

Editorial Note on Tinea Pedis

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EDITORIAL NOTE

Athlete's foot (Tinea pedis) is a fungal infection that starts between the toes and spreads to the rest of the foot. It is most frequent in individuals whose feet have grown extremely sweaty due to being trapped in tight-fitting shoes. Scaly rashes with itching, stinging, and burning are common signs and symptoms of athlete's foot. *Trichophyton rubrum* is the most common causative agent of tinea pedis. Also engaged are *Trichophyton interdigitale* and *Epidermophyton floccosum*. *Trichosporum violaceum* is another uncommon agent. *T. rubrum* is responsible for around 70% of the cases. The following are some of the risk factors: A hot and humid climate, long-term use of occlusive footwear, sweating profusely, and water exposure over a long period of time.

Tinea Pedis pathologies

Chronic hyperkeratotic tinea pedis: The *trichophyton rubrum* creates a characteristic pattern of lesion, which is the sole scaling and thickening commonly occurring beyond the plantar surface in the moccasin distribution. Another less prevalent cause of plantar rash may be in patients who do not react with anti-fungal medication as predicted. Differential diagnosis includes sterile maceration (due to a hyperhidrosis or occlusive footwear), contact dermatitis (due to type IV delayed hypersensitivity to various shoe materials, especially adhesive cement, thiuram containing rubber shoes, psoriasis, irritant dermatitis and tanning agents in leather footwear).

Chronic intertriginous tinea pedis: Chronic intertriginous tinea pedis is characterised by interdigital and sub-digital skin scaling, erythema and erosion of the foot, most frequently affecting the outer three toes.

Acute ulcerative tinea pedis: Typically in the 3rd and 4th interdigital areas, acute ulcerative tinea pedis (most frequently caused by *T. mentagrophytes var. interdirectional*) starts and expands to the lateral or plantar surface of the arch. Usual maceration of these toe web injuries and scale limits observed. Secondary infection with germs, cellular lymphangitis and cellulite are typical consequences.

Vesiculobullous tinea pedis: The less common consequence of a flare-up of interdigital tinea pedis is vesiculobullous tinea pedis, in which vesicles form on the soles and merge into bullae; risk factors include occlusive shoes and ambient heat and humidity.

Tinea pedis differential diagnosis includes: Dyshidrotic eczema, Palmoplantar psoriasis, Allergic contact dermatitis. Topical and occasionally oral antifungals, as well as moisture reduction and drying agents, are used to treat tinea pedis. Tinea pedis infection is likely caused by the occlusion of toe clefts, maceration, and moist circumstances, as well as an increase in the bacterial flora. This condition is influenced by skin breakdown, humidity, and temperature. To infiltrate the keratin layer of skin, the fungus secretes enzymes known as keratinases. Furthermore, the dermatophyte cell wall includes chemicals known as mannans, which inhibit the body's immunological response. It is distinguished histologically by acanthosis, hyperkeratosis, and a sparse, superficial, perivascular infiltration in the dermis. Spongiosis and parakeratosis are seen in the vesiculobullous type. Fungal filaments are visible when stained with PAS or methenamine silver stain.

Once therapy is initiated, the majority of healthy people have great results. Most patients get symptom reduction within a few days and complete healing between 7 days-14 days. However, tinea infection can be linked with cellulitis or even pyoderma in people who are hemiplegic or immune compromised.

Tinea pedis is a relatively common illness that is frequently seen by general healthcare professionals. While the physician manages the acute illness, the emphasis today is on prevention. The infection is best treated by an inter-professional team to reduce morbidity. Both the nurse and the pharmacist must inform the patient about the risk of reinfection if lifestyle modifications are not implemented. Old shoes should be thrown, and personal care products should not be shared. Protective footwear should be worn at the swimming pool or sauna. The feet should be kept dry, and constrictive, aerated shoes should be avoided. Cotton socks are recommended, and if the feet are continually perspiring, a drying antifungal powder may be used.

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