Preconference Form

Student Name: Jordan Cathell
Medical Diagnosis/Disease: OA and THR

NCLEX IV *(8)*: Physiological Integrity/Physiological Adaptation

Anatomy and Physiology
Normal Structures

The musculoskeletal system provides our body with protection of vital organs, movement, stability, shape, and support. It also stores minerals and hematopoiesis. Split between the muscular and skeletal systems

Osteocytes (Mature bone cells), osteoblasts (bone forming cells), osteoclasts (Reabsorb bone tissue)

includes bones, cartilage, muscles, ligaments and tendons. Tendons connect muscle to bone and ligaments are bone to bone. Bones articulate to form joints which provide different styles of movement.

Bones : cancellous- spongy and porous, spaces filled with red marrow, mostly short, flat (protect organs or place for attachment of muscles), irregular (Multiple shapes, allows connection to other bones for movement), and epiphysis of long bones

Articular Cartilage: thin layer of hyaline cartilage covering the epiphysis when bone forms a joint with another bone. Cartilage is a shock absorber

Joints: synarthroses don't move, amphiarthroses slightly moveable, diarthrosis is freely moveable.
-Articular cavity lined with synovium which produces synovial fluid for lubrication and cartilage nourishment.

Pathophysiology of Disease

- Osteoarthritis is a degenerative joint disease that results from the breakdown of articular joint cartilage. It is non inflammatory and non-systemic. More common in women. In later stages of osteoarthritis, there is uneven weight distribution and bones will begin to rub together due to cartilage destruction. Hips, knees, fingers, toes and vertebrae are most affected by OA. OA has no cure and to only manages pain or inflammation as symptoms arise.
- The cartilage breakdown is what leads to the pain, swelling and inflammation around the joints.
- Bones may develop growths called spurs
- THR: is to relieve pain and improve function through the replacement of the ball and socket joint with a prosthesis. The THR will consist of a prosthesis with a cup, ball, stem and femur. A THR can either be anterior or posterior and needs to have proper positioning post op to heal correctly. This includes not flexing the hip past 90 degrees, do not adduct or cross legs and do not put on shoes for 4-6weeks on your own.
- A THR may be needed due to osteoporosis causing a severe hip fracture in the femoral neck.

NCLEX IV *(7)*: Reduction of Risk

Anticipated Diagnostics
Labs
CBC
Erythrocyte sedimentation rate (ESR): measure/detect inflammation, measures how quickly RBC fall to the bottom of the test tube
C-reactive protein (CRP): protein made by liver, used to help diagnosis inflammation that could be due to infection or an autoimmune disorder (RA)
Synovial fluid cultures
Additional Diagnostics
MRI
CT
X-ray
Bone Scan

Bones cannot move without a muscle contraction
Muscles: cardiac (involuntary/heart), smooth (in walls of hollow structures like Gi, bladder, blood vessels, no striations, involuntary), and skeletal (striated, voluntary, acts in groups, attached to bones)
Muscle fibers held together by connective tissue
02, glucose and atp needed for power and contraction

As thick and thin filaments in sarcomere slide past each other → sarcomeres (contractable unit of myofibril) shorten & muscle contracts

Bursae are small sacs of connective tissue located wherever pressure is exerted over moving parts to decrease friction at joints

The hip joint is made up of the femur and pelvis. It is a ball and socket joint that allows for a full ROM of the leg and supports your body weight. The femur is a long bone with a rounded top (femoral head) that fits into the pelvis called the acetabulum.

NCLEX II *(3)*: **Health Promotion and Maintenance**

NCLEX IV *(7)*: **Reduction of Risk**

Contributing Risk Factors	Signs and Symptoms	Possible Therapeutic Procedures	Prevention of Complications
Age Smoking Obesity Repeated bending of joint Other joint injuries Anatomical factors Job	Reduced ROM Joint pain/stiffness Weakness in muscles around affected joint Loss of balance or instability Popping or creaking in joint (crepitus) Loss of joint function	Non-surgical Iv antibiotics (Post procedure if any) Analgesics Intraarticular corticosteroid injections PT Weight management Surgical Hip and knee replacements	(What are some potential complications associated with this disease process) Decreased ROM Contracture Bleeding in joint Hairline fractures THR: dislocation, PJI, hardware loosening, postoperative pain

NCLEX IV *(6)*: **Pharmacological and Parenteral Therapies**

Anticipated Medication Management

Analgesics/ NSAIDs
Topical agents
COX-2 inhibitor celecoxib
Intraarticular corticosteroid injections

NCLEX IV *(5)*: **Basic Care and Comfort**

Non-Pharmacologic Care Measures

PT for ROM
Cold therapy for inflammation
Healthy diet
Hydration
Use of assistive devices
Manual therapy
Weight management

NCLEX III *(4)*: **Psychosocial/Holistic Care Needs**

What stressors might a patient with this diagnosis be experiencing?

Lack of control
Depression
Financial burden
Fear of unknown
recovery
Anxiety

Client/Family Education

List 3 potential teaching topics/areas

 educate what osteoarthritis is and how to manage symptoms

 lifestyle modifications: reduce repeated motions, job accommodations

 Support systems: encourage having friends and family to help provide a hand as needed (after surgery for THR)

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)

Primary Rn
Dietician
Orthopedic surgeon
PT
Pharmacist
Radiologist
Home health