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Epidemiology and Outcomes of Patients with Rheumatic Diseases and SARS-CoV-2 Infection: Data from the Argentinean SAR-COVID Registry

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Background:

In the last time, many papers about SARS-CoV-2 have been published in the world. However, data from latinamerican patients is still scarce. In order to assess the impact of SARS-CoV-2 infection in patients with rheumatic diseases in our country and contribute to the global knowledge about the effect of immunosuppressive therapies in this group, the Argentine Society of Rheumatology has developed the National Registry of Patients with Rheumatic Diseases and COVID-19 (SAR-COVID).

Objectives:

The aim of this study was to evaluate clinical characteristics and outcomes of SARS-CoV-2 infection in patients with rheumatic diseases, treated or not with immunomodulators and/or immunosuppressants.

Methods:

SAR-COVID is a national, multicenter, prospective and observational registry, in which patients, ≥ 18 years of age, with a diagnosis of a rheumatic disease who had SARS-CoV-2 infection (PCR or positive serology) are consecutively included between August 13, 2020 and January 17, 2021. Sociodemographic data, comorbidities, underlying rheumatic disease and treatment, clinical characteristics, complications, laboratory and treatment of the SARS-CoV-2 infection were recorded. Hospitalization, mechanical ventilation requirements and death were assessed to evaluate COVID-19 outcome. Statistical analysis: Descriptive analysis. Chi² or Fischer test and T test or Mann-Whitney U test or ANOVA, as appropriate. Multiple logistic regression.

Results:

A total of 525 patients were included, 80.4% were female, with a median age of 52 years (IQR 40-62). Comorbidities were reported in half of them (53.3%). The most frequent rheumatological diseases were rheumatoid arthritis (40.4%) and systemic lupus erythematosus (14.9%). At the time of the infection, most of them were in remission or in minimal/low disease activity (68.2%) and 72.9% were receiving immunosuppressive or immunomodulatory treatment.

Symptoms were present in 96% of the patients, the most frequent being fever (56.2%), cough (46.7%) and headache (39.2%). During infection, 35.1% received some pharmacological treatment, dexamethasone (20%) the most frequently used. One third (35.1%) of the patients were hospitalized, 11.6% were admitted to the ICU, 10.1% needed mechanical ventilation and 6.9% died due to COVID-19. Complications were reported in 12.4%, being acute respiratory distress syndrome the most prevalent (8.8%).

Patients over 65 years of age were more frequently hospitalized, admitted to the ICU, needed mechanical ventilation and died due to COVID-19 (50% vs 31.4%, 22% vs 9%, 16.3% vs 5.2%, 14% vs 5%, , respectively; $p < 0.001$ in all cases). Similar results were seen in patients with vasculitis (57.7% vs 33.9%, 46.2 vs 9.8%, 34.6% vs 6 %; 30.8% vs 5.6%, respectively; $p < 0.001$ in all cases) and those with moderate/high disease activity (55.7% vs 26.5%, 21.3 vs 7.8%, 17.2% vs 4.2 %; 17.2% vs 4.2 %, respectively; $p < 0.001$ in all cases). Patients with APS were more frequently admitted to the ICU (29.4% vs 11%, $p = 0.037$). The presence of comorbidities was associated with higher hospitalization (46% vs 22.6%, $p < 0.001$), admission to the ICU (17.2% vs 5.9%, $p < 0.001$) and mechanical ventilation (10.2% vs 4.6%, $p = 0.028$). Immunosuppressive treatment was not associated with worse outcomes.

Conclusion:

In this cohort of patients with a wide distribution of rheumatic diseases, we have found clinical characteristics similar to those reported by other international cohorts. Compared with national data, the mortality reported in these patients is higher. However, it should be noted that these are early data collected during isolation and that there may be an underreporting of asymptomatic patients or with mild symptoms who do not attend the rheumatologist.

Older patients, those with comorbidities, with vasculitis and with higher disease activity showed poor COVID-19 outcomes.

References:

None

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