Prime Scholars Library

Medical Advances and Case Report

Commentary

Vol. 10 (3), pp.07-08 , September, 2022

Available online at
https://primescholarslibrary.org/

Assessments of primary immunodeficiency and immune response

Campbell Cutler*

Department of Medicine and Health Sciences, Universidad del Rosario, Bogota, Colombia.

Received: 19-Aug-2022, Manuscript No. Macr-22-77560; **Editor assigned:** 23-Aug-2022, PreQC No. Macr-22-77560 (PQ); **Reviewed:** 12-Sep-2022, QC No Macr-22-77560; **Revised:** 20-Sep-2022, Manuscript No. Macr-22-77560 (R); **Published:** 28-Sep-2022, DOI: 10.51268/2736-1888.22.10.145

DESCRIPTION

The immune system helps the body to fight infections. People with the Primary Immune-deficiency (PI) has a malfunctioning immune system. This means that people with PI are more likely to be infected and become very ill. There are over 400 types of PI, with varying degrees of severity, and a high degree of discovery. In some cases, a mildly ill person may not realize he or she is her PI until adulthood. It can also cause problems in infancy and be detected soon after birth. All states include testing her for a type of PI called Severe Combined Immunodeficiency (SCID) as part of newborn screening. Treatment can help the immune system work well. Which treatment is most effective depends on the type of PI.

The immune system is a wonderful collaboration between cells and proteins that work together to provide defense against infection. These cells and proteins do not form a single organ like the heart or liver. Instead, the immune system is distributed throughout the body to respond quickly to infections. Cells travel through specialized blood vessels called bloodstream or lymph vessels.

Immune response

The immune response is a dynamic system that maintains the body's integrity and specifically fights infections. However, many diseases highlight imbalances in host immune responses. Exacerbated responses lead to autoimmune and allergic diseases, while weak or inefficient responses favor opportunistic infections and viral reactivation. In sepsis, inflammation and compensatory immunosuppression make the use of appropriate drug therapy difficult. Until the current date, assessing the immune profile of patients remains a challenge.

Genetic mutation

Changes in a person's genes can cause components of the immune system to become deficient or dysfunctional. Most of these conditions are rare, but when they do occur, they suffer from an above-average number of infections, so they are often diagnosed early in life.

Medications

Medicines such as chemotherapy for cancer and immunosuppressants for various rheumatic and allergic diseases. The immune response is the body's ability to defend itself by defending against harmful pathogens and includes a line of defense against most microbes and specialized and highly specific responses to specific attackers. This immune response is classified as either innate, which is nonspecific, or adaptive, which is highly specific.

Inflammation

A specific response that attracts cells and molecules of the immune system to the site of infection or injury. It was characterized by increased blood supply, increased vascular permeability, and transendothelial migration of blood cells (leukocytes). The adaptive immune response is the body's second line of defense. Cells of the adaptive immune system are highly specific. This is because early maturation, in B and T cells develop antigen receptors specific only for certain antigens. This is very important for activating B and T cells. B and T cells are extremely dangerous cells, and if attacked without undergoing a rigorous activation process, defective her B or T cells could start destroying the host's own healthy cells.

Activation of naive helper T cells occurs when Antigen-Presenting Cells (APCs) present in foreign antigens through the cell surface MHC class II molecules. These APCs, which include dendritic cells, B cells, and macrophages, are specifically equipped with costimulatory ligands that are recognized not only by MHC class II, but also by costimulatory receptors on helper T cells. Without co-stimulatory molecules, adaptive immune responses are inefficient and T cells become energetic.

CONCLUSION

Management of PID patients is based on her three aspects of diagnosis. Suspicious clinical manifestations, consequences of abnormal immune responses, and underlying genetic defects. However, diagnosing PIDs can face significant challenges. There are many different types of PIDs that need to be recognized, most of which present clinical symptoms similar to common diseases. Immunodeficiencies resulting from multiple gene defects can have similar symptoms, and defects in the same gene can have different clinical manifestations. Severe PID is relatively easy to recognize, but mild immunodeficiency may not increase alertness until typical symptoms appear.