Journal of Clinical and Cellular Immunology
ISSN: 2155-9899
OPEN ACCESS Freely available online
Commentary

Immunological Disorders: A Brief Note

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DESCRIPTION

Immunological disorders or diseases are caused due to the dysfunction of the immune system. They include immunological deficiency syndromes, autoimmune diseases, and Asthma, allergy, and autoinflammatory syndromes. These disorders disrupt our body's ability to fight against bacteria viruses and parasites [1].

Immunological deficiency syndromes

Immunological deficiency syndromes are diseases where there is a defect in a component in the immune system. People with these deficiencies have higher chances of infections and developing certain cancers. Immunological deficiency syndromes include primary immune deficiency diseases and acquired immunodeficiency syndromes. Severe combined immunodeficiency is a primary immune deficiency, and AIDS is an acquired immunodeficiency syndrome [2].

Primary immune deficiency diseases: Primary immune deficiency diseases are genetic disorders and are rare. People with these disorders may be subject to chronic, debilitating infections, which increase the risk of developing cancer. These diseases can be fatal. These diseases can be recognized and diagnosed in childhood or adulthood, depending upon the disease severity. In recent studies, it is shown that there are more than 200 different forms of primary immune deficiency diseases affecting almost 500,000 people across the USA. These rare genetic disorders can be chronic and costly.

Acquired immunodeficiency syndromes: Acquired immunodeficiency syndrome is a chronic and life-threatening disorder caused by immunodeficiency viruses. They damage our immune system, destroy CD4 T lymphocytes and interfere with our body's ability to fight against infections. There is no cure for these syndromes, but medication can reduce the progression of the disease [3].

Autoimmune diseases

An autoimmune disease is a disease where our immune system attacks our own body mistakenly. Our immune system guards our body against germs. When a foreign body invades our body, our immune system sends out its army of fighter cells to attack them. The immune system will know the difference between foreign cells and our body cells. In autoimmune diseases, the immune system mistakes our body as foreign cells and releases autoantibodies that attack healthy cells. Most autoimmune diseases target only one organ, but other disorders like systemic lupus erythematosus affect the whole body. There are more than 80 autoimmune diseases [4]. There are some common autoimmune diseases like multiple sclerosis, lupus, and rheumatoid arthritis, and type 1 diabetes. Others are rare and difficult to diagnose. Mostly these diseases have no cure. They require lifelong treatment to suppress the symptoms.

Autoinflammatory syndromes

Autoinflammatory syndromes are rare disorders caused by an innate immune system response resulting in inflammation of multiple organs. Unlike autoimmune diseases, autoinflammatory syndrome lacks pathogenic autoantibodies and antigen-specific T cells [5]. These are rare disorders. Abnormal activation of innate immune system leads to autoinflammatory disease. They can damage vital organs. Colchicine is a therapy which is the most crucial and widespread effect on autoinflammatory disorders. It is a medication extracted from the meadow saffron and used since the first century for rheumatologic diseases.

By the activation of specific and nonspecific immune responses, immune system responds to foreign pathogens and cancer cells. The goal of the immunotherapy is to enhance these specific and nonspecific responses and control the growth of any malignant cells [6].

REFERENCES

1. Pestka S, Krause CD, Walter MR. Interferons, interferon-like cytokines, and their receptors. Immunol Rev. 2004;202: 8–32.
2. Schindler C, Levy DE, Decker T. JAK-STAT signaling: From interferons to cytokines. J Biol Chem. 2007;282: 20059–20063.
3. Donnelly RP, Kotenko SV. Interferon-lambda: A new addition to an old family. J Interferon Cytokine Res. 2010;30: 555–564.

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Received: September 06, 2021; **Accepted**: September 20, 2021; **Published**: September 27, 2021

Citation: Sai Priya NA (2021) Immunological Disorders: A Brief Note. J Clin Cell Immunol. 12:632.

4. Bluyssen HA, Blaszczyk K, Olejnik A. STAT2/IRF9 directs a prolonged ISGF3-like transcriptional response and antiviral activity in the absence of STAT1. Am J Physiol Cell Physiol. 2015;299: C354–C362.
5. Liu M, Guo S, Hibbert JM, Jain V, Singh N. Stiles CXCL10/IP-10 in infectious diseases pathogenesis and potential therapeutic implications. Cytokine Growth Factor Rev. 2011;22(3): 121–130.
6. Li H, Chen LY. Characteristics, diagnosis and prognosis of acute-on-chronic liver failure in cirrhosis associated to hepatitis B. Sci Rep. 2016;6: 25487-25487.