

Lecture 3

immunology

fourth class

Systemic lupus erythematosus (SLE) is an autoimmune disease. In this disease, the immune system of the body mistakenly attacks healthy tissue. It can affect the skin, joints, kidneys, brain, and other organs.

Symptoms:-

- Fever
- Joint pain, stiffness and swelling
- Butterfly-shaped rash on the face that covers the cheeks and bridge of the nose or rashes elsewhere on the body
- Skin lesions that appear or worsen with sun exposure (photosensitivity)
- Fingers and toes that turn white or blue when exposed to cold or during stressful periods (Raynaud's -phenomenon)
- Shortness of breath
- Chest pain
- Dry eyes
- memory loss

The cause of SLE:

is not clearly known. It may be linked to the following factors:

- 1- Genetic**
- 2- Environmental**
- 3- Hormonal**
- 4- Certain medicines**

SLE is more common in women than men by nearly 10 to 1. It may occur at any age. it appears most often in young women between the ages of 15 and 44.

Pathology

is an autoimmune disease characterized by acute and chronic inflammation of various tissues of the body. Autoimmune diseases are illnesses that occur when the body's tissues are attacked by its own immune system. The immune system is a complex system within the body that is designed to fight infectious agents, such as bacteria and other foreign microbes. One of the ways that the immune system fights infections is by producing antibodies that bind to the microbes. People with lupus produce abnormal antibodies in their blood that target tissues within their own body rather than foreign infectious agents. These antibodies are referred to as autoantibodies.

Because the antibodies and accompanying cells of inflammation can affect tissues anywhere in the body, lupus has the potential to affect a variety of areas.

Sometimes lupus can cause disease of the skin, heart, lungs, kidneys, joints, and/or nervous system. When only the skin is involved by rash, the condition is called lupus dermatitis or cutaneous lupus erythematosus. A form of cutaneous lupus erythematosus that can be isolated to the skin, without internal disease, is called discoid lupus erythematosus. When internal organs are involved, the condition is referred to as systemic lupus erythematosus (SLE).

Treatment :

Depending on the symptoms, blood test results and the particular organs involved, a person with lupus may receive one or more of the following:

- 1- nonsteroidal anti-inflammatory drugs (NSAIDs)
- 2- dhydroxychloroquine (Plaquenil)
- 3- corticosteroids
- 4- immunosuppressive drugs such as azathioprine (Imuran)