What Are Autoimmune Disorders?

By Elaine Moore, June 22, 2010

Autoimmune disorders are a group of more than 80 distinct diseases that emerge when the immune system launches an immune response against its own cells and tissues. Two distinct types of autoimmune disease occur: 1) localized disorders that target specific organs such as the thyroid gland in Hashimoto's thyroiditis and Graves' disease and 2) systemic disorders, which affect multiple organs, for instance in systemic lupus erythematosus or SLE, the immune system can target the lungs, hearts, joints, kidneys, brain, and red blood cells. Autoimmune disorders may cause mild insidious symptoms that come and go or debilitating conditions with high mortality.

Because all of the body's tissues and cells are at risk for autoimmune disease development, some researchers feel that most non-infectious diseases have an autoimmune origin. In the last decade, many common disorders including diabetes and heart disease have been found to be autoimmune disorders. In some cases, an individual will have several different autoimmune disorders although most people with an autoimmune disease will have one condition.

Causes

Autoimmune diseases are caused by a combination of genetic and environmental factors. That is, autoimmune diseases develop in persons with certain immune system and organ-specific genes when they're exposed to certain environmental triggers. For instance, persons with Graves' disease typically have HLA DR1 and B8 markers, which predispose them to several different autoimmune disorders. However, most people with these genes do not develop autoimmune disorders. When people with these genes develop Graves' disease, environmental triggers known to trigger disease development include excess dietary iodine, stress, estrogens, interferon, viral infections, and low selenium levels.

Symptoms

Symptoms vary in autoimmune disease, depending on the specific disease present and the organ or organs affected.

And although different autoimmune disorders are associated with a long list of symptoms, most patients will have a few predominant symptoms that can change over time. Symptom severity also varies, increasing in periods known as disease flares.

Often, early symptoms are vague and may be related to a number of different disorders. For instance, common symptoms such as fatigue, muscle pain, joint pain, anxiety, and depression occur in many different disorders. For this reason, before a diagnosis of autoimmune disease is made, specific symptoms are often treated. The Autoimmune and
Related Diseases Association (AARDA) reports that on average it takes 7 years for a proper diagnosis to be made. In the meantime, symptoms are treated.

**Diagnosis**

Autoimmune disorders are diagnosed in people who have certain symptoms. For instance, patients with symmetrical joint pain are suspected of having rheumatic disorders. Laboratory tests such as the erythrocyte sedimentation rate, complete blood count, and C-reactive protein are used to determine if an inflammatory disorder is present. If these tests suggest an inflammatory arthritic condition, more specific blood tests including tests for rheumatoid factor and cyclic citrullinated peptide (CCP antibodies) are used to diagnose rheumatoid arthritis. In most autoimmune diseases, specific metabolic changes and specific immunological (autoantibody) markers aid in diagnosis.

**Treatment**

The goal of treatment in autoimmune diseases is to help the immune system heal, which causes remission or freedom from disease. In some diseases, such as Graves' disease, permanent remission is expected as part of the natural disease course. In other diseases, such as multiple sclerosis, lengthy remissions are possible and the disease tends to follow a relapsing course. Treatments to suppress the immune system such as corticosteroids are commonly used, and in cases where glands are injured, treatment is used to correct hormone imbalances. Treatment is also used to alleviate symptoms, for instance the use of analgesic and anti-inflammatory agents in rheumatological disorders.

Resources:

National Institute of Health, Autoimmune Diseases Publication

Labtest Online, College of American Pathologists, www.labtestsonline.org