From global to local: navigating antifungal susceptibility testing and terbinafine sensitivity in *Trichophyton indotineae* infection

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### BACKGROUND

- *Trichophyton indotineae* (Ti) is a novel dermatophyte causing recalcitrant tinea outbreaks worldwide, including in the US.1-3
- Itraconazole is considered the first-line treatment for *Ti* due to widespread terbinafine failure.1,3
- However, current evidence and variable resistance profiles suggest terbinafine may be effective in select cases.4,6-10

### CASE PRESENTATION

- Woman in 40s presented with 2-months of a widespread pruritic eruption; relocated from India to NYC via Mexico. Upon arrival, she stayed at an US asylum facility. She denied contact with others having similar symptoms.
- Physical exam: Large, annular, scaly, erythematous plaques on face, neck, groin, lower extremities (Figures 1-3); KOH preparation revealed branching septate hyphae.
- Culture sent to NY State Dept. of Health Wadsworth Center.
- Prescribed 2-weeks of oral terbinafine 250 mg daily and ketoconazole 2% cream; observed clinical improvement at follow-up (Figure 4).
- Subsequent analyses confirmed Ti with low terbinafine MIC value (<0.0039 ug/mL) and SQLE polymorphism at position 448 (A448T), correlated with terbinafine susceptibility.6-10

### LEARNING OBJECTIVES

- Terbinafine minimal inhibitory concentrations (MICs) have been correlated to mutations in squalene epoxidase (SQLE) and clinical response to terbinafine.
- Antifungal susceptibility testing (AFST) and genetic analyses in *Ti* are evolving, offering potential treatment insights.

### REFERENCES

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**Fig 1.** Ti causing Tinea faciei.

**Fig 2.** Ti causing Tinea corporis.

**Fig 3.** Ti causing Tinea cruris.

**Fig 4.** Ti causing Tinea faciei, improving with 2 weeks of terbinafine 250mg daily and ketoconazole cream.
Disclosure Page

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