

## Elevated Creatinine Clearance and Normal Glomerular Filtration Rate in Patients with Systemic Lupus erythematosus

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**Abstract :** Background: The creatinine clearance is a widely used value to estimate the GFR. Increased creatinine clearance is often called hyperfiltration and is usually seen during pregnancy, patients with diabetes mellitus preceding the diabetic nephropathy. It may also occur with large dietary protein intake or with plasma volume expansion. Renal injury in lupus nephritis is known to affect the glomerular, tubulointerstitial, and vascular compartment. However high creatinine clearance has not been found in patients with SLE, Target: Follow-up of creatinine clearance values in patients with systemic lupus erythematosus without history of kidney injury. Material and methods: We observed the creatinine, creatinine clearance, GFR and dipstick protein values of 7 women (with a mean age of 42.71 years) with systemic lupus erythematosus. Patients with active lupus have been monthly tested in the period of 13 months. Creatinine clearance has been estimated by Cockcroft-Gault Equation formula in ml/sec. GFR has been estimated by MDRD formula (The Modification of Diet in renal Disease) in ml/min/1.73 m<sup>2</sup>. Proteinuria has been defined as present when dipstick protein > 1+. Results: In all patients without history of kidney injury we found elevated creatinine clearance levels, but GFR remained within the reference range. Two of the patients were in remission while the other five patients had clinically and immunologically active Lupus. Three of the patients had a permanent presence of high creatinine clearance levels and proteinuria. Two of the patients had periodically elevated creatinine clearance without proteinuria. These results show that kidney disturbances may be caused by the vascular changes typical for SLE. Glomerular hyperfiltration can be result of focal segmental glomerulosclerosis caused by a reduction in renal mass. Probably lupus nephropathy is preceded not only by glomerular vascular changes, but also by tubular vascular changes. Using only the GFR is not a sufficient method to detect these primary functional disturbances. Conclusion: For early detection of kidney injury in patients with SLE we determined that the follow up of creatinine clearance values could be helpful.

**Keywords :** systemic Lupus erythematosus, kidney injury, elevated creatinine clearance level, normal glomerular filtration rate

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