

Healthcare Disparities in Lupus Nephritis: Findings from the Southern California Lupus Registry

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Background:

Lupus nephritis (LN) is a major cause of among systemic lupus erythematosus (SLE) patients. Despite therapeutic advancements, LN patients continue to have a poor prognosis related to socioeconomic status (SES). We sought to establish the correlation between SES and LN prevalence in San Bernardino and Riverside counties of Southern California.

Methods:

Adult subjects were recruited from the Southern California Lupus Registry (SCOLR) based at Loma Linda University and its affiliated institutions. Diagnosis of SLE was met based on Systemic Lupus International Collaborating Clinic (SLICC) classification criteria. Sociodemographic data, body mass index (BMI), and insurance type were collected. Using insurance as a surrogate for SES, subjects were partitioned into 2 groups based on insurance coverage, namely federal insurance [MediCare and/or MediCal (California's Medicaid)] versus

non-federal insurance. Our dependent variable is the prevalence of lupus nephritis. Differences in sociodemographic and clinical variables were assessed using t-test and chi-square analyses. Multivariate regression model was utilized to determine the association of federal insurance and incidence of nephritis without influence of confounders.

Results:

162 SLE patients were included in the study. 57 (35%) were Caucasian, 58 (36%) Hispanic, 17 (10%) Asian, and 30 (19%) African-American. Mean age was 41.8 ± 15.5 years, mean BMI was 29.3 ± 9.8 kg/m², and 150 (93%) subjects were female. 68 (42%) patients were federally insured. Multi-regression analysis showed that after adjusting for age, sex, ethnicity, and BMI, SES was found to be independently associated with the prevalence of nephritis (odds ratio 2.621, $P = 0.027$) (see Table 1).

Conclusion: Socioeconomic status is associated with greater mortality in SLE patients. Our findings confirm the association of health insurance with long-term outcomes in SLE and warrant further studies to advocate for changes in the healthcare industry in order to improve patient outcomes.

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Table 1. Multivariable Analysis Against Prevalence of Lupus Nephritis

	Odds Ratio	P-Value	95% Confidence Interval
Age	0.979	0.146	0.952-1.007
Male	1.240	0.803	0.228-6.745
Ethnicity	2.782	0.100	0.834-9.270
BMI >30	0.962	0.161	0.913-1.007
Federal Insurance	2.621	0.027	1.113-6.169