

Autoimmune Hemolytic Anemia

Every individual possesses an immune system that protects the body by eliminating harmful micro-organisms like viruses and bacteria. This system can differentiate between our own cells and foreign cells, ensuring it targets only the latter. However, in certain cases, the immune system fails to recognize self and foreign cells, leading to the destruction of the body's own cells. These conditions are known as autoimmune diseases or rheumatological diseases. When the immune system attacks and destroys red blood cells, it results in a condition called autoimmune hemolytic anemia (AIHA).

AIHA is characterized by the production of antibodies, specifically IgG and IgM, against the patient's red blood cells. Warm AIHA occurs when IgG antibodies are present, while cold AIHA results from IgM antibodies.

In some instances, the cause for production of these antibodies remains unknown despite numerous tests, which is called as primary AIHA. On the other hand, AIHA can also be a manifestation of another underlying disease, which is called as secondary AIHA. In cases of secondary AIHA, treatment should target both the AIHA itself and the underlying cause. Various conditions, such as lymphoma (type of blood cancer), other cancers, autoimmune diseases like Systemic Lupus Erythematosus (SLE), infections like Hepatitis C (HCV) or HIV, certain medications, and congenital immune system defects, can give rise to secondary AIHA.

Once the antibodies attach to the red blood cells, they get destroyed within the spleen, leading to an excessive production of bilirubin and resulting in jaundice. The increased destruction of red blood cells can lead to anemia, causing symptoms like fatigue, tiredness, and dizziness. During a physical examination, an enlarged spleen may be detected.

Several blood tests are conducted to confirm the presence of AIHA. Tests for antibodies, such as Direct Coombs Test (DCT) and Indirect Coombs Test (ICT), are performed. Other tests like Complete Blood Count (CBC), Reticulocyte Count, LDH, Bilirubin, and Haptoglobin are used to assess the degree of blood cell destruction and confirm AIHA.

Additional specialized tests, including HIV, HCV, ANA, CT scanning, and bone marrow examination, are conducted to rule out other possible underlying diseases that may lead to AIHA. If AIHA is associated with another condition, treating the underlying disease becomes essential.

Steroids are given in the initial treatment of AIHA. Patients also receive folic acid, calcium, medications to prevent gastric ulcers, and injections to prevent blood clotting. Once the hemoglobin level improves, the dose of steroid pills is gradually reduced.

In cases where AIHA does not respond to steroids or relapses after stopping steroid treatment, a special drug called Rituximab may need to be administered. Rituximab is usually given

once a week for four weeks and can produce favorable results. However, there is a possibility of the disease recurring after some months or years. In such situations, Rituximab injections can be repeated, or other drugs like Azathioprine, Cyclosporine, Danazol, MMF may be tried to achieve remission. If these treatments prove ineffective, surgical removal of the spleen (splenectomy) may be considered as a last resort.

AIHA can reoccur in approximately 30% of patients, even after the spleen is removed. In such cases, chemotherapy is administered to target the cells responsible for producing the antibodies. Drugs like Cyclophosphamide, 6MP, and Vinblastine are commonly used in this type of treatment. In situations where these treatments prove ineffective, a bone marrow transplant may be considered.

Steroids are not effective in treating cold AIHA. Instead, Rituximab is used as the initial treatment for this form of AIHA.

In patients with AIHA, blood transfusions can be challenging. The patient's own antibodies may attack the red blood cells that are being transfused, leading to severe RBC destruction and even kidney failure. Sometimes, compatibility tests between the patient and donor blood may not show a match. In critical situations where the patient's hemoglobin levels are severely low and life is at risk, mismatched blood may have to be given which carries significant risks and requires the consent of the patient's relatives.

Steroids are given for very long time in the treatment for AIHA, but they can cause various side effects. One of the most significant side effects is reduced immunity

and an increased risk of infections. It's crucial for AIHA patients to avoid contact with individuals with coughs and fevers, practice good hygiene, drink boiled water, eat cooked food, wash hands before meals, and avoid becoming constipated.

Common side effects of steroids include cheek swelling and pimples, mood swings, irritability, increased blood glucose levels (requiring insulin), elevated blood pressure, and a potential risk of stomach ulcers. The possibility of developing shingles is also higher, and preventive medication like Acyclovir is often prescribed.

Pregnant women can still use steroid medications, but other drugs may have serious effects on the developing fetus. Thus, individuals undergoing treatment should avoid pregnancy.

Even after the hemoglobin levels normalize, regular follow-up is necessary, and patients should adhere to the recommended follow-up schedule.

There are no specific dietary changes that can increase hemoglobin level in AIHA. Patients are free to eat any food they prefer, although reducing sugar intake slightly is advisable.

AIHA is not a hereditary disease and is not contagious. Ongoing research and clinical trials have led to significant advancements in the treatment of AIHA. Patients should consider participating in clinical trials if given the opportunity.

While this article provides a lot of information about AIHA, any additional questions or concerns can be addressed by consulting your doctor.

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