Preconference Form

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Medical Diagnosis/Disease: Osteoarthritis

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

Anatomy and Physiology

Normal Structures

The purpose of the musculoskeletal system is to protect body organs, provide support and stability, store minerals, and allow movement. Bones are a huge part of this system. They help the body from collapsing. They serve as a point of attachment for muscles and ligaments. Ligaments provide stability to joints. Bones serve as a storage site for inorganic minerals like calcium. There are bone cells and there are 3 types which are osteoblasts, osteocytes, and osteoclasts. Osteoblasts make collagen, they are basic bone forming cells. Osteocytes are mature bone cells, and osteoclasts take part in bone remodeling by breaking down bone tissue. The inner layer of bone is mostly osteoblasts with some osteoclasts. The anatomic structure of a bone is typically represented by a long bone. (tibia). Each long bone has an epiphysis: the widened area at each end of the long bone, diaphysis main shaft providing structural support, and metaphysis which is the flared area between the epiphysis and diaphysis. There is an epiphyseal plate which is the cartilaginous area between the epiphysis and metaphysis. It actively makes chondrocytes that become mature bones. The periosteum is composed of fibrous connective tissue that covers the bone. Medullary cavity in the center of the diaphysis that is either red or yellow bone marrow. We have 206 bones. Long bones can be the femur. Short bones tarsals. Flat bones pelvis. Irregular bones sacrum. Sesamoid bones could be patella. Joints are where the end of two bones are close and move depending on each other. Three types of cartilage are hyaline, elastic, and fibrous. Hyaline being the most common. It is found in the trachea, bronchi, nose, epiphyseal plate, and articular surfaces of bones. There are three types of muscles: cardiac, skeletal and smooth. Cardiac muscles are only in the heart. Smooth muscles are found in places such as airways and arteries. Skeletal muscles account for about half of a body's weight. The structural unit for skeletal muscle is muscle fibers. They are long and contain many mitochondria to

Pathophysiology of Disease

Osteoarthritis is a joint disease that affects the entire joint, including cartilage, bone, and joint lining. It occurs when the cartilage that cushions the end of bones in your joints gradually deteriorates, leading to bone-on-bone friction. Cartilage degration, bone remodeling, and an inflammatory response. OA can be primary or secondary, depending on whether it is caused by aging and genetics or by other factors such as injury, infection, or obesity. OA can affect any joint, but it is most common in the hands, hips, and knees, where the load and stress are high. OA has no cure, but it can be managed by a combination of medication, exercise, weight control, physical therapy, braces, injections, and surgery, depending on the severity and location of the disease.

What is a
total hip arthroplasty?
It is a total hip replacement that provides significant relief of pain and improved function for people with joint deterioration from OA, RA. The prosthesis replaces the ball and socket joint formed by the upper shaft of the femur and pelvis.

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

Anticipated Diagnostics

Labs

-Blood Tests

-Joint Fluid Analysis

-Rheumatic Panels

Additional Diagnostics

-Medical history and physical exam

-X-rays

-MRI of joints

support their high metabolic activity. Muscle contractions occur as thick(myosin) and thin(actin) filaments slide past each other, causing the sarcomeres to shorten.

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

Contributing Risk Factors	Signs and Symptoms
-Age -Gender -Obesity -Joint injury's -Genetics -Smoking -Diet -Repetitive Stress	-Pain -Stiffness -Tenderness -Loss of Flexibility -Bone spurs -Swelling

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

Possible Therapeutic Procedures	Prevention of Complications
Non-surgical -Corticosteroid injections (cortisone shot) -Physical Therapy -Medications -Acupuncture	(What are some potential complications associated with this disease process) **Pain** Joint Damage Bone Damage Cartilage breakdown Pinched nerve Increased risk for falls

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

Anticipated Medication Management
-Acetaminophen
-NSAIDS
-Steroid Injections
-Opioids

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

Non-Pharmacologic Care Measures
-Exercise
-Weight Loss
-Heat and Cold
-Braces
-Assistive devices
-Mind and Body practices

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

What stressors might a patient with this diagnosis be experiencing?
-Paying for medical bills
-Worrying about future disabilities
-Lack of movement

Client/Family Education

List 3 potential teaching topics/areas
-Try to exercise
-Use items such as braces or canes
-Try to lose weight to take load off joints

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)
-Nurses
-Rheumatologists
-Physical Therapists
-Dieticians
-Social Workers
-Chiropractors