

Rituximab reduces kidney inflammation in patients with lupus

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Treatment with the targeted drug rituximab can significantly benefit some patients with severe lupus nephritis who do not respond to conventional therapy, according to a study appearing in an upcoming issue of the *Clinical Journal of the American Society Nephrology* (CJASN). The findings indicate that this immunosuppressive agent could improve the health of patients who have few other treatment options and who might otherwise develop end-stage renal disease (ESRD).

Lupus nephritis is a kidney disorder that arises in individuals who have the autoimmune disease systemic lupus erythematosus (SLE), and it puts individuals at elevated risk of developing ESRD. The standard treatment for lupus nephritis includes corticosteroids and cyclophosphamide, however a significant number of patients do not respond to these drugs or experience toxic effects when taking them. Because SLE seems to be caused at least in part by hyperreactive B cells of the immune system, targeting B cells could be a potential therapeutic option for patients with SLE and lupus nephritis.

A team of researchers led by Fadi Fakhouri, MD, of Imperial College in London, UK, recently tested the effects of rituximab—an antibody directed against B cells that was initially developed for the treatment of non-Hodgkin lymphoma—in patients with lupus nephritis. The study retrospectively assessed the long-term (≥ 12 months) efficacy and safety of rituximab in 20 SLE patients with severe lupus nephritis. After an average follow-up of 22 months, kidney improvements were seen in 12 patients (60%).

During the study, the investigators noted which patients benefited most from rituximab. They found a strong association between depletion of B cells after one month and treatment success. They found that patients with certain characteristics did not experience this beneficial B cell depletion and therefore might not be candidates for rituximab therapy. These characteristics included very low levels of albumin in the blood and black ethnicity.

The study's findings suggest that rituximab, which has low toxicity, could be an effective option for patients with lupus nephritis that is resistant to conventional therapy, particularly for those patients whose B cells become depleted after one month of treatment. "Prospective studies assessing the efficiency of rituximab, with or without cyclophosphamide, in severe lupus nephritis are warranted," the authors wrote.

Source: American Society of Nephrology

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