Recent dermatophyte (ringworm) cases associated with sexual contact

What: Clinicians should consider dermatophyte infections (ringworm) when evaluating patients with painful and persistent skin lesions.

Why

The first United States case of genital ringworm caused by the emerging dermatophyte fungus *Trichophyton mentagrophytes* genotype VII (TMVII) was reported in New York City in June 2024. The patient reported recent history of sex with men and domestic travel as well as international travel to Europe. TMVII has been circulating in Europe and other global regions for several years; most cases are among men who have sex with men with likely sexual transmission. Cases have also been reported among travelers returning from Southeast Asia who engaged in sex tourism. TMVII can cause severe ringworm involving the face, genital and perianal areas.

Signs and Symptoms of TMVII Infections

TMVII infections can cause inflamed, itchy, painful, and persistent skin lesions located on the genitals, buttocks, or face. Skin lesion appearance may vary, but can include sharply demarcated, erythematous, scaling plaques or pustules (**Figures 1 and 2**). Co-infections with sexually transmitted infections such as HIV, chlamydia, gonorrhea, syphilis, and mpox have been reported.

Diagnosis and Treatment

- Dermatophyte infection may be strongly suspected based on symptoms, including the appearance of the rash.
- For patients with possible dermatophyte infections, the diagnosis should be confirmed with in-clinic microscopy (KOH preparation) where available.
- Confirming TMVII infection requires advanced molecular methods that are only available at select academic, commercial, and public health laboratories.
- If TMVII infection is suspected, empiric treatment with oral terbinafine (250mg daily) should be started. Confirmation of TMVII infection via diagnostic testing may take weeks.
- Treatment generally lasts 6-8 weeks.
- Treatment should be continued until there is complete clinical resolution and negative KOH preparation from skin scrapings, if available.
- TMVII infections are generally susceptible to oral terbinafine. Antifungal resistance has been reported among other *Trichophyton species*, including in the US.

For Assistance

If TMVII infection is suspected (either based on perioral, perianal or genital dermatophyte infection or potential exposure to a person with known TMVII infection), clinicians should contact their state or local health departments and email CDC at FungalOubtreaks@cdc.gov for assistance with testing and clinical management.

Clinicians can request consultation for challenging STI cases through the STD Clinical Consultation Network.

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Clinical Images of TMVII

Figure 1. Clinical appearance of *Trichophyton mentagrophytes* genotype VII infections in men in France, 2022. A, B) Swollen lesions above the upper lip (A) and on the beard (kerions) (B). C) Papular and nodular inguinal lesions. D) Peri-anal mpox lesions with associated papules and pustules with central umbilication and a large lesion with a central necrotic crust, surrounded by extensive erythemato-squamous circinate lesions caused by TMVII infection. (source: https://wwwnc.cdc.gov/eid/article/29/7/23-0025-f1)

Figure 2. Clinical appearance of *Trichophyton mentagrophytes* genotype VII infection in first US case. A) Scaly, erythematous circular and annular plaques on scrotum, perineum, thighs, and buttocks due to TMVII infection. B) Large erythematous, scaly oval plaque on right tibia due to TMVII infection.
(source: https://jamanetwork.com/journals/jamadermatology/article-abstract/2819235)

RESOURCES:

- Potential Sexual Transmission of Tinea Pubogenitalis from TMVII – JAMA Dermatology – June 5 2024
- Potential Sexual Transmission of Antifungal-Resistant Trichophyton indotineae – Volume 30, Number 4—April 2024 – Emerging Infectious Diseases journal - CDC
- Sexually Transmitted Trichophyton mentagrophytes Genotype VII Infection among Men Who Have Sex with Men - Volume 29, Number 7—July 2023 - Emerging Infectious Diseases journal - CDC
- Notes from the Field: First Reported U.S. Cases of Tinea Caused by *Trichophyton indotineae* — New York City, December 2021–March 2023 | MMWR (cdc.gov)
- Emerging severe and antimicrobial-resistant ringworm infections
- Watch & Learn: KOH preparation. YouTube video from the Journal of Family Practice

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