

CLINICAL PRESENTATION AND OUTCOMES OF SARS-CoV-2 INFECTION IN PATIENTS WITH LUPUS NEPHRITIS AND ITS POTENTIAL EFFECT IN THE PROBABILITY OF RELAPSE

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Introduction



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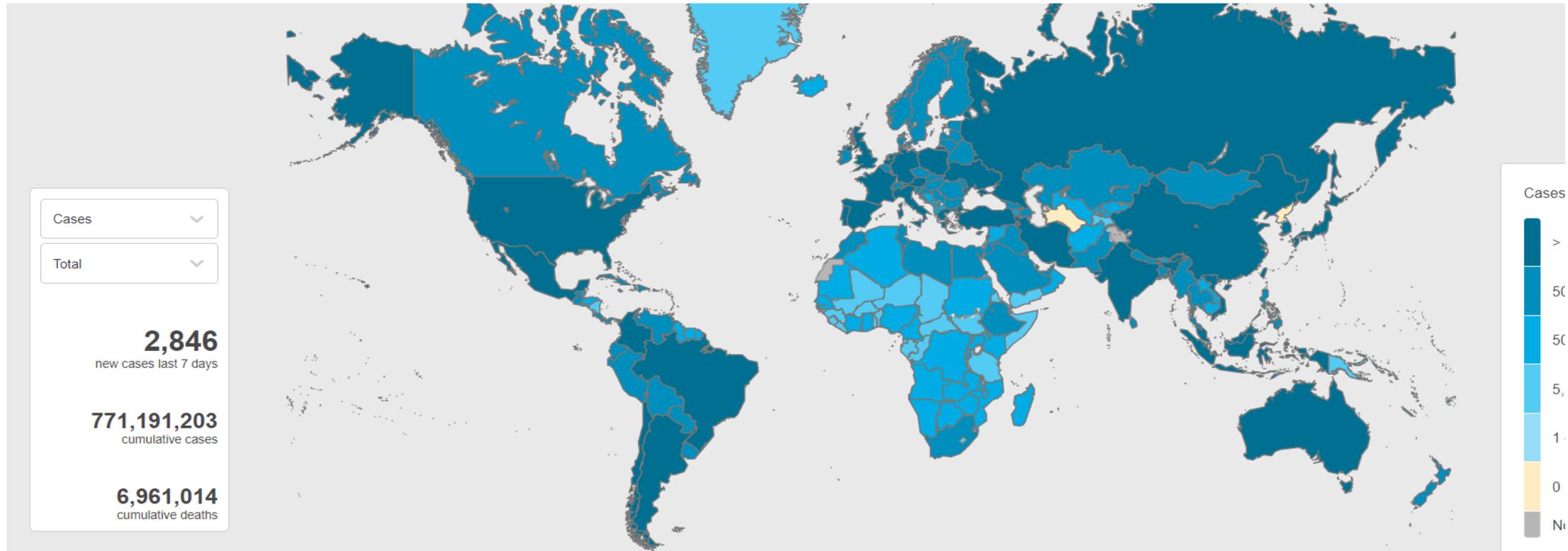
Overview

Measures

Table View

Data

More Resources



<https://covid19.who.int>

Aim

The present study is aiming to record the clinical presentation and outcome of SARS-CoV-2 infection in patients with lupus nephritis (LN).

Methods

- Retrospective study
- 5 different research centers in Greece
- 82 patients
- 56 (68.3%) had a positive test for SARS-CoV-2 and were compared with the remaining 26 who did not

Methods

Inclusion criteria

- Age >18 years
- Histologically confirmed LN

Exclusion criteria

- ESKD before SARS-CoV-2 infection diagnosis

Methods

LN

- Age at diagnosis
- Gender
- Histopathological diagnosis Lupus-GN, WHO class
- Past medical history
- Immunosuppression at diagnosis (induction and maintenance treatment)
- Type of immunosuppression
- 1st outcome (Remission/ treatment resistant)
- History of vaccination
- Type of vaccination
- Doses of vaccination

SARS-CoV-2 infection

- Reason for testing
- Type of symptoms
- Time (months) from biopsy to SARS-CoV-2 infection
- COVID-19 outcome
- Post-COVID-19 LN outcome
- Time to relapse (weeks) from SARS-CoV-2 infection

LUPUS NEPHRITIS

Classification

- Minimal mesangial LN (class I) {normal urinalysis, no or minimal proteinuria, and a normal serum creatinine}
- Mesangial proliferative LN (class II) {microscopic hematuria and/or proteinuria}
- Focal LN (class III) {hematuria and proteinuria. Maybe hypertension, a decreased GFR, and/or nephrotic syndrome. Less than 50 % of glomeruli are affected}
- Diffuse LN (class IV) {the most common histologic pattern and most severe. Hematuria and proteinuria. Frequently nephrotic syndrome, hypertension, and reduced GFR. More than 50 % of glomeruli are affected.}
- Lupus membranous nephropathy (class V) {10-20 % of patients with LN. Nephrotic syndrome +/-hematuria and hypertension}
- Advanced sclerosing LN (class VI) {kidney dysfunction, proteinuria and a relatively bland urine sediment. Global sclerosis of more than 90 % of glomeruli}

LN Outcomes- Definitions

- **Complete remission** is defined, by a UPCR $<500\text{--}700$ mg/d ($<50\text{--}70$ mg/mmol) by 12 months with normal or near-normal GFR (according to the 2019 update of EULAR/ERA-EDTA recommendations for LN),.
- **Partial remission** is defined by a reduction in proteinuria of at least 25% by 3 months or 50% by 6 months.
- **Resistant to treatment**

Outcomes of SARS-CoV-2 infection - Definitions

- **Recovery** was defined as the complete and permanent relief of symptoms accompanied by release from the need for oxygen therapy and hospitalization and administration of specific or non-specific treatment
- **Long-COVID** was defined as the presence of symptoms (physical and/ or mental) for a period of time greater than 2 months from the beginning of the infection.
- **Death**

Demographics, clinical and histopathological data

Parameter	Number of patients (N)
LN	82
Gender	70F, 12M
LN and positive SARS-CoV-2 test	56
Age	33 (12,7%)
Proliferative LN	43 (76,8%)
On immunosuppression at positive test	37 (66%)

Results

- 52 (94.6%) patients were tested due to symptoms
- 5 (9.01%) patients required hospitalization mainly due to hypoxemia.
- 11 (19.6%) patients received specific treatment for SARS-CoV2 infection,
- 51 (91.6%) patients had complete recovery, 2 (3.57%) prolonged symptomatology, and 1 (1.785%) died.

LN Outcome after SARS-CoV-2 infection

- 6 (10.9%) patients with SARS-CoV-2 infection, who were in remission before infection, experienced a relapse of LN 2.7(\pm 2.1) months later.
- None of the patients without SARS-CoV2 infection relapsed in the same time period ($p=0.09$).

Conclusions

- SARS-CoV-2 infection affects the **morbidity** of patients with LN.
- It **may possibly enhance the possibility of LN relapse** in those who have previously achieved remission.

Thank you for your attention!