Relationship between urinary protein changes in lupus nephritis and renal pathology

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ABSTRACT. This study investigated the relationship between urinary protein excretion in lupus nephritis New Zealand black mice and renal pathology. A total of 328 lupus nephritis New Zealand black mice were established by a backcross hybridization method, and renal pathology was determined. The urinary protein excretion of the backcross mice over 24 h was compared and analyzed. Urinary protein excretion over 24 h differed significantly across different pathological types (1.9, 2.4, 2.9 and 4.9 g in types II, III, IV, and V, respectively) in the backcross mice (P < 0.05). Moreover, it correlated with pathology grade (r = 0.391, P = 0.0001) as well as activity index, chronic index, renal tubular interstitial activity index, and renal tubular interstitial lesions (P < 0.05) but not with vascular lesions (P = 0.683). Urinary protein excretion from lupus nephritis is closely associated with renal pathology. Urinary
protein changes can be used to determine lupus nephritis pathology and have some clinical significance for treatment and prognosis.

**Key words:** Lupus nephritis; Urinary protein; Pathological type