



CDPH Health Advisory

Reports of Rare, Severe Dermatophyte Infections Associated with Sexual Contact in the United States

June 20, 2024

The California Department of Public Health (CDPH) issued a [health advisory](#) yesterday to inform health care providers that the first known United States (U.S.) case of sexually transmitted *Trichophyton mentagrophytes* genotype VII (TMVII) was reported in June 2024 in a patient who had recently traveled to California. TMVII is a rare dermatophyte (e.g., ringworm or tinea) infection that causes highly inflammatory, painful, and persistent lesions, often affecting the anogenital or perioral areas, and may require weeks of oral antifungal treatment. Prior to this case, sexual transmission of TMVII had been reported in France, primarily among men who have sex with men (MSM), and among other persons in European countries returning from Southeast Asia who had engaged in sex tourism. Given the novelty of sexually transmitted dermatophyte infections and the potential for local spread in the United States, CDPH would like to inform clinicians of TMVII as a potential emerging public health concern and provide guidance on the clinical recognition, diagnosis, and treatment of patients who are suspected to have this infection.

For assistance in testing or clinical management of suspected TMVII or other sexually transmitted dermatophyte infection, providers can contact the [Sexually Transmitted Diseases Clinical Consultation Network \(STDCCN\)](#), the Los Angeles County Department of Public's Division of HIV and STD Programs Provider Consult Line at (213) 368-7441, or U.S. Centers for Disease Control and Prevention (CDC) at fungaloutbreaks@cdc.gov

Reporting

Providers are asked to report suspect cases of TMVII in LA County to:

Los Angeles County DPH Acute Communicable Disease Control:

- Fax a [CMR](#) to 888-397-3778 or 213-482-5508 or send via secure email to ACDC-MorbidityUnit@ph.lacounty.gov, or
- Call 888-397-3993 weekdays 8:30 am–5:00 pm.

Long Beach Health and Human Services:

- Fax a [Long Beach CMR](#) to 562-570-4374 or send by secure email to LBEpi@longbeach.gov, or
- Call 562-570-4321 weekdays 8:00 am-5:00 pm

Pasadena Public Health Department:

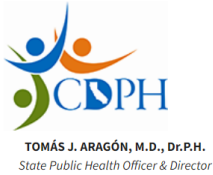
- Complete a [Pasadena CMR](#) and send by fax to 626-744-6115, or
- Call 626-744-6089 weekdays 8:00 am-5:00 pm

Read the CDPH communication below or [online](#).

You can also copy and paste this link into your browser:

<https://www.cdph.ca.gov/Programs/OPA/Pages/CAHAN/Reports-of-Rare-Severe-Dermatophyte-Infections-Associated-with-Sexual-Contact-in-the-United-States.aspx>

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State of California—Health and Human Services Agency
California Department of Public Health



Health Advisory

TO: Healthcare Providers
Reports of Rare, Severe Dermatophyte Infections Associated with Sexual Contact in the United States
6/19/2024

Key Messages

- The first case of sexually transmitted *Trichophyton mentagrophytes* genotype VII (TMVII) was reported in the United States. This patient had traveled to California prior to diagnosis.
- Health care providers should have a high suspicion for TMVII in patients presenting for inflammatory, painful, or persistent skin lesions affecting the genitals, buttocks, or face. Empiric treatment should be initiated if TMVII is suspected based on clinical presentation, such as in cases of topical treatment failure, highly inflammatory appearance, and anogenital lesions.
- Diagnosis with potassium hydroxide (KOH) preparation and fungal culture of skin scrapings should be attempted in all suspected cases of TMVII. Fungal isolates should be submitted to select laboratories (listed below) for genetic sequencing and species identification.
- For assistance in testing or clinical management of suspected TMVII or other sexually transmitted dermatophyte infection, providers can contact the [Sexually Transmitted Diseases Clinical Consultation Network \(STDCCN\)](#), your [local health department](#), CDPH STD Control Branch at (510) 620-3400 or stdcb@cdph.ca.gov, or U.S. Centers for Disease Control and Prevention (CDC) at fungaloutbreaks@cdc.gov.

Background

The California Department of Public Health (CDPH) would like to inform health care providers that the first known United States (U.S.) case of sexually transmitted *Trichophyton mentagrophytes* genotype VII (TMVII) was [reported in June 2024 \[1\]](#). TMVII is a rare dermatophyte (e.g., ringworm or tinea) infection that causes highly inflammatory, painful, and persistent lesions, often affecting the anogenital or perioral areas. Prior to this case, sexual transmission of TMVII had been reported in [France \[2\]](#), primarily among men who have sex with men (MSM), and among other persons in European countries returning

from [Southeast Asia](#) who had engaged in sex tourism [3]. TMVII is reported to be spreading locally in [Europe](#) and other global regions [4].

This U.S. case of TMVII occurred in an HIV-negative man living in New York City who had reported recent travel to Europe and California. The patient had multiple male sexual partners while traveling, prior to developing a scaly, erythematous, and pruritic rash affecting the groin, genitals, and legs. After diagnosis, the patient was successfully treated with a prolonged antifungal regimen including oral terbinafine and itraconazole [1]. In addition to this case, a separate case of sexually transmitted *Trichophyton indotineae* was recently reported in [Pennsylvania](#) in a woman after travel to South Asia – unlike TMVII, *T. indotineae* is often resistant to terbinafine, a first-line antifungal medication [5]. Patients with TMVII and *T. indotineae* are often initially treated with topical regimens, but usually fail such treatments.

Given the novelty of sexually transmitted dermatophyte infections and the potential for local spread in the United States, it is important that California providers be aware of TMVII and other sexually transmitted dermatophytes as an emerging public health concern and understand steps to diagnosis and management.

Recommendations

To prevent local spread and expedite clinical recognition, diagnosis, and treatment of patients with suspected TMVII, CDPH recommends the following:

- Suspect TMVII in people with highly inflammatory, painful, or persistent skin lesions affecting the genitals, buttocks, or face (see Figures A-D below). Unlike other dermatophyte infection affecting the groin (e.g., jock itch), TMVII may affect the shaft of the penis and usually fails to clear with topical antifungal regimens. Lesion appearance is variable, but may include sharply demarcated, erythematous, scaling plaques or pustules. Co-infections with other sexually transmitted infections (STIs) have been reported. Sexual activity during recent travel to Europe or Southeast Asia or partners who have traveled to these locations may heighten suspicion for TMVII, but absence of such risk factors should not be used to rule out the infection.
- TMVII infection may be strongly suspected based on clinical presentation, but clinicians should attempt to confirm diagnosis with both in-clinic microscopy and fungal culture.
 - Microscopy with [potassium hydroxide \(KOH\) preparation](#) of skin scrapings can be used to visualize segmented hyphae to confirm fungal infection [6]. See [KOH Procedure](#) from the CDC for more information on performing this assay [7]. Given the relatively low sensitivity of KOH preparation for the detection of dermatophyte infections [8], negative results should not preclude patients from treatment in highly suspicious cases.
 - Fungal culture of skin scrapings can be used to identify fungal infection. Providers should request the isolate be speciated and saved for further testing.

- While diagnostic testing should be attempted, lack of in-clinic microscopy or fungal culture results should not delay treatment.
- Microscopy and culture do not differentiate TMVII from other *Trichophyton* species (e.g., *T. mentagrophytes* or *T. interdigitale*). If a *Trichophyton* species is identified by fungal culture, the sample should be sent for genomic sequencing to differentiate species. There are select laboratories that can provide this service:
 - [Wadsworth Mycology Laboratory of the New York State Department of Health](#) (Albany, NY, USA)
 - [Fungus Testing Laboratory of the University of Texas Health](#) (San Antonio, TX, USA)
 - [Center for Medical Mycology of the University Hospitals Cleveland Medical Center](#) (Cleveland, OH, USA)
- Most tinea infections affecting the skin can be empirically treated with first-line topical antifungals such as clotrimazole or topical terbinafine. If TMVII is suspected due to topical treatment failure, highly inflammatory appearance, and anogenital lesions, empiric treatment with oral Terbinafine 250 mg once daily should be started. Treatment should be continued until the infection has resolved which may take ≥ 6 weeks. If there is no clinical improvement with terbinafine after 2-4 weeks of treatment, consider referring the patient to an infectious disease specialist or dermatologist and switching to oral Itraconazole 200mg once daily.
- Providers should share the following practices to prevent transmission or reinfection with suspect or confirmed dermatophyte (including TMVII or *T. indotineae* infection):
 - Avoid sexual skin-to-skin contact if there is a rash affecting the genitalia or in the perianal or perioral areas.
 - Avoid sharing personal items and clothing
 - Wash and dry clothing on high heat to kill fungal spores.
 - Avoid use of topical steroids.
 - Need for prolonged therapy to prevent relapse and reinfection for TMVII or *T. indotineae* infection.

Resources

For assistance in testing or clinical management of suspected TMVII or other sexually transmitted dermatophyte infection, providers can contact the [Sexually Transmitted Diseases Clinical Consultation Network \(STDCCN\)](#), your [local health department](#), CDPH STD Control Branch at (510) 620-3400 or stdcb@cdph.ca.gov, or CDC at fungaloutbreaks@cdc.gov.

Figures



Figure: *Trichophyton mentagrophytes* genotype VII infection affecting the perioral area (A & B), groin (C), and perianal area (D) [2].

References

- [1] Caplan, Avrom S., et al. "Potential Sexual Transmission of *Tinea Pubogenitalis* From TMVII." *JAMA dermatology* (2024).
- [2] Jabet, Arnaud, et al. "Sexually transmitted *Trichophyton mentagrophytes* genotype VII infection among men who have sex with men." *Emerging Infectious Diseases* 29.7 (2023): 1411.
- [3] Nenoff, Pietro, et al. "Trichophyton mentagrophytes ITS Genotype VII from Thailand." *Dermatophytes and Dermatophytoses*. Cham: Springer International Publishing, 2021. 231-256.
- [4] Kupsch, Christiane, et al. "Trichophyton mentagrophytes—a new genotype of zoophilic dermatophyte causes sexually transmitted infections." *JDDG: Journal der Deutschen Dermatologischen Gesellschaft* 17.5 (2019): 493-501.
- [5] Spivack, Stephanie, et al. "Potential Sexual Transmission of Antifungal-Resistant *Trichophyton indotineae*." *Emerging Infectious Diseases* 30.4 (2024): 807.
- [6] Video: [Watch and Learn KOH Preparation](#). Youtube (2015).
- [7] Handout: [KOH Procedure](#). CDC.
- [8] Levitt, J. O., Levitt, B. H., Akhavan, A., & Yanofsky, H. (2010). The sensitivity and specificity of potassium hydroxide smear and fungal culture relative to clinical assessment in the evaluation of tinea pedis: a pooled analysis. *Dermatology research and practice*, 2010, 764843. <https://doi.org/10.1155/2010/764843>

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