure: Total Hip Arthroplasty

• Surgical replacement of hip joint with a prosthetic implant to relieve pain / restore fx

- femoral head and acetabulum (hip socket) surgically removed
- metal or ceramic prosthetic ball / stem inserted into femur and plastic or metal cup placed into acetabulum
- Components are sealed with or without bone cement
- Surrounding muscles / soft tissue repaired / drain may be placed to reduce accumulation of fluid

Nursing Problem Worksheet

Name: Suzette Commodore

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?
<p>Problem: Pain</p> <p>Reasoning: due to arthritic joint changes/assoc. therapy</p> <p>Goal: Within 1-2 of intervention pt perception of pain ↓ documented by using pain scale</p> <p>Goal: Pt demonstrates ability to perform ADL's w/ minimal discomfort</p>	Assess pain on a scale of 1-10 Q 2	if pain > 5 admin Oxycodone and reassess after 20 mins
	Observe for nonverbal cues of pain (restlessness, grimacing, guarding) every shift	encourage nonpharmacologic pain relief (heat/cold compress, repositioning)
	Assess bowel sounds Q 5; Shift and last BM	Educate pt on side effects of opiates including constipation
	Assess LOC 30-60 mins after IVP of morphine	Hold next dose and notify provider
	Assess emotional and behavioural response to pain Q 4	Cluster care and allow rest and relaxation

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?
<p>Problem: Impaired Mobility</p> <p>Reasoning: muscular weakness AED unsteady gait and ↓ ROM</p> <p>Goal: Pt demonstrates appropriate use of assistive device on flat/uneven surfaces</p> <p>Goal: Pt performed ROM exercise to ↑ mobility</p>	Assess muscle strength and coordination each shift	encourage ROM at least 3 times a day
	Observe for environmental safety and possible hazards before leaving room	reinforce fall precautions: non-slip socks, call light with reach and bed in lowest position
	Assess fall score at the begin of shift	encourage pt to call before getting up for safety
	Assess pain/fatigue before during and after activity	Provide rest between ADL's and exercise
	Assess gait and proper use of assistive devices	Assistance with ambulation and document distance and tolerance of walk

ACTIVE LEARNING TEMPLATE: Medication

STUDENT NAME Suzette Commodore

MEDICATION Oxycodone

REVIEW MODULE CHAPTER _____

CATEGORY CLASS Opioid (Analgesic)

PURPOSE OF MEDICATION

Expected Pharmacological Action

- Bind to opiate receptor in CNS altering perception of and response to painful stimuli
- Stimuli → generalized CNS depression

Therapeutic Use

- decrease in pain

Complications

CV: orthostatic hypotension Derm: flushing, sweating
 EENT: blurred vision, diplopia (double vision), miosis
 Endo: adrenal insufficiency GI: constipation checking dry mouth, N/V. BU: urinary retention Neuro: confusion, dizziness, hallucinations, headache
 Respiratory: depression, central sleep apnea, hypoxia

Medication Administration

- PO (Adults \geq 50 kg):
 5-10mg (IR) every 3-4 hours initially as needed. Optimal analgesia
 chronic pain: eqiv. 24hr dose given in 2 doses as ER every 12hrs

Contraindications/Precautions

Hypersensitivity: products containing ETOH/bisulfites pt & known tolerance
 Significant respiratory depression: paralytic ileus (temp const. intestine fail to move food thru GI tract → bloating, pain, swelling)
 Substance Abuse disorders, hepatic/renal impairment

Nursing Interventions

- Assess type, location/intensity of pain prior to and 1 hour (peak) after admin
- Assess bowel fx routinely
- Equianalgesic chart should be used when changing routes for one opioid to another
- Assess Gen/Pedi pt more freq due to ↑ risk for respiratory complications
- Stimulant lax. should be admin if opioid use exceeds 2-3 days
- Labs: May ↑ analysed Lipase

Adult: 0.4mg morphine in 10mL NS - every 2mins PRN

Interactions

Drug-Drug: pt's receive MAO-inhibitors may result in unpredictable reactions, ↓ initial doses 25% of usual dose
 mixed antagonist/antagonist including nalbuphine/butorphanol may ↓ oxy's analgesic effects and/or precipitate opioid withdrawal

Evaluation of Medication Effectiveness

- Decrease in severity of pain w/o significant alteration in level of pain/respiratory status

Client Education

- Explain therapeutic value of med before admin to achieve analgesic effect
- Side effects
- PO: may be admin w/ milk/food
- pt must not consume w/ other CNS depressants like alcohol
- Encourage pt to turn cough to bottle every 2 hrs
- may dizziness, drowsiness
- Educate on how to recognize respiratory depression especially call 911 and having naloxone

ACTIVE LEARNING TEMPLATE: **Medication**

STUDENT NAME Suzette Commedore
MEDICATION Morphine Sulfate (IVP)
CATEGORY CLASS Opioid

REVIEW MODULE CHAPTER _____

PURPOSE OF MEDICATION

Expected Pharmacological Action

• Binds w/ opiate receptors in the CNS to alter perception of and response to painful stimuli while producing general CNS depression

Therapeutic Use

• to relieve pain severe enough to require opioid treatment

Complications

CNS: agitation, amnesia, anxiety, ataxia, chills, coma, confusion
↑ intracranial pressure, seizures CV: Bradycardia, CA, hypotension, shock
EENT: laryngeal edema, rhinitis, blurred vision E/O: ocular irritation
GI: constipation, NV GU: urinary retention RESP: depression, sleep apnea, HEMAT: leukopenia, thrombocytopenia

Medication Administration

ADULTS (PO): 15-30mg Q4 PRN
IVP: 2-4 mg admin over 4-5 mins.

Contraindications/Precautions

Hypersensitivity to products w/ tartrazine dyes/ alcohol
• acute severe bronchial asthma, GI obstruction (paralytic ileus)
USE OF MAO inhibitors past 14 days
use cautiously HX of substance abuse / mental illness, head trauma

Nursing Interventions

• have antagonist (naloxone)
• for direct IV injection dilute w/ 4-5mL sterile water over 4-5 mins
• assess type, location, intensity of pain prior to admin then 20 mins
• continue infusion additional bolus every 15-30 min break thru pain
• assess goni/pedi more freq
• Don't dilute IV push

Interactions

Drug-Drug: use w/ extreme caution w/ MAO inhibitors ≥ 14 days
Serotonergic NTs systems: tramadol, trazodone, tricyclic antidepressants, meth blue mixed agonist/antagonist may ↓ analgesic effects or precipitate withdrawal: nalbuphine, butorphanol may ↑ anticoagulant effects of warfarin

Client Education

• may cause drowsiness/dizziness
• take as directed
• warn for potential abuse
• notify HCP if pain not adequately controlled
• emphasize importance of aggressive prevention of constipation

Evaluation of Medication Effectiveness

• ↓ in severity of pain no significant alteration of LOC or respiratory stat
• ↓ in pulmonary edema