

### COVID-19 in patients with psoriasis: A Latin American case series



*To the Editor:* The impact that COVID-19 has on patients with psoriasis is not completely clear. It has been reported that patients usually experience mild symptoms; however, pneumonia may develop in up to 15% of these patients, and 5% of patients progress to acute respiratory distress syndrome.<sup>1</sup> Controversy over the use of human monoclonal antibodies against cytokines (biologics) and other immunomodulatory therapies has increased the interest in the dermatologic community, since it is presumed that these patients may have a greater risk of requiring in-hospital management during acute infection.<sup>1,2</sup>

We conducted a case series study. Data were collected in 13 cities in 4 Latin American countries from April to December 2020 via an online survey addressed to dermatologists who treated patients with psoriasis who presented with COVID-19 in their follow-up visits. As eligibility criteria, the following were taken into account: diagnosis of psoriasis and confirmed diagnosis of COVID-19 through immunologic tests. Descriptive analysis included absolute and relative frequencies for qualitative variables and central tendency measures with dispersion for quantitative variables. Crude odds ratios were calculated for relevant outcomes and reported with their 95% CIs.

**Table I.** Characteristics of Latin American patients with psoriasis and confirmed or highly suspected COVID-19

Characteristic	All patients (N = 53)	Hospitalized patients (N = 15)	Ambulatory patients (N = 38)
Sex, n (%)			
Female	16 (30.19)	3 (5.66)	13 (24.5)
Male	37 (69.81)	12 (22.64)	25 (47.16)
Mean age, y (range)	45 (23-89)	49 (31-89)	43 (23-77)
Country of origin, n (%)			
Argentina	7 (13.21)	1 (6.66)	6 (15.78)
Chile	9 (16.98)	3 (20)	6 (15.78)
Colombia	36 (67.93)	11 (73.33)	25 (65.78)
Mexico	1 (1.89)	0 (0)	1 (2.63)
Psoriasis phenotype, n (%)			
Plaque	50 (94.34)	13 (86.6)	37 (97.36)
Inverse	2 (3.77)	2 (13.3)	0 (0)
Erythrodermic	1 (1.89)	0 (0)	1 (2.63)
Psoriasis treatment type			
Biologic treatment	29 (54.71)	7 (46.66)	22 (57.89)
Nonbiologic systemic treatment	14 (26.41)	6 (40)	8 (21.05)
Biologic and nonbiologic systemic treatment	3 (5.66)	0 (0)	3 (7.89)
No systemic agent	7 (13.21)	2 (13.33)	5 (13.15)
Change in psoriasis severity with COVID-19, n (%)			
Worsening	16 (30.19)	7 (46.66)	9 (23.68)
Improving	5 (9.43)	1 (6.66)	4 (10.52)
Unaltered	32 (60.38)	7 (46.66)	25 (65.78)
Comorbidities, n (%)			
Obesity	19 (31.67)	1 (6.66)	18 (47.36)
Hypertension	15 (28.30)	7 (46.66)	8 (21.05)
Cardiovascular disease	2 (3.77)	1 (6.66)	1 (2.63)
Diabetes	7 (13.21)	1 (6.66)	6 (15.78)
Chronic liver disease	6 (11.32)	3 (20)	3 (7.89)
Chronic lung disease	3 (5.66)	0 (0)	3 (7.89)

We included 53 patients in this study; clinical and sociodemographic characteristics of all patients are presented in Table 1. All patients recovered fully from COVID-19. Patients treated with biologics or systemic immunomodulators constituted 46 (86.78%). Of all patients, 15 (28.3%) were hospitalized and 3 (5.66%) were admitted to an intensive care unit. Patients not receiving biologic therapy were more frequently hospitalized than those receiving biologic therapy (53.33% vs 46.66%, respectively; odds ratio, 0.45; 95% CI, 0.13-1.53;  $P = .2$ ). In addition, we found that psoriasis was unaltered in most patients during the infection (60.38% vs 30.19%).

The conditions that coexist other than psoriasis that potentially constitute a risk of hospitalization<sup>1,3</sup> were hypertension (46.66%), obesity (6.66%), and chronic liver disease (20%). As described in other studies, comorbidities such as cardiovascular disease and chronic lung disease were less frequent.<sup>1,4</sup> Our findings are consistent with those previously reported in other case series in Italy.<sup>5</sup> Further studies are required to establish whether these comorbidities increase the risk of COVID-19 severity and hospital admission rates in patients with psoriasis.

This case series had a limited number of patients but is of great value in our population because of the absence of major real-life follow-up data. Our data suggest that negative outcomes during acute infection occur less frequently than expected, especially in patients receiving biologic therapies. The hospitalization rate was lower in patients receiving biologic therapy, as was described in other case series in New York.<sup>4</sup> This could be related to the main problem in COVID-19 complications being that it is associated with a cytokine storm; immunosuppressive therapies may reduce the impact of this process, though further studies are required to establish whether it is a protective factor. Importantly, these observational data are subject to important biases and cannot be used to determine true population-level outcomes.

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#### Conflicts of interest

None disclosed.

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