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Study of the relationship between urinary level of uromodulin, renal involvement and disease activity in patients with Systemic Lupus Erythematosus (SLE)

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Lupus nephritis develops in up to 75 % of SLE patients with 10 to 30% progressing to ESRD. Urinary biomarkers to replace serial renal biopsies have been widely studied recently. Uromodulin, the most abundant urinary protein expressed exclusively by the TAL cells, showed its ability to elicit an inflammatory response and be a CKD biomarker. This study was conducted on 70 subjects divided as 23 SLE patients without LN, 27 SLE patients with LN and 20 control volunteers. Renal activity was assessed by SLICC Renal Activity score, positive anti-ds DNA and low complement levels. Urinary Uromodulin results showed lowest values among nephritis patients with mean 5.6 ± 3.4 , followed by 9.9 ± 5.2 in SLE patients without nephritis and 12.9 ± 4.6 in the control group, with statistical significant difference ($P < 0.0001$). Uromodulin also showed statistically significant positive correlation with eGFR ($P = 0.03$), while negative correlations were found with serum Creatinine, 24 hrs urinary proteins and SLICC renal activity score, with statistical significance ($P = 0.001$), ($P = 0.000$) and ($P = 0.000$) respectively. Thus, from the results of this study, we can conclude that decreasing urinary uromodulin levels can be a marker for renal activity in SLE patients, and a marker for CKD in absence of activity markers.

Biography

Marwa Mounir Ismail graduated class 2008 from faculty of medicine, Alexandria University, Egypt. A master degree candidate. Working as a nephrologist in the Medical Research Institute, Alexandria University.

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