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SEVERE COVID-19 IN A SUSTAINED REMISSION LUPUS PATIENT - CASE REPORT

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BACKGROUND

The coronavirus disease 2019 (COVID-19) presents with a great heterogeneity, with studies showing some risk factors associated to worst outcomes. Its relationship with autoimmune diseases and immunosuppressant drugs is still not clear. We presented a case of a young female patient with systemic lupus erythematosus (SLE) that was in a sustained clinical remission, with COVID-19 diagnosis evolving to a severe form with the need for invasive ventilation; however, evolving with recovery and hospital discharge.

CASE REPORT

F.L.A., 37 years old, female, followed in our ambulatory with SLE diagnosis since she was 15, with a cutaneous and articular predominant form, without severe activities, recently in sustained remission for more than one year, and in a regular use of hydroxychloroquine without corticosteroids. She was admitted at our hospital with a prior history of one-week flu syndrome progressing with persistent fever, dyspnea and desaturation, demanding hospitalization and oxygen supplementation. She had contact with a previous confirmed COVID-19 case, and had no organ dysfunctions nor clinical or laboratory lupus activities. Complementary exam showed leukocytosis and lymphopenia, high PCR and D dimer. Lungs computed tomography (CT) scan compatible with > 50% affected parenchyma (Fig. 1), besides a positive RT-PCR swab for severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). On the second day, she evolved with worsening hypoxemia and need for orotracheal intubation and invasive ventilation, being transferred for the critical care unit, receiving protocol treatment including neuromuscular blocking agents and prone position ventilation. She was also given ceftriaxone, azithromycin and dexamethasone. Showing a progressive clinical improvement, she was extubated within 6 days and had hospital discharge after 14 days of hospitalization.

Figure 1. Characteristic pulmonary involvement evidenced in more than 50% of parenchyma during initial investigation.

Table 1. Complementary general and lupus activity tests in evolutionary analysis.

Complementary tests	Admission	Hospital discharge	Follow-up (60 days)
Hemoglobin	13.8	11.5	13.2
Overall white blood cells count	14,500	14,700	8,400
Lymphocytes (absolute)	900	1,980	1,480
Platelet count ($\times 10^3$)	272,000	301,000	338,000
Creatinine (mg/dL)	0.6	0.4	0.6
CRP (mg/dL)	28.8	4.0	0.6
Erythrocyte sedimentation rate (mm/h)	96	-	8
Albumin (mg/dL)	3.8	3.0	-
Dimer-D (ng/mL)	6,934	1,844	-
Fibrinogen (mg/dL)	86	790	-
Proteinuria (spot – mg/dL)	490	-	310
C3 (mg/dL)	105	-	83.5
C4 (mg/dL)	16.1	-	21.5
Anti-DNAs (U/mL)	49	-	21.8

CONCLUSION

We presented a case of a young female SLE patient, without clinical activities or immunosuppressants use, evolving to a severe form of COVID-19; however, with a favorable outcome. The case reinforces the need for more studies and better comprehension about the relationship between autoimmune diseases and the risks for the SARS-CoV-2 infection and prognosis.