

THE CLINICAL PICTURE

Ayano Hamai, MD

Department of General Medicine,
Awa Regional Medical Center,
Chiba, Japan

Yukinori Harada, MD, PhD

Department of Diagnostic and Generalist
Medicine, Dokkyo Medical University
Hospital, Mibu, Tochigi, Japan

Masked tinea



Figure 1. During her hospitalization for rehabilitation, the patient was masked. On hospital day 22, she complained of itching on her face. Removal of the mask revealed erythema on the right side of her face. Analysis of the lesions with potassium hydroxide confirmed tinea faciei.

A 91-YEAR-OLD WOMAN WAS admitted to the hospital with a 1-month history of anorexia. On admission, there were no significant abnormal findings, including in the face and mouth. She had been taking colchicine for gout, and this medication was suspected as the cause of anorexia. Colchicine was thus discontinued, her anorexia rapidly improved, and her hospitalization continued for rehabilitation. She wore a mask during this time.

On day 22 of hospitalization, the patient complained of itching on the face. Therefore, we asked her to remove her mask for examination. On removal of the mask, we noted a painless rash that extended from the forehead to the mandible on the right side of her face. The rash had well-defined borders, with

small eczematous lesions at the margins and fine scaling (**Figure 1**). Differential diagnoses such as cellulitis, herpes zoster, seborrheic dermatitis, or contact dermatitis were ruled out because the lesions were painless, without blisters, and with distinct borders.

Microscopic study of a lesion preparation using potassium hydroxide showed tinea faciei, a filamentous fungal infection (**Figure 1**). She also had tinea pedis on both feet. Topical terbinafine ointment was prescribed, and the lesions improved within 2 months.

■ TINEA AND MASKS

Our patient's tinea faciei was likely attributable to her wearing a mask every day for almost the entire day, in addition to her touching her feet and face. Prolonged mask-wearing has been reported to be a risk factor for

doi:10.3949/ccjm.90a.23002

facial dermatitis¹ and may trigger skin temperature elevation, sweating, and irritation, which could result in the development of tinea faciei.²

To prevent tinea faciei, changing the face mask daily, avoiding wearing a mask continuously more than 6 hours a day, and washing the face and hands may be recommended based on a previous report.²

The diagnosis in our patient was delayed because large areas of tinea faciei were hidden by the patient's mask. Indeed, mask-related diagnostic delays have been reported in cases of facial dermatologic diseases such as facial skin tumors.^{3,4} In particular, hospitalized patients would seem at high risk for delayed diagnosis of facial skin problems since medical staff rarely ask patients to remove their masks during rounds.

Lesions on the patient's forehead could have been detected earlier, as the mask did not cover the

forehead. However, physicians did not recognize the lesions, perhaps because of cognitive bias based on a low suspicion for the development of tinea faciei, but also perhaps because the yellow and dark skin color of the patient's face made recognition of the lesions more difficult.

Our patient's case should serve as an alert to pay more attention to facial skin problems that may not be visible because of masks, and to examine the patient's face without the mask. Scheduling regular head-to-bottom examination in patients hospitalized for long periods may help prevent this kind of infection.

DISCLOSURES

The authors report no relevant financial relationships which, in the context of their contributions, could be perceived as a potential conflict of interest.

REFERENCES

1. Justin LYS, Yew YW. Facial dermatoses induced by face masks: a systematic review and meta-analysis of observational studies. *Contact Dermatitis* 2022; 87(6):473–484. doi:10.1111/cod.14203
2. Bortoluzzi P, Boneschi V, Veraldi S. 'Mask' tinea: an increasing infection during COVID-19 pandemic. *Mycopathologia* 2022; 187(1): 141–142. doi:10.1007/s11046-021-00612-7
3. Klingenstein A, Samel C, Hintschich C. Potential delay of diagnosing infraorbital skin tumors due to coverage by face masks during the COVID-19 pandemic: an observational study. *Clin Ophthalmol* 2022; 16:3581–3587. doi:10.2147/OPTH.S384217
4. Mokos M, Bašić-Jukić N. Diagnostic delays for non-melanoma skin cancers in renal transplant recipients during the COVID-19 pandemic: what is hiding behind the mask? *Acta Dermatovenereol Croat* 2021; 29(2):111–113. PMID:34477079

Address: Ayano Hamai, MD, Department of General Medicine, Awa Regional Medical Center 1155, Yamamoto, Tateyama-City, Chiba 294-0014, Japan; ayanohamai.chariq1216@gmail.com

Changed your address? Not receiving your copies?

To receive *Cleveland Clinic Journal of Medicine*, make sure the American Medical Association has your current information. *Cleveland Clinic Journal of Medicine* uses the AMA database of physician names and addresses to determine its circulation. All physicians are included in the AMA database, not just members of the AMA.

Only YOU can update your data with the AMA.

- If your address has changed, send the new information to the AMA. If you send the update by mail, enclose a recent mailing label. Changing your address with the AMA will redirect all of your medically related mailings to the new location.
- Be sure the AMA has your current primary specialty and type of practice. This information determines who receives *Cleveland Clinic Journal of Medicine*.
- If you ever notified the AMA that you did not want to receive mail, you will not receive *Cleveland Clinic Journal of Medicine*. If you wish to reverse that decision, simply notify the AMA, and you will again receive all AMA mailings.
- Please allow 6 to 8 weeks for changes to take effect.

To contact the American Medical Association:

- **PHONE** 800-621-8335
- **FAX** 312-464-4880
- **E-MAIL** dpprodjira@ama-assn.org
- **US MAIL**

Send a recent mailing label along with new information to:

American Medical Association
AMA Plaza
Data Verification Unit
330 N. Wabash Ave., Suite 39300
Chicago, IL 60611-5885