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1510

IMPACT OF ACTIVE LUPUS NEPHRITIS ON THE QUALITY OF LIFE OF PATIENTS FROM A LATIN AMERICAN LUPUS COHORT

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GLADEL LATIN AMERICA SCIENCE & EDUCATION

BACKGROUND

- Systemic lupus erythematosus (SLE) has a negative impact on patients' quality of life and is associated with an increased economic burden[1,2]
- Lupus nephritis (LN) is present in up to 65% of patients with SLE, and approximately 13% of patients with LN will progress to end-stage renal disease within 10 years[3]
- There are limited data on the impact of active LN on the health-related quality of life (HRQoL) of patients with LN and on whether achieving renal clinical response with current treatments can improve HRQoL
- The Latin American Lupus Study Group (Grupo Latino Americano De Estudio del Lupus [GLADEL]) was created to explore disease features, the clinical course, and outcomes in Latin American patients with SLE[4]
  - GLADEL 2.0 is an observational prevalent and incident cohort that was initiated in 2019 in Argentina, Brazil, Chile, Colombia, the Dominican Republic, Ecuador, Mexico, Paraguay, Peru, and Uruguay[5]
- The study aimed to evaluate HRQoL in patients with active LN in the GLADEL 2.0 cohort at baseline and 12 months after treatment and to assess the impact of renal response on HRQoL

METHODS

Study population

- A total of 44 centers from 10 Latin American countries enrolled patients aged ≥18 years who fulfilled the 1982/1997 American College of Rheumatology (ACR) and/or 2012 Systemic Lupus International Collaborating Clinics (SLICC) classification criteria
- Patients were categorized into 4 subsets according to the presence of LN, as follows:
  - Group I: no LN
  - Group II: prevalent and inactive LN
  - Group III: prevalent and active LN
  - Group IV: incident LN with an onset of <3 months and renal biopsy
- For this analysis, patients in Groups II, III, and IV with sufficient follow-up data at 12 months were included

Study assessments

- Baseline demographics, clinical manifestations, and disease activity based on the Systemic Lupus Erythematosus Disease Activity Index (SLEDAI) and SLICC/ACR Damage Index were assessed
- At baseline, HRQoL was assessed based on the Lupus Quality of Life (LupusQoL) questionnaire and was stratified by the presence of active or inactive LN
- At the 12-month follow-up, LupusQoL responses were assessed in patients with active LN and stratified by their renal response
- Renal response at the 12-month follow-up was assessed and categorized according to European Alliance of Associations for Rheumatology/Kidney Disease: Improving Global Outcomes criteria, as follows:
  - Complete response (CR): <0.5 g/g reduction in proteinuria, measured as urine protein-to-creatinine ratio (UPCR) from a 24-hour urine collection
  - Partial response (PR): ≥50% reduction in proteinuria, measured as UPCR from a 24-hour urine collection
  - No response (NR): <50% reduction in proteinuria

Statistical analysis

- Continuous variables were reported as medians (interquartile ranges), and categorical variables were reported as frequencies (percentages)
- Baseline LupusQoL responses were compared between patients in Groups II and Groups III + IV using a Kruskal-Wallis test
- LupusQoL responses at the 12-month follow-up were compared between patients with NR and PR + CR using a Kruskal-Wallis test

RESULTS

Patient characteristics

- Of the 1081 patients included in the GLADEL 2.0 cohort, 651 with a history of LN were evaluated (423 with active LN and 228 with inactive LN)
- Patients with active LN were predominantly female (369/423 [87.2%]) and had a lower socioeconomic status, a higher unemployment rate, and a higher SLEDAI score than patients with inactive LN

Baseline LupusQoL responses

- Patients with active LN had significantly worse baseline LupusQoL responses across all domains compared to those with inactive LN (**Table 1**)

TABLE 1: LupusQoL responses by domain at baseline in patients with inactive LN versus active + incident LN

LupusQoL domain, median (IQR)	Total (N = 651)	Group II: prevalent and inactive LN (n = 228)	Groups III + IV: prevalent and active + incident LN (n = 423)	*P* value
Physical health	78.1 (56.3-93.8)	87.5 (71.9-96.9)	71.9 (50.0-87.5)	<0.0001
Pain	83.3 (58.3-100.0)	91.7 (75.0-100.0)	75.0 (50.0-91.7)	<0.0001
Planning	83.3 (58.3-100.0)	91.7 (75.0-100.0)	75.0 (41.7-91.7)	<0.0001
Intimate relationship	100.0 (62.5-100.0)	100.0 (62.5-100.0)	75.0 (50.0-100.0)	0.001
Burden to others	58.3 (25.0-83.3)	75.0 (41.7-91.7)	50.0 (16.7-75.0)	<0.0001
Emotional health	75.0 (50.0-87.5)	83.3 (62.5-95.8)	66.7 (45.8-83.3)	<0.0001
Body image	80.0 (55.0-100.0)	90.0 (70.0-100.0)	75.0 (50.0-95.0)	<0.0001
Fatigue	68.8 (43.8-87.5)	81.3 (56.3-93.8)	62.5 (37.5-81.3)	<0.0001

IQR=Interquartile range; LN=Lupus nephritis; LupusQoL=Lupus Quality of Life questionnaire.

Impact of achieving renal response on LupusQoL responses

- At the 12-month follow-up, no differences were found between patients who achieved CR or PR and those who did not (**Table 2**)

TABLE 2: Impact of achieving renal response at 12 months on LupusQoL responses in patients with active LN

LupusQoL domain, median (IQR)	Total (N = 328)	NR (n = 113)	PR + CR (n = 215)	*P* value
Physical health	84.4 (68.8-93.8)	81.3 (65.6-93.8)	84.4 (68.8-93.8)	0.777
Pain	83.3 (66.7-100.0)	83.3 (66.7-100.0)	83.3 (75.0-100.0)	0.407
Planning	83.3 (66.7-100.0)	83.3 (66.7-100.0)	83.3 (66.7-100.0)	0.704
Intimate relationship	87.5 (75.0-100.0)	87.5 (75.0-100.0)	87.5 (62.5-100.0)	0.948
Burden to others	58.3 (33.3-83.3)	58.3 (33.3-83.3)	58.3 (33.3-75.0)	0.657
Emotional health	77.1 (62.5-91.7)	75.0 (50.0-91.7)	79.2 (66.7-87.5)	0.310
Body image	85.0 (70.0-95.0)	85.0 (65.0-100.0)	85.0 (70.0-95.0)	0.629
Fatigue	75.0 (56.3-87.5)	75.0 (56.3-90.6)	75.0 (56.3-87.5)	0.938

CR=Complete response; IQR=Interquartile range; LN=Lupus nephritis; LupusQoL=Lupus Quality of Life questionnaire; NR=No response; PR=Partial response.

KEY TAKEAWAY

- **In the GLADEL 2.0 cohort, active LN had a significant impact on the HRQoL of patients; further evaluation is warranted to confirm whether achieving renal clinical response can improve HRQoL in patients with LN**

CONCLUSIONS

- **Patients with active LN showed a worse HRQoL compared to those with inactive LN**
- **No differences in HRQoL were found between patients who achieved and did not achieve renal response at the 12-month follow-up**
- **Future analyses with a larger number of patients are necessary to provide conclusive data**

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