

Autoimmunity :

Is an immune response against a self-antigen or antigens. Autoimmune disease is tissue damage or disturbed physiological function due to an autoimmune response.

What triggers autoimmunity?

1.Genetic factors

2.Environmental factors: include hormones, infection, therapeutic drugs and miscellaneous other agents such as ultraviolet radiation.

Rheumatoid arthritis [RA]

is an autoimmune disease of unknown origin that results in a chronic, systemic inflammatory disorder that may affect many tissues and organs, and erosive arthritis of the peripheral joints that can also affect multiple organs such as the heart and the lungs.

Genetic basis of RA

Association between RA and the class II HLA proteins was first noted at 1970 The region on the short arm of human chromosome 6, and contains hundreds of genes, including many involved in immune function. HLA-DRB1 gene.

Environmental Risk Factors

1. Silica Dust Exposure 2.Smoking 3. Infections 4. Dietary Factors

Clinical features

Pain, swelling, and tenderness may initially be poorly localized to the joints. Pain in affected joints, aggravated by movement, is the most common manifestation of established RA. *Rheumatoid nodules* may develop in 20–30% of persons with RA. *Rheumatoid vasculitis* which can affect nearly any organ system, is seen in patients with severe RA and high titers of circulating rheumatoid factor. Osteoporosis secondary to rheumatoid involvement is common and may be aggravated.

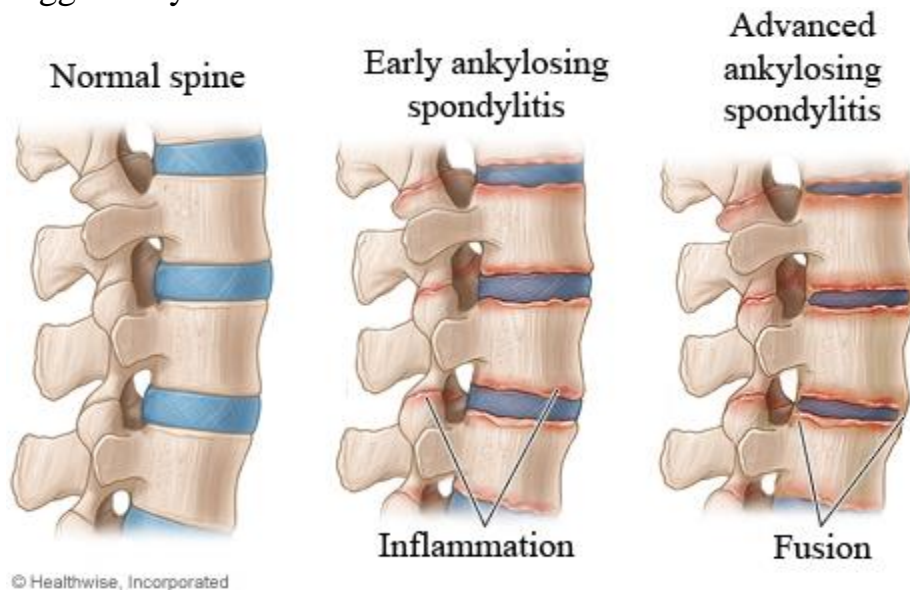
LABORATORY FINDINGS

Rheumatoid factors, which are autoantibodies reactive with the Fc portion of IgG, are found in more than two-thirds of adults with the disease and have classically been used to evaluate patients with RA. Widely utilized tests largely detect IgM rheumatoid factors. These include systemic lupus erythematosus, Sjogren's syndrome, chronic liver disease, sarcoidosis, interstitial pulmonary fibrosis.

The presence of rheumatoid factor does not establish the diagnosis of RA, as the predictive value of the presence of rheumatoid factor in determining a diagnosis of RA is poor. The development of anti-CCP is most frequent in individuals with an RA. The erythrocyte sedimentation rate (ESR) is increased in nearly all patients with active RA.

Ankylosing spondylitis

Ankylosing spondylitis (AS) is an inflammatory disorder of unknown cause that primarily affects the axial skeleton; peripheral joints and extraarticular structures are also frequently involved. The disease usually begins in the second or third decade; male to female prevalence is between 2:1 and 3:1, may also be triggered by infection.



EPIDEMIOLOGY

AS shows a striking correlation with the histocompatibility antigen HLA-B27 and occurs worldwide roughly in proportion to the prevalence of this antigen.

CLINICAL MANIFESTATIONS

The symptoms of the disease are usually first noticed in late adolescence or early adulthood. back pain or stiffness.

Diagnosis

These consist of the following: (1) a history of inflammatory back pain (see below), (2) limitation of motion of the lumbar spine (3) limited chest expansion, and (4) definite radiographic sacroiliitis. The presence of B27 is neither necessary nor sufficient for the diagnosis.