Immune System NCLEX Review

Immune Disorders

AIDS- Syndrome distinguished bv cellular immune function deficits associated with HIV, evidenced by the development of opportunistic infections

Assessment

1. P. Carinni pneumonia
2. Stomatitis or esophagitis
3. Severe debilitating meningitis
4. Cytomegalovirus
5. Kaposi sarcoma

Diagnostic

- Positive ELISA and confirmed by western blot assay
- Viral load testing, antigen assays
- CBC reveals leukopenia

High risk groups:

- Homosexual/bisexual men
- IV drug users
- Hemophiliacs via contaminated blood products
- Children of infected mothers in utero or at birth

Implementation:

- Preventative measures
- No cure; antiviral medications
- IV antibiotics
- Treat opportunistic infection
- Standard precautions
- Adequate nutritional intake
- Symptom relief
- Family and client support

Anaphylaxis a serious and immediate hypersensitivity reaction that releases histamine from the damaged cells *(localized or systemic).*

Cause:

- Food
- Latex
- Medications
- Chemicals
- Cosmetic products
- Environmental factors

Signs and Symptoms:

" Hypo- Tachy- Tachy- Diz - Hoarse- Head- *Pruritus "

- **Hypo**tension
- **Tachy**cardia
- **Tachy**pnea
- **Diz**ziness
- **Hoarse**ness
- **Head**ache
- ***Pruritus**

PRIORITY NURSING ACTIONS!

1. Respiratory status and maintain a patent airway
2. Call the Rapid Response Team
3. Administer oxygen
4. Start an IVF *(PNSS)*
5. Prepare to administer diphenhydramine and epinephrine
6. Documentation

Immunodeficiency is the absence or inadequate production of immune bodies.

Goal: Protection against *infection.*

Autoimmune Disease

Systemic lupus erythematosus (SLE) chronic, progressive, systemic inflammatory disease that can cause major organs and systems to fail. "**NO CURE"**

Cause: Unknown

Target Organ: Integumentary, GI, Renal

Signs and Symptoms:

- "Butterfly rash"
- *Skin:* Dry, scaly, raised rash
- Fever
- Photosensitivity

- Joint pain
- Erythema of the palms

Nursing Interventions:

- Monitor skin integrity
- **DIET:** High Vitamins and Iron, High Protein *(Renal: OK)*
- Monitor intake and output and daily weight
- Early detection: Lupus nephritis
- Provide emotional and supportive therapy
- Monitor BUN, Creatinine closely

Scleroderma (Systemic Sclerosis) characterized by inflammation, fibrosis, and sclerosis.

Target Organ: Connective tissue, skin, synovial membranes, esophagus, heart, lungs, kidneys, and gastrointestinal tract.

Signs and Symptoms:

- Stiffness and muscle weakness
- Pitting edema of the hands and fingers
- Taut and shiny skin
- Decreased ROM
- Joint contractures

Nursing Interventions:

- Encourage activity as tolerated.
- *Room temperature:* constant
- **DIET:** Small frequent meals; **AVOID:** Spicy, Caffeine, Alcohol
- Advise the client to **sit up** for 1 to 2 hours after meals

Polyarteritis Nodosa is a form of systemic vasculitis that causes inflammation of the arteries in visceral organs, brain, and skin. **Prognosis:** Poor

Signs and Symptoms:

- Severe abdominal pain
- Bloody diarrhea
- Weight loss
- Elevated ESR

Nursing Interventions:

- Monitor skin integrity
- **DIET:** High Vitamins and Iron, High Protein *(Renal: OK)*
- Monitor intake and output and daily weight
- Early detection: Lupus nephritis
- Provide emotional and supportive therapy

- Monitor BUN, Creatinine closely

Pemphigus is a rare group of blistering autoimmune diseases that affect the skin and mucous membranes.


© MAYO FOUNDATION FOR MEDICAL EDUCATION AND RESEARCH. ALL RIGHTS RESERVED.

Signs and Symptoms:

- Fragile, partial-thickness lesions
- **Nikolsky's sign:** Separation of the epidermis caused by rubbing the skin
- Malaise, pain, and dysphagia

Nursing Interventions:

- Provide supportive care
- Provide oral hygiene and increase fluid intake.
- Assist with soothing baths
- Administer corticosteroids and cytotoxic agents as prescribed

Goodpasture Syndrome autoantibodies are made against the glomerular basement membrane and alveolar basement membrane.

Target Organ: Lungs and Kidneys

Signs and Symptoms:

- Shortness of breath
- Hemoptysis
- Decreased urine output
- Hypertension and tachycardia

Nursing Interventions:

- Corticosteroid therapy and plasmapheresis
- Provide supportive therapy for pulmonary and renal involvement.

Lyme's Disease caused by the spirochete Borrelia burgdorferi, acquired from a tick bite.

Signs and Symptoms:

- *First Stage:* Bullseye rash; it may occur anywhere on the body. Flulike symptoms
- *Second Stage:*Joint pain
- *Third Stage:* Arthritis

Nursing Interventions:

- Gently remove the tick with tweezers
- Wash with soap and water
- Perform a blood test 4 to 6 weeks after a bite
- Avoid areas that contain ticks, such as wooded grassy areas

Post transplantation Immunodeficiency is a immunosuppression caused by therapeutic agents.

Signs and Symptoms:

- Assess for signs of opportunistic infections.
- Assess nutritional status.
- Assess for signs of rejection

Nursing Interventions:

- Strict aseptic technique is necessary
- Provide psychosocial support
- Provide client teaching about immunosuppressants