Preconference Form

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Medical Diagnosis/Disease: osteoarthritis and total hip arthroplasty (THA)

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

Anatomy and Physiology

Normal Structures

The skeletal system is made up of bones (cortical which are compact and dense outer layer, cancellous which are spongy and porous that make up most of the bone. There are long, short, flat and irregular bones), cartilage (support soft tissue, protect underlying tissue, essential for long bone growth prior to maturity, has a fibrous covering called perichondrium. Types:hyaline in your trachea, nose, elastic in your ears, larynx, fibrocartilage acts as a shock absorber in your knees, pelvic girdle), muscles (bones can not move with muscle, three types- cardiac, smooth, skeletal, muscle fibers are held together by connective tissue composed of myofibrils that are made of filaments. Myofibrils make sarcomere which is responsible for muscular contraction while antagonists relax the muscle), ligaments (connect bone to bone at joints, permit movement and provide stability), tendons (attach muscle to bone), joints (junction between two or more bones and they are classified all based on the movement (amphiarthroses:slightly, synthroses: none, diarthroses: freely moveable which are most, under diathrososes there is categories such as hinge, pivot, ball and socket, gliding, saddle, condyloid), joints do a lot for motion!) that support the body, give structure, allow the body to move while working with the muscles, blood cell production (red bone marrow produces blood cells), mineral storage like calcium and phosphours, and helps maintain homeostasis.

Blood and nerve part- provide O2 and nutritents via the arteroiles in the Haversian canals, the vessels in the periosteum that enter the bone, and vessels in the marrow and bone ends. There are sensory nerve endings in the periosteum that connect with the CNS

-FASCIA- layer of connective tissue that separtes one muscle from another and provides strength to the muscle. (coating of the muscles)

-BURSAE- small sacs of connective tissue located wherever pressure is exerted over moving parts (at joints to decrease friction), cushion b/w moving parts

Pathophysiology of Disease

Osteoarthritis causes inflammation, changes in bone shape, and primarily cartilage deterioration. It can be from physical stress, physical changes that affect joint function (weight for example), and aging or genetics.The first step that happens tends to be articular cartilage eroding (covering the ends of the bone where they meet the joint). Articular cartilage contain cells called chondrocytes which produce/maintain matrix. So, this damage to the cartilage causes damage to the matrix and this results in chondrocytes multiplying forming a cluster called bone spurs. Damaging in matrix can also cause the bone underneath of the cartilage to thicken and form bone cysts. There will also be problems within the joint synovial fluid and this is when people start to feel the pain, stiff, and ROM is limited. People expereince joint stiffness, reduced range of motion, and changes in bones and joint pain. OA can be in any joint but it is most often in the knees, hips, lower back, neck, and hands

total hip arthoplasty= hip replacment. surgical procedure that involves replacing damaged hip bone and cartilage with prosthetic components. You get your hip replaced because of a broken bone from injury or disease, osteoarthritis, or hip problems in general. Priority post op assessments are pain control, wound healing, ROM, and strength. Potential post op complications are blood clot, fat embolism, bleeding, dislocation, and infection.

NCLEX IV *(7)*: Reduction of Risk

Anticipated Diagnostics

Labs

CBC, joint fluid

Additional Diagnostics

xray, CT, MRI, ultrasound, bone scan

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

Contributing Risk Factors

age, joint injury, overuse, obesity, musculoskeletal abnormalities, weak muscles, genetics, gender (Females), physical activity, occupation, diet

Signs and Symptoms

pain, joint stiffness, reduced ROM,

NCLEX IV *(7)*: Reduction of Risk

Possible Therapeutic Procedures

Non-surgical

cortisone injections

Surgical

arthrocentisis, joint replacment, realigning the bone (osteotomy), artificial hip

Prevention of Complications

(What are some potential complications associated with this disease process)

difficulty walking, incorrect alignment of joints, reduced ROM, pinched nerves in the spine, osteoporosis

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

Anticipated Medication Management

pain meds (NSAIDS, tylenol),

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

Non-Pharmacologic Care Measures

PT/OT, transcutaneous electrical nerve stimulation(TENS), active ROM, ice/heat

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

What stressors might a patient with this diagnosis be experiencing?

basic ADL struggles, $$, family caregivers, rehab/PT, work, will their symptoms get worse?

Client/Family Education

List 3 potential teaching topics/areas

- PT/OT recommendations/strategies
- basic ADLs and how to make them easier for client (Clumping care, assistive device, etc)
- Ways the eliminate pain (non pharmacologic/meds)

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)

CNA, nurse, caregiver, primary Dr, radiologist, orthopedic surgeon, orthopedic dr, nutritionist, case managment