

Short Note on Immune System Disorders

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DESCRIPTION

Immune system disorders result in abnormally low or excessive immune system activity. Overactive immune systems cause the body to attack and harm its own tissues (autoimmune diseases). Immune deficiency diseases reduce the body's ability to defend against intruders, making it more susceptible to infection. The immune system may produce antibodies that, instead of defending infections, attack the body's own tissues in reaction to an unknown stimulus. The goal of autoimmune disease treatment is to reduce immune system activity.

Immune system includes the following organs:

- Spleen
- Tonsils
- Bone marrow
- Lymph nodes

These organs are responsible for the production and discharge of lymphocytes. White blood cells are divided into two types: B cells and T cells. B and T lymphocytes fight antigens, which are intruders. B cells create antibodies that are specific to the illness that your body has discovered. Immune cells known as T cells target foreign or damaged cells.

Autoimmune disorder

In autoimmune illnesses, the body attacks normal, healthy tissues. The reason behind this is unknown. The genes are most likely triggered by a combination of a person's genes and something in the environment.

The following are three common autoimmune diseases:

Type 1 diabetes is the most frequent type of diabetes. The immune system attacks the pancreas' insulin-producing cells. Insulin is a hormone that takes sugar from the bloodstream and converts it to energy.

Rheumatoid arthritis is a joint-related of arthritis. This type of arthritis is characterised by swelling and abnormalities of the joints. Some persons with rheumatoid arthritis have an auto-antibody called rheumatoid factor in their blood.

Lupus: This condition affects the lungs, kidneys, and skin, among other body components. In the blood of lupus patients, autoantibodies of various types might be found.

Nobody knows for sure what causes autoimmune illnesses, but a variety of factors appear to have a role. Learn everything you can about your immune system disorder if you have one. Work together with your healthcare providers to keep it under control.

What are the different types of immunodeficiency disorders?

An immune deficiency condition develops when the immune system isn't working properly. Primary immunodeficiency disease occurs when you are born with a deficiency or when there is a hereditary reason. There are around 100 different types of primary immunodeficiency diseases.

Secondary immunodeficiency problems occur when your body is attacked by an external source, such as a toxic substance or an infection. A secondary immunodeficiency condition can be caused by the following factors:

Burns that are severe

Chemotherapy/radiation

Diabetes/malnutrition

The following are examples of secondary immunodeficiency disorders:

Cancers of the immune system such as leukemia

Multiple myeloma (plasma cell cancer)

Causes

The immune system's blood cells aid in the protection of the body against dangerous substances like bacteria, viruses, pathogens, cancer cells, and blood and tissue from outside the body. Antigens are present in these substances. The immune system produces antibodies against these antigens, allowing it to eliminate these harmful substances.

An autoimmune disorder may result in:

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- The breakdown of body tissue, one of the possible outcomes of an autoimmune illness.
- An organ's abnormal development.
- One or more organs or tissues may be affected by an autoimmune disease.
- Autoimmune diseases commonly affect the following areas:
 - Tissues that are linked together (Connective tissues).
 - Endocrine glands such as the thyroid and pancreas.
 - Red blood cells are the cells that make up blood.

Symptoms

Each illness has its own set of symptoms, which can be mild or severe. Some of these signs and symptoms include:

- Infections of sinuses
- Pinkeye
- Colds/diarrhea/pneumonia
- Infections with yeast

Your doctor may recommend that you be tested for an immunodeficiency disorder if your symptoms do not respond to treatment or do not resolve completely over time.

How is immunodeficiency disorders treated?

Treatment for each immunodeficiency problem will be determined by the individual circumstances. AIDS, for example, can result in a variety of infections. For each infection, your doctor will prescribe medication. If necessary, you may be prescribed an antiretroviral to treat your HIV infection.

CONCLUSION

Antibiotics and immunoglobulin treatment are routinely used to treat immunodeficiency problems. Treatment of viral infections caused by immunodeficiency disorders includes antiviral medications such as amantadine and acyclovir, as well as a drug called interferon.

Your doctor may recommend a bone marrow (stem cell) transplant if your bone marrow isn't producing enough lymphocytes.