Lipid Test Flags Renal Impairment Risk in Lupus

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Contributing Writer

A simple serum lipid test may identify patients with systemic lupus erythematosus who are at an increased risk for renal dysfunction, according to investigators.

Data collected on 1,060 patients with SLE who were registered at the University of Toronto Lupus Databank were analyzed by Annaliese Tisseveras and her colleagues.

They found that an elevated serum total cholesterol level in the first sample obtained from patients and recorded in the databank was significantly associated with subsequent renal deterioration and death associated with kidney dysfunction (Arthritis Rheum. 2006;54:2211-9).

"Independent of any association with proteinuria or steroid therapy, an elevated total cholesterol level portends a worse renal outcome," reported Ms. Tisseveras and her colleagues at Toronto Western Hospital. More research is needed, they noted, but "the predictive value of an elevated cholesterol level on renal function … cannot be discounted."

The patients, who were mostly women, had a mean age of 36 years and a mean duration of SLE of 4 years when the first total cholesterol measurement was recorded. The first measurement ranged from 1.6 to 17.1 mmol/L, with a mean of 5.3 mmol/L (205 mg/dL).

During an average follow-up of almost 9 years, 9% of patients experienced renal deterioration, 4% developed end-stage renal disease (ESRD), and 15% died (30% of the deaths were associated with renal dysfunction). The investigators stratified patients into two groups: those with normal total cholesterol levels and those with elevated levels. They then looked at Kaplan-Meier survival estimates for each of the three outcomes—renal deterioration, ESRD, and death. The estimates for each of the outcomes, they found, were significantly different between the two groups, with worse outcomes in the group with elevated total cholesterol levels.

In multivariate analyses that included other variables, baseline proteinuria and serum creatinine level were predictive of both ESRD and renal deterioration. Total cholesterol level did not retain its significance with regard to ESRD, however, which may be due to the low number of patients with ESRD.

Total cholesterol level did, however, correlate again with death, and significantly with renal death—a finding that is "strongly supportive of a pathogenic role for hypercholesterolemia in SLE renal disease," the investigators reported. ■

Patients With SLE Sought for Stem Cell Trial

Researchers are recruiting patients with severe and active systemic lupus erythematosus to participate in a pilot study involving hemapoietic stem cell transplant.

Potential participants with systemic lupus erythematosus (SLE) should be 15-40 years of age and have acceptable organ function. Participants should have 4 of the 11 American College of Rheumatology criteria for SLE but no other significant medical conditions. Patients may have active and refractory lupus affecting the kidneys, CNS, lungs, or blood. Participants also should have no evidence of malignancy, active hepatitis B virus or hepatitus C virus, or HIV infections. Written consent is required.

The treatment protocol includes priming and conditioning regimens. The priming regimen involves treatment with methylprednisolone, rituximab, cyclophosphamide, and mesna. At the end of this regimen, patients will receive a granulocyte colony-stimulating factor to mobilize stem cells for collection for transplant. Patients will undergo the conditioning regimen immediately prior to stem cell transplant.

Following transplantation, patients will be followed for 6 months and then at 9, 12, 18, and 24 months. After 2 years, patients will be followed yearly for 5 years.

The trial is being conducted at the National Institutes of Health campus in Bethesda, Md. The principal investigator is Dr. Steven Pavletic of the National Institute for Arthritis and Musculoskeletal and Skin Diseases. Physicians who know of interested patients may contact Cheryl Yarboro, R.N., by calling 301-402-6409.

—Kerri Wachter