

IgA Deficiency

What is IgA deficiency?

Immunoglobulin A (IgA) is one of the five antibody proteins your body makes to fight infections- the others being Immunoglobulin G, M, D and E. These antibody proteins are made by specialized forms of white blood cells known as plasma cells. The plasma cells are present in lymph nodes, tonsils, adenoids, bone marrow, liver, spleen and other lymphoid organs. IgA deficiency occurs when the plasma cells responsible for making IgA are deficient or absent. IgA deficiency may occur alone (selective IgA deficiency) or in combination with other antibody shortages such as IgG deficiency.

How common is IgA deficiency and why is it important?

Immunodeficiency diseases are rare. However, selective IgA deficiency is the most common form of immunodeficiency. Roughly 1 in 600 people of European ancestry in this country are IgA deficient. About half of the people with selective IgA deficiency are asymptomatic- they do not know they have the disease until tested. The other half suffers from repeated sinus and ear infections and pneumonia. Some with IgA deficiency may have bad diarrhea because of infection with a parasite known as Giardia Lamblia. A simple stool examination under microscope may help unravel this infection. Treatment is easy though recurrences may occur. Rarely such patients may develop more serious forms of infections to which they may succumb. Anyone with recurrent infections should be screened for the presence of IgA deficiency and other serious immune deficiency disorders. Your allergist and immunologist can help you here.

Some patients with selective IgA deficiency may develop anaphylaxis- a life-threatening allergic reaction when they are infused with blood products such as plasma. These patients at risk can be identified by doing certain special blood tests by your doctor. Once identified such patients should wear MedicAlert bracelet and use only IgA free blood products.

Allergic diseases such as hay fever, asthma, eczema and food allergies are more common in patients with selective IgA deficiency. Exact reasons for this are not clear. It is known these patients make more than usual amounts of immunoglobulin E (IgE) antibody protein to compensate for lack of IgA. The increased IgE perhaps is responsible for the higher prevalence of allergic disorders in these patients.

Autoimmune disorders such as celiac disease, type I diabetes mellitus, lupus, juvenile rheumatoid arthritis are more common in patients with selective IgA deficiency. Some experts believe that increased frequency of infections is somehow tied to the development of autoimmune diseases in these patients. Others believe that genetic influences play a role. Regardless people with IgA deficiency should be screened for the development of autoimmune diseases periodically.

Finally, stomach and intestinal cancers and some types of leukemia are more common in people with IgA deficiency. They also may have prominent lymph nodes in the neck from recurrent infections. Prominent lymphoid tissue in the intestine could lead to development of intestinal block in some.

How is it diagnosed and treated?

IgA deficiency can easily be diagnosed by simple blood tests. Once diagnosed such patients should be warned about the risks discussed above. They should periodically be screened for such associated complications. Those who are asymptomatic do not need any special treatment. Others with recurrent sinus infections will benefit from continuous use of antibiotics in small doses especially during winter months. Few who have an associated immunodeficiency such as IgG deficiency may deserve treatment with weekly or monthly immunoglobulin infusions. Treatment of underlying allergic diseases may also help mitigate infections.

Summary

IgA deficiency is common. In many its presence may not pose any immediate threat to the affected individual. However it could lead to development of allergic diseases, serious transfusion related reactions, autoimmune diseases and even cancer. Therefore screening for this common disorder and satisfactory treatment and follow up is important.

About the author:

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