

that systemic psoriasis therapy does not worsen COVID-19. Larger detailed studies are needed.

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Patients in this manuscript have given written informed consent to publication of their case details.

Conflict of interest

Dr. Lima serves on the speakers' bureau for Abbvie. Mary Cueva has no relevant conflicts of interest. Dr. Lopes receives scholarship from CAPES - Brazilian Federal Agency for Support and Evolution of Graduate Education within the Ministry of Education of Brazil. Dr. Alora has been an investigator for Abbvie, Janssen, Celgene, Eli Lilly, Pfizer, Inc., Novartis.

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Delayed melanoma diagnosis in the COVID-19 era: increased breslow thickness in primary melanomas seen after the COVID-19 lockdown

Editor

For malignant melanoma (MM), the Breslow thickness and the presence of ulceration are important elements for determining the staging and prognosis.¹ Skin cancer screening and dermoscopic examination allowed an earlier recognition of cutaneous MM, causing especially an over-detection of thin lesions, without a proportional decline in later-stage disease.² Furthermore, the incidence of thicker MMs does not seem to be decreasing.^{3,4} Due to the COVID-19 pandemic, some planned medical activities have been postponed, for both national directives and out of concern of the patients who were afraid to go to hospitals.⁵ The aim of this study was to verify whether the Italian lockdown for the COVID-19 pandemic has had any detrimental effect on MM diagnosis. This cross-sectional study collected all consecutive primary MM from the Pathology Registry of IDI-IRCCS, a dermatological reference centre in Rome, Italy. Mean Breslow thickness (mm), ulceration (%) and other main histological features were collected. We divided the COVID-19 Italian pandemic into three phases: (i) prelockdown: from 1 January to 9 March; (ii) lockdown: from 10 March to 3 May; and (iii) postlockdown: from 4 May, when the lockdown measures started to be progressively eased, to 6 June – the last surgery date for which confirmed pathology results were available. Frequency distributions, means and proportions were obtained using the IBM SPSS Statistics for Windows, Version 26.0.0.1 (IBM Corp., Armonk, NY, USA). Differences between proportions were tested using the Fisher exact test. Differences between measures of central tendency were tested using the non-parametric Kruskal–Wallis one-way ANOVA on ranks. 95% confidence intervals (CIs) for the means and for the conditional maximum-likelihood estimates of the odds ratios (OR, in this case, Fisher's exact 95% CI) were computed using the OpenEpi online resource.⁶ During the 158 days of the study period, a total of 237 patients with primary MM were diagnosed: 128 (54.0%) were males, and average age was 57 years (standard deviation, 17). The mean number of MM diagnoses per day were as follows: 2.3 in the prelockdown phase, 0.6 during the lockdown and 1.3 after the lockdown (in 2018–2019, we had 2.3/day). The characteristics of the MMs are shown in Table 1. The OR for nodular MMs in the post- vs. prelockdown phases is 5.5 (exact 95% CI, 1.3–25.1), for SSM with nodule is 3.9 (exact 95% CI, 0.9–16.7), and for ulcerated MMs is 4.9 (exact 95% CI, 1.4–17.3). Proportion of ulceration was 5.9% (95% CI, 2.4–11.7%) prelockdown and 23.5% (95% CI 10.8–41.2%) postlockdown. Mean Breslow thickness was 0.88 (95%

Table 1 Number of newly diagnosed melanomas and proportions of different histological characteristics, in the three COVID-19 epidemic phases, IDI-IRCCS, Rome, Italy, 1 January–6 June 2020

Year 2020	Melanomas N	<i>In situ</i> N (%)	Nodular N (%)†	Ulcerated N (%)†	Superficial spreading with nodule N (%)†
Prelockdown	158	39 (24.7)	5 (4.2)	7 (5.9)	6 (5.0)
Lockdown	34	10 (29.4)	2 (8.3)	2 (8.3)	0 (0)
Postlockdown	45	11 (24.4)	6 (17.6)	8 (23.5)	5 (14.7)
P value†		0.856	0.015	0.011	0.032

†The denominator of these percentages does not include *in situ* melanomas. ‡From Fisher exact tests.

Table 2 Breslow thickness of newly diagnosed melanomas in the three COVID-19 epidemic phases, IDI-IRCCS, Rome, Italy, 1 January–6 June 2020. Overall estimates, and stratification by sex and by age group

Year 2020	Thickness (mm) Overall	By sex		By age group (years)		
		Females	Males	<50	50–64	65+
Prelockdown	0.88	0.79	0.96	0.66	0.89	1.06
Lockdown	0.66	0.66	0.66	0.40	0.38	1.33
Postlockdown	1.96	1.44	2.70	1.39	1.82	2.93
P value†	0.001	0.325	<0.001	0.274	0.014	0.007

†From non-parametric Kruskal–Wallis one-way ANOVA on ranks.

CI, 0.50–1.26) prelockdown and 1.96 (95% CI, 1.16–2.76) postlockdown. Table 2 shows the Breslow thickness stratified by sex and by age group: significant increases are observed for men (from 0.96 to 2.70) but not for women (0.79 to 1.44), and in patients 50 years old or older. The proportion of postlockdown *in situ* MMs (24.4%) is practically superimposable on the prelockdown one (24.7%), which is very close to the observed values for 2018 (23.8%) and 2019 (26.4%) on over 800 MMs per year. The reduced mean Breslow thickness of lesions seen during the lockdown (0.66 mm) and the increased proportion of *in situ* MMs (29.4%) indicate that more ‘health-conscious’ people were more likely to defy the lockdown limitations than people who might have been underestimating the severity of their lesions. Our data support the study hypothesis that during the COVID-19 lockdown period, diagnoses of MMs may have been delayed. Other studies should shed light on whether this is an isolated or more widespread phenomenon. Though it is way too early to gauge the consequences of such diagnostic delay, should this issue be neglected, dermatologists and their patients may pay a higher price later with increased morbidity, mortality and financial burden.

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COVID-19-related cutaneous manifestations associated with multiple drug sensitization as shown by lymphocyte transformation test

Editor

Patients with novel coronavirus disease 2019 (COVID-19) can present with a wide variety of cutaneous manifestations.^{1,2}