

Gender-dependent differences in the clinical course of lupus nephritis.

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INTRODUCTION AND AIM

Genetic, environmental and hormonal factors are involved in the pathogenesis of systemic lupus erythematosus (SLE). The female sex hormones have a well known impact on the incidence of SLE, which is diagnosed most often in women of childbearing potential. The course of the disease differs in both genders, with more severe symptoms of lupus nephritis (LN) and more rapid progression to end stage renal disease in male patients, however findings are not entirely consistent. The aim of the study was to confirm the influence of gender on the course LN in our cohort of patients.

METHODS

A retrospective study was conducted in 114 patients with diagnosed LN and 55 patients with SLE without renal involvement, including 147 women (87.0%) and 22 men (13.0%).

Patients were evaluated for the presence of clinical manifestations of SLE, based on American College of Rheumatology (ACR) and Systemic Lupus International Collaborative Clinics (SLICC) diagnostic criteria, the course of disease, as well as immunological and clinical biomarkers of the disease activity. The disease activity was estimated by SLE Disease Activity Index (SLEDAI) and features of renal involvement (rSLEDAI).

RESULTS

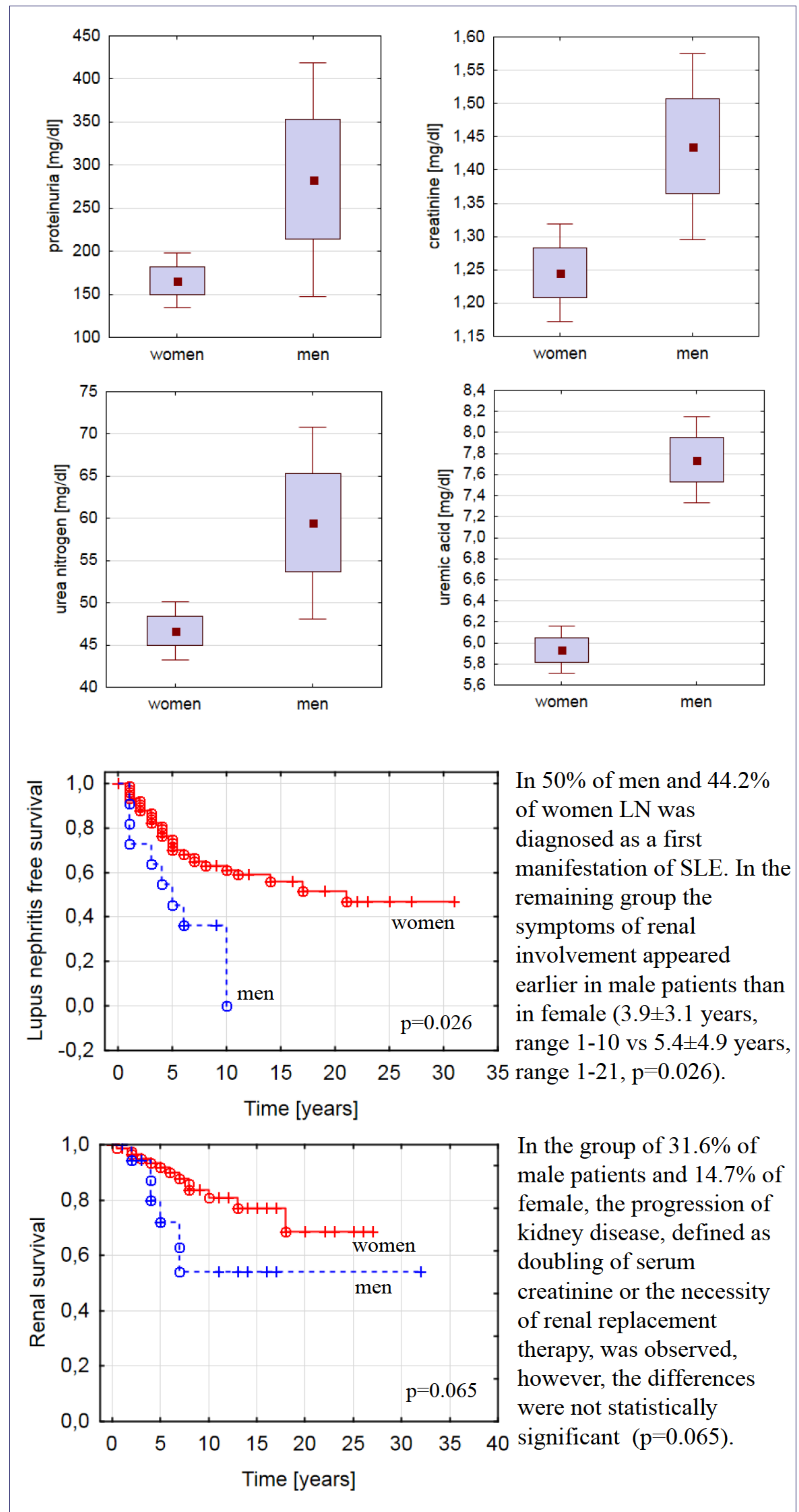
Renal involvement occurred significantly more often in the group of male patients than in female patients (86.4% vs 64.6%, $p=0.03$) and skin lesions were more common in female group (81.6% vs 54.5%, $p=0.007$). Disease duration, age at SLE and LN diagnosis didn't differ in both gender.

There were no differences between the number of fulfilled ACR and SLICC diagnostic criteria according to gender. No differences in the activity of SLE and LN assessed by SLEDAI and rSLEDAI in both genders were found.

Group	Women (n=147)	Men (n=22)	p value
LN [n, (%)]	95 (64.6%)	19 (86.4%)	0.03
Skin lesions [n, (%)]	120 (81.6%)	12 (54.5%)	0.007
age at the time of SLE diagnosis [years]	32.3±14.4 (30.0)	33.8±17.1 (26.0)	0.82
age at the time of LN diagnosis [years]	32.9±15.0 (28.0)	32.6±14.6 (28.0)	0.89
disease duration [years]	10.7±7.4 (10.0)	9.9±7.9 (7.5)	0.56
ACR	5.48±1.46 (5.0)	5.14±1.25 (5.0)	0.35
SLICC	6.05±1.83 (6.0)	5.91±1.6 (5.5)	0.92
SLEDAI	13.2±7.1 (12.0)	15.0±8.2 (14.0)	0.18
rSLEDAI	5.9±4.9 (4.0)	7.3±4.9 (8.0)	0.08

The clinical indicators of the LN activity were significantly higher in men than in women.

Group	Women	Men	p value
proteinuria [mg/dl]	166.0±279.5 (72.5)	283.6±426.9 (105.5)	0.048
creatinine [mg/dl]	1.25±0.64 (0.99)	1.44±0.46 (1.54)	0.0002
urea nitrogen [mg/dl]	46.7±28.4 (38.0)	59.5±36.2 (48.0)	0.008
uremic acid [mg/dl]	5.93±1.85 (5.7)	7.74±1.28 (7.5)	<0.0001



CONCLUSIONS

The study confirms the statistically significant higher prevalence and severity of lupus nephritis in male patients.

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