

Clinical Manifestation of Dermatophytic Infection

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Citation: Priyadarshini V, Clinical Manifestation of Dermatophytic Infection. J Exp Clin Microbiol 2021;5(4):1.

EDITORIAL

Interactions between the host, infectious organisms, and the environment all play a role in fungal infections. Dermatophytes are bacteria that cause usually harmless surface diseases. They can, however, induce a variety of serious illnesses in immunocompromised individuals. *Trichophyton rubrum* is the world's most prevalent dermatophyte, with the highest prevalence rate. There are only a few papers based on long-term, large-scale studies about the epidemiological and mycological aspects of *T. rubrum*. It has long been thought to be a major cause of dermatophytosis. Dermatophytes are fungi that grow only on keratin. These fungi can infect the skin, hair, and nails, causing superficial diseases. Dermatophytes are distributed by people (anthropophilic organisms), animals (zoophilic organisms), and soil (geophilic organisms), as well as indirectly by fomites. The history, physical examination, and potassium hydroxide (KOH) microscopy can all be used to diagnose dermatophyte infections. Wood's lamp inspection, fungal culture, or histologic investigation are sometimes required for diagnosis. Most dermatophyte infections are treated with topical medications. Topical fungicidal allylamines had a higher cure rate and a shorter treatment time than fungistatic azoles. *Tinea capitis*, *Tinea barbae*, and onychomycosis are best treated with oral treatment. The conventional treatment for tinea capitis is griseofulvin, which is taken orally.

Germs are discouraged from colonizing the skin's outer layer due to its dryness, and the shedding of epidermal cells prevents many microbes from establishing residence. However, damage, inflammation, or maceration can cause the skin's protective processes to fail. Furthermore, by raising local warmth and moisture, occlusion of the skin with nonporous materials might interfere with the skin's barrier function. Cutaneous infection can occur when the skin's defensive mechanisms are inhibited or fail. Dermatophytes are restricted to hair, nails, and superficial skin because they require keratin for development. These fungi do not infect mucosal surfaces as a result. Infections caused by dermatophytosis are known as "tinea" infections. They're

also named by the part of the body that's involved. Some dermatophytes can be passed from one person to the next (anthropophilic organisms). Others reside in soil and are transmitted to people by geophilic organisms, while others are transmitted to humans by animal hosts (zoophilic organisms). Dermatophytes can also be transmitted indirectly by fomites (e.g., upholstery, hairbrushes, hats). *Tinea capitis*, or scalp ringworm, is a childhood ailment. Its incidence varies greatly depending on where you live. In some urban regions, the disease is widespread. The nature of the infecting organisms and the availability of control measures are the key causes for these variances in the prevalence of infection in different location.

Tinea corporis is a dermatophytosis characterized by pink to red "O-shaped" patches and plaques with raised, scaly edges that spread peripherally while remaining clear in the center. It can also take the form of circle- or round-shaped scaling patches with numerous tiny papules or pustules. Anthropophilic organisms are linked to endemic infections affecting large numbers of children, while zoophilic fungi are linked to occasional sickness. The pattern of hair shaft invasion is used to classify *Tinea capitis*. Asectothrix infections are dermatophyte infections in which arthrospores originate on the exterior of the hair shaft; endothrix infections are those in which the spores develop within the hair itself. The fungus enters the hair medulla in *T. schoenleinii* infections, but eventually regress and leave tunnels carrying air within the hair shaft. Dermatophytosis can damage the skin and nails on practically any area of the body. Itching, a ring-shaped rash, red, scaly, or cracked skin, and hair loss are all common clinical symptoms. The symptoms often occur 4–14 days after the body is exposed to pathogenic fungus.

Tinea barbae causes superficial annular lesions in the beard, but it can also cause a deeper infection that looks like folliculitis. *Tinea barbae* can also create an inflammatory kerion, which is a big, moist scalp mass caused by a severe dermatophyte inflammatory reaction. This can lead to scars and hair loss. *Tinea capitis* is a type of dermatophytosis that primarily affects kids. It can spread quickly.

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Received: December 11, 2021, Accepted: December 16, 2021, Published: December 21, 2021



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