

Medical-Surgical Nursing: An Integrated Approach, 2E

Chapter 22

NURSING CARE OF THE CLIENT: IMMUNE SYSTEM

Immunity

- The body's ability to protect itself from foreign agents or organisms.

Organs of the Immune System

- Classified as *primary* or *peripheral lymphoid organs*.
- Primary lymphoid organs are bone marrow and the thymus gland.
- Peripheral lymphoid organs are lymph nodes, spleen, tonsils, appendix, Peyer's patches of the small intestines, and the liver.

Types of Immunity

- Natural (innate).
- Acquired (adaptive).

Factors Influencing Immunity

- Age.
- Sex.
- Nutritional Status.
- Stress.
- Treatment Modalities.

Hypersensitive Immune Responses

- Allergies.
- Anaphylaxis.
- Transfusion reactions.
- Transplant rejection.
- Latex allergy.

Allergies

- Allergic disorders are the result of a *hypersensitivity* (excessive reaction to a stimulus) of the immune system to *allergens* (a type of antigen commonly found in the environment).

Anaphylaxis

- A systemic reaction to allergens and the most serious type of allergic reaction.
- Foods, drugs, hormones, insect bites, blood, and vaccines are all associated with anaphylactic reactions.

Transfusion Reactions

- Any client receiving blood products that are *homologous* or from a donor may develop a transfusion reaction.
- Five types: febrile nonhemolytic; allergic urticarial; delayed hemolytic; acute hemolytic; and anaphylactic.

Transplant Rejection

- Even with the use of immunosuppressive medications, 10% to 15% of transplanted organs fail.

Latex Allergy

- Since 1987, when universal precautions (now called Standard Precautions) were mandated, exposure to latex by health care workers has dramatically increased.
- By June, 1996, 28 latex-related deaths had been reported to the FDA.

Autoimmune Diseases

- Rheumatoid arthritis.
- Systemic lupus erythematosus.
- Myasthenia gravis.

Rheumatoid Arthritis

- A chronic, systemic autoimmune disease characterized by joint stiffness.
- Affects 2.1 million people in the U.S.
- Cause unknown, but genetic disposition suspected.

Systemic Lupus Erythematosus

- A chronic, progressive, incurable autoimmune disease affecting multiple body organs.
- Characterized by periods of remission and exacerbation.
- Occurs most commonly in women during their childbearing years, particularly in African Americans.

Client Teaching for Systemic Lupus Erythematosus

- Get adequate rest.
- Use stress-reduction techniques.
- Avoid exposure to sunlight; use sunscreen.
- Involve friends and family in care.
- Report fever, chills, anorexia, or symptom worsening to health care provider immediately.
- Never just stop taking medications.
- Contact the Lupus Foundation of America for information and support.

Myasthenia Gravis

- An autoimmune disease characterized by extreme muscle weakness and fatigue due to the body's inability to transmit nerve impulses to voluntary muscles.
- Clients must be carefully monitored for signs of respiratory distress and myasthenic or cholinergic crisis.