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"IVIG: A Key Therapy for Autoimmunity"

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Abstract:

Intravenous immunoglobulin (IVIG) is a pooled antibody, and a biological agent used to manage various immunodeficiency states and a plethora of other conditions, including autoimmune, infectious, and inflammatory states. **IVIG**: is a sterile, highly purified preparation of these antibodies (mainly IgG) from the plasma of thousands of donors. Autoimmune disorders are conditions where the immune system mistakenly damage its own body cells, tissues and organs. Which leads to a chronic inflammation, tissue damage and affects the normal function of the body. IVIG works by supplying the body with healthy antibodies that help control an overactive immune system. It blocks harmful autoantibodies, reduces inflammation, and balances immune responses. In this way, it protects the body from attacking its own cells. include neutralization of pathogenic autoantibodies, modulation of Fc receptors, inhibition of complement activation, and regulation of cytokine networks. Clinically, IVIG has proven that effective against the disorders like Guillain–Barré syndrome, myasthenia gravis, immune thrombocytopenia, Kawasaki disease, dermatomyositis, and certain neurological disorders, and chronic inflammatory demyelinating polyneuropathy (CIDP). Even though Intravenous immunoglobulin is safe and beneficial but it has some limitation like they are expensive, insufficient supply meanwhile they have some side effects like headache, flushing, severe allergic reaction and kidney failure. Still, for patients who do not respond to other treatments, but IVIG provides significant improvement in symptoms and quality of life. The research and clinical studies shows that, IVIG continues to developed in the field of autoimmune disorders.

Keywords: Intravenous immunoglobulin (IVIG), antibodies (mainly IgG), Guillain–Barré syndrome, myasthenia gravis, immune thrombocytopenia, Kawasaki disease