

sometimes used to treat seborrheic dermatitis. For extensive disease, oral itraconazole or fluconazole (200 mg daily) can be used for 5–7 days. The rare cases of fungemia caused by *Malassezia* species are treated with AmB or an azole, such as voriconazole, prompt removal of the catheter, and discontinuance of parenteral lipid infusions. *Malassezia* skin infections are benign and self-limited, although recurrences are the rule. The outcome of systemic infection depends on the host's underlying conditions, but most infected neonates do well.

■ DERMATOPHYTE (MOLD) INFECTIONS

Etiologic Agents, Epidemiology, and Pathogenesis The molds that cause skin infections in humans include the genera *Trichophyton*, *Microsporum*, and *Epidermophyton*. These organisms, which are not components of the normal skin microbiota, can live within the keratinized structures of the skin—hence the term *dermatophytes*. Dermatophytes occur worldwide, and infections with these organisms are extremely common. Some organisms cause disease only in humans and can be transmitted by person-to-person contact and by fomites, such as hairbrushes or wet floors, that have been contaminated by infected individuals. Several species cause infections in cats and dogs and can readily be transmitted from these animals to humans, and others are spread from contact with soil. The characteristic ring shape of cutaneous lesions is the result of the organisms' outward growth in a centrifugal pattern in the stratum corneum. Fungal invasion of the nail usually occurs through the lateral or superficial nail plates and then spreads throughout the nail; when hair shafts are invaded, the organisms can be found either within the shaft or surrounding it. Symptoms are caused by the inflammatory reaction elicited by fungal antigens and not by tissue invasion. Dermatophyte infections occur more commonly in males than in females, and progesterone has been shown to inhibit dermatophyte growth.

Clinical Manifestations Dermatophyte infection of the skin is often called *ringworm*. This term is confusing because worms are not involved. *Tinea*, the Latin word for *worm*, describes the serpentine