Systemic Lupus Erythematosus (SLE) Mechanism, Treatment and Complications

SLE is an autoimmune disease that affects multiple systems, and particularly skin, joints, kidney and serosal membranes.

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Mechanism and Characteristics

Systemic Autoimmune Disease
Systemic Auto-in-moon
The etiology is not completely understood. The presence of many different autoantibodies demonstrates a lack of self-tolerance. This combined with external triggers such as UV radiation may play a part in the pathophysiology.

9:1 female to male ratio
9 to 1 Female-butterfly
As with other autoimmune diseases females are affected to a higher degree than males. It is more common in African-American patients than Caucasians.

Treatment

Glucocorticoids
Glue-quarter-on-steroids
Local or systemic glucocorticoids are used for acute exacerbations and systemic glucocorticoids are used for severe manifestations.

NSAIDS
N-sad
Used for symptoms of minimal severity.

Hydroxychloroquine
Hydra-color-queen
This is the best longterm therapy for constitutional, cutaneous and articular manifestations.

Cyclophosphamide
Cyclops-phosphate-P
Used for patients with active glomerulonephritis.

Complications

Lupus nephritis
Loopy-butterfly with Kidney-in-flames
Occurs in up to 50% of SLE patients and is due to immune complex deposition in the glomeruli, tubular or peritubular capillary basement membranes or larger blood vessels. The most common type is diffuse proliferative glomerulonephritis.

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Libman-Sacks Endocarditis

Lip-man-Sack on In-donut-heart-card

These noninfectious vegetations are smaller, 1-3 mm, than vegetations in infective endocarditis and rheumatic heart disease. They are also present on both sides of the heart valve unlike infective endocarditis and rheumatic heart disease.

Secondary Antiphospholipid Antibody Syndrome

Secondary Anti-phospholipid-bilayer Ant-tie-body

This is no longer known as lupus anticoagulant syndrome because it is in fact a procoagulant state. Antiphospholipid antibodies cause a hypercoagulable state due to endothelial injury. It is characterized by elevated antiphospholipid antibodies in conjunction with 1 or more of the following: 1) venous thromboembolism, 2) arterial thrombosis, 3) fetal loss.

Other

Drug-induced lupus

Loopy-pill-butterfly

This disease is similar to SLE; however, it is due to certain drugs such as sulfonamides, hydralazine, INH, procainamide and phenytoin (SHIPP) among others. Anti-dsDNA and anti-Smith antibodies are typically absent while anti-histone antibodies are classically present. Treatment involves discontinuing the offending drug and starting the patient on prednisone if needed.

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