

Preconference Form

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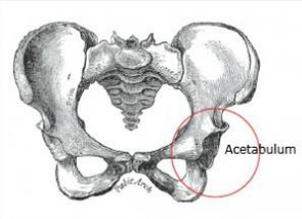
Medical Diagnosis/Disease: Osteoarthritis

NCLEX IV (8): Physiological Integrity/Physiological Adaptation

Anatomy and Physiology

Normal Structures

- Hip joint formed by the femur and pelvis (pubis, ilium, and ischium)
- Ball-and socket joint
- Surface of femur and acetabulum(pelvis) covered in hyaline cartilage
- ROM: flexion/extension, abduction/adduction, internal/external rotation, weight bearing
- Iliofemoral ligament prevents hypertension, maintains upright position
- Pubofemoral ligament limits hypertension and abduction
- Ischiofemoral ligament prevents excessive movement of adduction/ internal rotation
- Acetabular labrum: enhances stability by making a secure fit for the femoral head



- Bursae- fluid filled sacs lines with the synovial membrane that produces synovial fluid. Function is to lessen the friction between tendon and bone, ligament and bone, tendons and ligaments, and between muscles. 20 bursae around hip

Pathophysiology of Disease

- Noninflammatory disorder of the diarthrodial (synovial) joints
- Gradual loss of articular cartilage with the formation of bony outgrowths (spurs or osteophytes) at the joint margins
- Could be caused direct damaged cartilage or joint instability, however there is no single cause
- Various genetic traits may be responsible for the development of cartilage defects
- Obesity contributes to hip and knee OA. It increases mechanical stress on the joints
- Decreased Estrogen at menopause may contribute to increased incidence of OA
- Anterior cruciate ligament injury from quick stops and pivoting increases risk for knee OA
- The normally smooth, white, translucent articular cartilage becomes dull, yellow, and granular as OA progresses
- As the collagen structure in the cartilage changes, articular surfaces become cracked and worn
- As central cartilage becomes thinner, cartilage as the joint becomes thicker and osteophytes form. Joint edges become uneven, affecting the distribution of stress across the joint and causing reduced motion
- Inflammation is secondary symptom, however, when phagocytes try to get rid the joint of small pieces of cartilage torn from joint surface. This causes pain and stiffness
- Pain in later disease occurs due to articular cartilage being lost, and bony joint surfaces rub each other
- Develops in the intervertebral (apophyseal) joints of the spine

NCLEX IV (7): Reduction of Risk

Anticipated Diagnostics

Labs

Synovial fluid analysis helps to distinguish OA from other types of inflammatory arthritis

No labs or biomarkers can be used to diagnose OA
Erythrocyte sedimentation rate(ESR) is normal expect for slight increases during acute inflammation
CBC

Liver function tests

Additional Diagnostics

x-rays help confirm and stage joint damage
a bone scan

CT scan

MRI

-all detect early joint change

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| <p>Contributing Risk Factors</p> <ul style="list-style-type: none"> Drugs- indomethacin and corticosteroids may stimulate collagen-digesting enzymes in joint synovium Hematologic or endocrine problems-chronic hemarthrosis Inflammation- release of enzymes in response to local inflammation may affect cartilage health Joint instability- damage to supporting structures causes instability, placing uneven stress on joint cartilage Mechanical stress-repetitive physical activities Neurologic problems-pain and loss of reflexes from neurologic disorders, such as diabetic neuropathy and chronic joint, cause abnormal movements Skeletal deformities-congenital or acquired conditions (dislocated hip) Trauma- dislocations or fractures may lead to avascular necrosis or uneven stress on cartilage |
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| <p>Signs and Symptoms</p> <ul style="list-style-type: none"> Pain Musculoskeletal problems Impaired role performance |
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| <p>Possible Therapeutic Procedures</p> <p><u>Non-surgical</u></p> <p>Health promotion</p> <p>Abulatory care</p> <p>Heat and cold applications</p> <p>Nutrition therapy</p> <p>Exercise</p> <p>Rest and joint protection</p> <p>Role performance</p> <p><u>Surgical</u></p> <p>Joint surgery – hip replacement (total hip arthroplasty)- replaces damaged hip joint with artificial joint to relieve pain and improve mobility. Prosthetic components may be metal or ceramic ball that is placed on a metal stem that will fit into femur</p> <p>Acupuncture</p> |
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| <p>Prevention of Complications</p> <p>(What are some potential complications associated with this disease process)</p> <p>Avoid smoking</p> <p>Properly treat joint injuries</p> <p>Maintain healthy weight and eat balanced diet</p> <p>Use safety measures to protect and decrease risk for joint injury</p> <p>Exercise regularly, including strength and endurance training</p> |
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NCLEX IV (6): Pharmacological and Parenteral Therapies

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| <p><u>Anticipated Medication Management</u></p> <p>NSAIDS</p> <p>Aspiran, salicyte</p> <p>Corticosteroids</p> <p>Systemic</p> <p>Topical analgesics</p> |
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NCLEX IV (5): Basic Care and Comfort

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| <p><u>Non-Pharmacologic Care Measures</u></p> <p>Exercise promotion</p> <p>Ice when swelling</p> <p>Heat when stiffness occurs</p> <p>Diet</p> <p>Rest</p> |
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NCLEX III (4): Psychosocial/Holistic Care Needs

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| <p><u>What stressors might a patient with this diagnosis be experiencing?</u></p> <p>Pain, stiffness, swelling</p> |
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Client/Family Education

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| <p><u>List 3 potential teaching topics/areas</u></p> <ul style="list-style-type: none"> having adequate sleep/rest pain management maintaining joint flexibility and muscle strength |
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NCLEX I (1): Safe and Effective Care Environment

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| <p><u>Multidisciplinary Team Involvement</u></p> <p>(Which other disciplines do you expect to share in the care of this patient)</p> <p>Prevention through exercise and rest promotion</p> <p>Use of medications for pain</p> <p>Nutritional Supplements for anti-inflammatory effects</p> |
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