

## Correspondence

### Scabies outbreak during COVID-19: an Italian experience

Dear Editor,

Scabies is a disease caused by *Sarcoptes scabiei* var. *hominis*. This parasite causes an infestation of the skin with a high grade of transmission.<sup>1</sup> The typical symptom of scabies is an intensive pruritus which causes sleep deprivation and deteriorates the daytime quality of life.<sup>1</sup> In vulnerable subjects, scabies can cause a life-threatening condition.<sup>1</sup> In the young and the elderly, scabies can cause a more severe infection.<sup>2</sup>

Coronavirus disease 2019 (COVID-19) is a pandemic disease which has caused a world health emergency.<sup>3</sup>

In an attempt to contain the rapid spread of COVID-19, the Italian Government decided to adopt a “stay-at-home” policy starting on March 10, 2020. The adoption of these restrictive measures forced the population into home confinement.

We report our experience at the Dermatological Clinic of Mycology and Parasitosis of the “Federico II University Hospital” in Naples.

Despite the restrictions and the fear of COVID-19 infection, we carried out our activities.

Patients were referred to us by dermatologists suspecting scabies as a diagnosis. Our role was to search the mite by scarification of the cutaneous lesions and microscopic examination in order to confirm the infestation. The samples were examined under a light microscope after adding 15% potassium hydroxide solution.

We calculated the number of patients admitted to our clinic with suspected scabies in the first year since the first case of COVID-19 was diagnosed in Italy (March 2020–March 2021), and we compared it with the annual average of admissions from 2015 to 2019. The number of admissions per year remained similar. In fact, from March 2020 to March 2021, 103 patients had been admitted to our clinic with a suspect of scabies whereas the yearly average before March 2020 was 107 patient per year.

However, in the last year, we observed a significant increase in percentage of patients positive for scabies (Table 1) compared with the percentage of positive patients per year from 2015 to 2019 (33.03% vs. 23.05–26.10%,  $P < 0.01$ ). We have also noticed a significant increase of positive percentage for people under 18 (60.02% vs. 27.52–31.20%,  $P < 0.01$ ) and over 65 (50.01% vs. from 18.00%–22.35%,  $P < 0.01$ ). A chi-squared test was used to test our hypothesis.

Furthermore, we investigated sociogeographic and sexual features of patients noticing that there was no socioeconomic difference between patients admitted before and after the pandemic period. In fact, our patients found positive to scabies came from both rural and urban areas, not highlighting a prevalent geographical feature.

Although we observed a turnaround between the percentage of sexual prevalence of positive patients (Table 1) during the two considered periods, before March 2020 there was a prevalence of positive female patients (46.88% vs. 50.12–53.13%); contrariwise, since that time, a prevalence of positive male patients was observed (55.20% vs. 40.10–44.80%).

Due to limitations caused by the pandemic, the therapy and follow-up of patients also changed.

In fact, before the pandemic period, we used to cure scabies infection with a topical scabicide (permethrin 5% cream) applied overnight to the entire skin surface (excluding the scalp and face) with a second application, usually a week after the initial treatment. We checked the patients' status the first and fourth week after the second cycle of treatment.

Since March 2020, we have routinely suggested a third cycle of treatment 10 days after the second one with only one check-up 3 weeks later.

According to the current literature,<sup>4,5</sup> our results show an increase in scabies diagnosis during the last year.

**Table 1** Epidemiological features of positive patients before and after March 2020

Year	January 2015– December 2015	January 2016– December 2016	January 2017– December 2017	January 2018– December 2018	January 2019– March 2020	March 2020– March 2021
Sex						
Male, %	42.1%	43.8%	40.10%	44.80%	44.03%	55.20%
Female, %	50.12%	51.27%	53.07%	53.13%	52.66%	46.88%
Positive						
Total %	26.10%	24.50%	23.05%	25.01%	25.10%	33.03%
<18 years, %	28.55%	31.2%	27.52%	29.54%	28.03%	60.02%
>65 years, %	19.85%	22.35%	21.33%	20.75%	18.00%	50.01%

Cases of *Sarcoptes scabiei* have always occurred in our hospital. The “stay-at-home” policy probably fostered close contacts with relatives and cohabitants, increasing the risk of transmission. In addition, daily habits including body care and personal hygiene practices have changed due to confinement at home and social isolation.

Certainly, further epidemiological studies are needed to investigate the prevalence of scabies before and during COVID-19 in order to improve our knowledge about this parasitosis and its management to prevent its spread in particular conditions such as the pandemic that the whole world has lately been experiencing.

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### References

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