NR 324 Final Exam Review

1. **Types of Traction**

Skin: Weights attached to patient's skin to decrease muscle spams and immobilize the extremity before surgery. Ex **Bryant traction** (for hip dysplasia in children) and **Buck 's traction** for hip fracture in adult patients).

Skeletal: Screws are inserted into bone. Used for long bone fractures such as femur, tibia, fibula, humerus, ulna, radius, metacarpals, phalanges and metatarsals.

Halo: used for cervical bone fractures. **Nurse should make sure wrench to release rods is attached to the vest, so CPR can be performed.**

Nursing interventions

- Assess neurovascular status every hour for the 1st 24hrs and then every 4 hours.
- Do not lift or remove weights
- Do not let weights rest on floor (make sure they are hanging freely)
- Muscle spams are expected and should be treated w/meds, repositioning, heat, or message. Unrelieved muscle spasms should be reported to provider.
- For halo traction, move patient as a unit and do not apply pressure to rods.
- Monitor for skin breakdown

2. **Lupus**

Autoimmune disorder that causes chronic inflammation in the body. There is no cure. There are 2 types. **Systemic** – affects the connective tissues in multiple organs. **Discoid** - affects skin (butterfly rash).

Risk factors: Female, ages 20-40, race (Africa American, Asian, Native American)

S&S: Fatigue, joint pain, fever, butterfly rash on face, depression, edema, Raynaud's phenomenon, anemia, pericarditis, lymphadenopathy.

Lab: positive ANA titer, decreased serum completement (C3/C4), decreased RBC, WBC, platelets. Increase BUN and creatinine with kidney involvement.

Med: NSAIDs, immunosuppressant agents (prednisone, methotrexate), antimalaria drugs (hydroxychloroquine), topical steroid creams for rash.

Interventions: Avoid UV/sun exposure, avoid sick people, stress, cold weather, infection, pregnancy, patient should use mild protein shampoo to wash hair.

3. **Gout**

Inflammatory arthritis, resulting in formation of uric acid crystals in joints and body tissues.

Risk: obesity, alcohol, high purine diet (meat), cardiovascular disease, starvation dieting.

S&S: severe joint pain in the great toe, erythema, swelling, warmth in affected joint, tophi w/chronic gout.

Med: colchicine, NSAIDs, Corticosteriods, allopurinol and probenecid.

Interventions; Pt should avoid spicy food, balance diet, stop alcohol consumption, and eat 2hrs before bedtime.

4. **HIV/AIDS**

Retrovirus that targets CD4+ lymphocytes (T-cells), resulting in decreased immune function and susceptibility to infections. AIDS = stage 3 (end-stage) HIV infection.

RF: Unprotective sex, multiple sec partners, perinatal exposure, IV drug use, health care workers.
S&S: Flu-like symptoms, weakness, night sweats, headache, weight loss and rash
Stage 3 (AIDS)

- CD4+ count < 200 cells/mm3
- **Symptoms:** Kaposi's sarcoma, TB, Pneumonia, wasting syndrome, candidiasis of the airways, herpes, other infection

Diagnosis: positive ELISA test, confirmed with Western blot test.
Med: 3-4 Antiretroviral medications (ending with Vir)
Patient teaching:

- Practice good hand hygiene, bathes daily with antimicrobial soap
- Avoid raw foods
- Don't clean cat litter boxes
- Avoid sick people
- Practices safe sex
- Ongoing monitoring of CD4+ counts

5. Rheumatoid Arthritis (RA)

Chronic, progressive autoimmune disease that cause inflammation, thickening and deformation of the joints. Joints are affected bilaterally and symmetrically.
RF: Female gender, age 20-50, genetics
S&S: joint pain, morning stiffness, fatigue, joint swelling with erythema and warmth, swan neck and boutonniere deformities in fingers, subcutaneous nodules, fever red sclera and lymphadenopathy
Labs: positive Rheumatoid factor (RF) antibody, positive ANA titer, Elevated WBCs, ESR and CRP
Diagnosis: Arthrocentesis (aspiration of synovial fluid from joint) to test for WBCs and RF
Meds: NSAIDs, immunosuppressants (prednisone, methotrexate), antimalarial agents (hydroxychloroquine).
Procedures: Plasmapheresis (to remove antibodies from blood) total joint arthroplasty
Complications: Sjogren's syndrome (dry eyes, dry mouth, dry vagina)
Patient education

- Take hot shower to relieve morning stiffness
- Physical activity to preserve ROM
- Use of assistive devices

6. Osteoarthritis

Progressive degeneration of articular cartilage in joints.
RF: Older age, women, obesity, smoking, repetitive stress on joints
S&S: Joint pain/stiffness, crepitus, enlarged joints, Herberden's nodes (distal interphalangeal joints), Bouchard's node (proximal interphalangeal joints).
Meds: Oral analgesics (acetaminophen, NSAIDs), Topical analgesics (capsaicin), Glucosamine, injection of glucocorticoids, and hyaluronic acid
Surgery: total joint arthroplasty
Interventions

- Apply Ice (acute inflammation) or heat

- Splinting and /or use of assistive devices
- Physical therapy
- TENS (transcutaneous electrical nerve stimulation)
- Burning sensation is normal for capsaicin and gloves must be worn when apply

7. Osteoarthritis vs. RA

Osteoarthritis	Rheumatoid arthritis
• Degenerative disease process • Pain with activity, get better with rest. • Affects specific joint, not symmetrical • Herbeden's and Bouchard's nodes • Negative rheumatoid factor	• Inflammatory disease process • Pain after rest/immobility, get better with movement • Affect All joints, symmetrical • Swan neck and boutonniere deformities • Positive rheumatoid factor

8. Fractures

RF: Osteoporosis, long-term steroid use, falls, trauma, bone cancer and substance abuse.
S&S: pain, crepitus, deformity in extremity, muscle spasms, edema and ecchymosis
Meds: antibiotic (prophylactic) analgesic, muscle relaxants.
Interventions
Stabilize affected area, elevated affected limb, apply ice, and perform neurovascular assessments every hour

- Pain level
- Sensation (numbness, tingling lack of sensation
- Skin temperature
- Capillary refill
- Pulses
- Movement

Surgeries

- **External fixation:** pin attached to external frames
- **Open reduction and internal fixation**: pins, plates, screws, and rod used internally
  Intervention for Pin site
  - Monitor for signs of infection: increase drainage, erythema, loosening of pins, skin tenting at pin site
  - Clean pins using a New cotton tip swab for each pin.
  - Do not remove crusting at pin site
  - Complication is compartment syndrome with edema

9. Types of Fractures

- **Close (simple) fracture:** Does not break skin surface.
- **Open (compound) fracture:** Breaks skin surface, increased risk of infection
- **Complete fracture:** goes through entire bone
- **Incomplete facture:** goes part way through bone

- **Comminuted fracture**: bone split in multiple pieces
- **Compression fracture:** one or more bones in spine weaken and collapse (due to loading force
- **Oblique fracture:** fracture occurs at oblique angle
- **Spiral fracture:** fracture from twisting motion (sign of abuse, especially in children.

10. Fracture Complications

I. **Fat embolism:**

Fat globule from bone marrow travels to lungs, impairing respirations. Long bone and hip fracture are most common.

S/S: Dyspnea, confusion (early sign), tachypnea, tachycardia, petechiae on upper body (late sign)

II. Osteomyelitis:

It's a bone infection

S/S: bone pain, erythema, edema, fever, elevated WBC

Treatment: Long -term antibiotic therapy, surgical debridement of bone, hyperbaric oxygen therapy.

11. Casts

Nurse teaching and care

- Handle plaster cast with palms (not fingertips) and wear gloves until cast is dry.
- Elevate cast above lever of heart for the 1st 24-48 hours.
- Capillary refill
- Tell patient not to place objects under cast
- Itching can be relieved by blowing cold air from a hair dryer under cast.
- Reports to provider: hot spots, areas with increased drainage, malodorous areas.

12. Compartment syndrome

Increase pressure within muscle compartment of an extremity that impairs circulation. Assessment is neurovascular assessment.
S&S: Intense pain with passive movement, paresthesia (early sign), paralysis (late sign), pallor, pulselessness (late sign) and hard/swollen muscles.
Treatment: Fasciotomy

13. Ulcerative colitis and Crohn's Disease

They are both inflammatory bowel disease that cause inflammation in the digestive tract. Ulcerative colitis affects the large intestine and rectum causing continuous lesions, while Crohn's is widespread because it can affect any part of the digestive tract and also have fistula.
Lab: decreased Hct/Hbg and albumin. Increased ESR, CRP and WBC
RF: genetics, Caucasians, Jewish descent, stress, autoimmune disorder.
Meds: 5-aminisalicylin acid (ex: Sulfasalazine), corticosteroids (ex: prednisone), Immunosuppressant (ex: cyclosporine), antidiarrheals e.g. loperamide.
Interventions

- Monitor for signs of peritonitis (rigid/board like abdomen, rebound tenderness, fever, tachycardia, nausea and vomiting)
- Monitor I&Os, electrolytes (risk for hypokalemia)
- NPO during exacerbation
- East food high in protein and calories and low in fiber
- Avoid caffeine and alcohol
- East small meals frequently

Ulcerative colitis	Crohn's Disease	Diverticulitis
Inflammation of the colon, causing continuous lesions. Chronic blood loss can cause anemia.	Inflammation and ulceration of the small intestine, causing sporadic lesions and risk for fistula	Inflammation of diverticular (small pouched in the colon) can perforate and cause peritonitis
LLQ pain, fever, 12-20 liquid stools/day, abdominal distention and pain, mucus/blood/pus in stools.	RLQ pain, fever, 5 loose stools/day, mucus/pus in stools, abdominal distention, and pain, steatorrea	LLQ pain, nausea, vomiting, fever, and chills.

14. Peptic Ulcer Disease

Is an erosion in the stomach, esophagus, or duodenum mucosa . Priority finding is hemetamesis

RF: H. pylori infection, NSAID use, stress.

S&S: nausea, vomiting, heartburn, bloating, bloody emesis or stools, and pain:

- **Gastric Ulcer**: pain 30-60nmin after meal, worse in a day, worse with eating.
- **Duodenal ulcer:** pain 1.5-3hrs after meal, worse in night, better with meal or antacids

Diagnosis: Esophagogastroduodenoscopy (EGD)

Meds: antibiotic to prevent resistance (metronidazole, amoxicillin, clarithromycin and tetracycline), H2 receptor antagonist (ranitidine), PPI (pantoprazole), Antacids (take 1-3 hrs after meals, 1 hr apart from other meds) and Mucosal protectant (sucralfate, given 1 hr before meals and at bedtime.

Teaching:

Avoid acid-producing foods (Milk, caffeine, spicy foods) and avoid NSAIDs.

Complications:

Perforation resulting in hemorrhaging: s/s severe epigastric pain, rigid/board-like abdomen, rebound tenderness, hypotension, and tachycardia.

15. Gastroesophageal reflux disease (GERD)

Gastric contents including enzymes backflow into esophagus causing pain and mucosal damage (esophagitis Barrett's epithelium). Exacerbation is chocolate

RF: Obesity, smoking, alcohol use, older age, pregnancy, ascites, hiatal hernia, supine position, diet high in fatty/fried/spicy foods, caffeine, citrus fruits.

S&S: Dyspepsia (indigestion), throat irritation, bitter taste, burning pain in esophagus, pain worsen when laying down, improves with sitting upright, and chronic cough.

Meds: H2 receptor antagonist (ranitidine), PPI (pantoprazole), Antacids (take 1-3 hrs after meals, 1 hr apart from other meds), proton Pump Inhibitors (pantoprazole), and prokinetics (metoclopramide: accelerates gastric emptying, watch for symptoms of EPS).
Surgery: fundoplication (fundus of stomach is wrapped around esophagus)
Teaching

- Avoid fatty/fried/spicy foods
- Eat smaller meals
- Remain upright after meals
- Avoid tight-fitting clothing
- Lose weight
- Elevate HOB 6-8 with blocks.

16. Intestinal (Bowel) Obstruction

S/S: abdominal distention, constipation, abdominal pain, high pitched bowel sounds above obstruction, hypoactive bowel sounds below obstruction.

- **Small bowel:** projectile vomiting with fecal odor, fatigue and imbalance, metabolic alkalosis
- **Large bowel:** diarrhea or ribbon like stool around impaction

Surgery: colon resection, colostomy, lysis of adhesions
Interventions: NPO, Place NG tube, administer IV fluids and electrolytes

17. Hiatal Hernia

Stomach is sliding up thru the LES. Part of the bowel goes inside abdominal wall or muscle sphincter
S/s: heartburn is the main, dysphagia, painful bending over, SOB, pressure (similar to heart attack)
- Most common cause (risk factor): elevated BMI (>25)
o Anything that increases intra-abdominal pressure: pregnancy, weight lifting
- Avoid tight clothing that can put pressure in the abdomen
- Life style modification: lose weight, avoid alcohol (increases relaxation of LES), stop smoking

Diagnostic study: endoscopy or barium swallow

18. **Diarrhea**

- Get history and make sure patient is not taking an antibiotic to rule out c diff
- Might order stool culture for c. diff (doctor has to order)
- Always follow up!

19.