

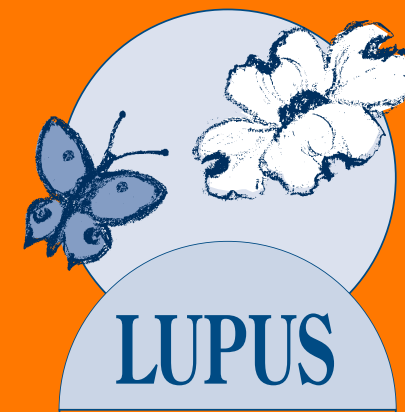
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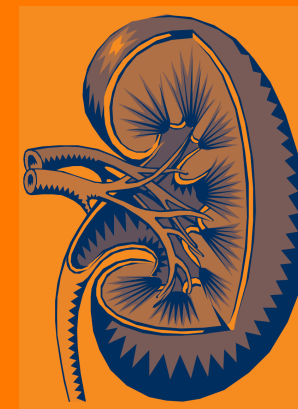
Remember, patient education and emotional support is imperative for the lupus patient.



Foundation of Virginia, Inc.

How LUPUS® Affects Your Kidneys

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WHAT IS LUPUS?

Lupus is a chronic inflammatory disease that can affect various parts of the body, especially the skin, joints, blood, and kidneys. The body's immune system normally makes proteins called antibodies to protect the body against viruses, bacteria, and other foreign materials. These foreign materials are called antigens. In an autoimmune disorder such as lupus, the immune system loses its ability to tell the difference between foreign substances (antigens) and its own cells and tissues. The immune system then makes antibodies directed against "self." These antibodies, called "auto-antibodies," react with the "self" antigens to form immune complexes. The immune complexes build up in the tissues and can cause inflammation, injury to tissues, and pain.

WHAT IS LUPUS NEPHRITIS?

Lupus Nephritis is a complication of systemic lupus erythematosus (SLE) in which the disease has caused injury in the kidneys. Approximately 60% of adults with SLE develop renal (kidney) involvement within their lifetime.

The disease has periods of relapses and remissions similar to SLE.

HOW IS LUPUS NEPHRITIS DIAGNOSED?

Most patients are asymptomatic. Blood and urine tests can detect Lupus Nephritis. Persistent *protein* in the urine (proteinuria) of greater than 500 mg daily or the presence of *cellular casts* in the urine indicates SLE involvement in the kidneys.

Protein is regulated by the kidney and when inflammation or injury occurs in the kidney, protein may leak into the urine. This results in further scarring and damage to the kidneys if left untreated.

Cellular casts can be seen with microscopic evaluation of urine and indicate renal disease.

Lupus Nephritis may cause an elevated blood creatinine level, edema (swelling), microscopic hematuria (blood in the urine), low blood complement levels and hypertension.

CLASSIFICATION OF LUPUS NEPHRITIS

The class of Lupus Nephritis is established by a kidney biopsy. There are 6 classes which were defined by the World Health Organization (WHO). The WHO classification system guides prognosis and treatment.

Class	Definition
I	Normal or minimal pathology
II	Mesangial nephropathy
III	Focal proliferative nephritis
IV	Diffuse proliferative nephritis
V	Membranous nephropathy
VI	Sclerosing nephropathy

TREATMENT OF LUPUS NEPHRITIS...

Depends on the classification of the lesion in the kidney. Treatment regimens are still widely debated and vary from one nephrologist to another. Some medications that may be used include:

1. Corticosteroids — oral prednisone or intravenous methylprednisolone.

2. Other immunosuppressants such as:
 - a. Mycophenolate mofetil (MMF)
 - b. Cyclosporine
 - c. Azathioprine
 - d. Cyclophosphamide

Management of hypertension delays the progression of all forms of renal disease. ACE (angiotensin-converting enzyme) inhibitors and ARBs (angiotensin receptor blockers) are antihypertensive medications that not only reduce blood pressure but also reduce proteinuria. Thus, these medications are also beneficial in delaying the progression of renal disease.

If a patient progresses to end stage renal disease (WHO Class VI), kidney dialysis or successful transplantation can sustain life.

COURSE AND PROGNOSIS

Classes I, II, and V have the best prognosis. Classes III and IV have the least favorable prognosis; however, in recent years outcomes for these groups have greatly improved.

Since the early 1990s, the 5-year survival rate for all patients with lupus nephritis has increased to greater than 80%.

WHAT ELSE SHOULD I KNOW?

Remember lupus nephritis can have periods of remission and exacerbation. Be sure to maintain regular follow up with your nephrologist for monitoring and prevention of relapses.

Pregnancy in patients with Lupus Nephritis can be safe if Lupus is stable. Pregnancy may worsen kidney function, so be sure to discuss your risks with your nephrologist.