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Commentary

Parasitic skin diseases reflect social and environmental health inequalities

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DESCRIPTION

Parasitic skin diseases represent a persistent and often underappreciated component of global infectious disease burden, affecting millions of people across diverse geographic, economic, and climatic settings. Although they are frequently overshadowed by bacterial, viral, and fungal infections, parasitic infestations of the skin continue to pose significant public health challenges, particularly in resource-limited regions where overcrowding, inadequate sanitation, and limited access to healthcare facilitate transmission. These conditions are not merely dermatological problems but indicators of underlying social, environmental, and economic disparities that shape health outcomes across populations.

Parasitic skin diseases are caused by a wide range of organisms, including mites, lice, fleas, and certain larvae that live on or within the skin. Among the most common conditions are scabies, pediculosis (lice infestation), cutaneous larva migrans, and tungiasis. Each of these conditions has distinct clinical features, transmission patterns, and complications, yet they share a common dependence on close human contact or contaminated environments for spread. Scabies, caused by the mite Sarcoptes scabiei, remains one of the most widespread parasitic skin infections globally.

Cutaneous larva migrans, caused by hookworm larvae penetrating the skin, is frequently seen in tropical and subtropical regions where warm, moist soil conditions favor parasite survival. This condition is often acquired by walking barefoot on contaminated ground, particularly beaches or soil contaminated with animal feces. The larvae migrate within the skin, producing serpiginous, intensely itchy tracks that can persist for weeks. Although rarely life-threatening, the condition can significantly affect quality of life due to persistent discomfort and secondary infections caused by scratching.

Tungiasis, caused by the sand flea *Tunga penetrans*, is another parasitic skin disease that disproportionately affects impoverished communities in parts of Africa, Latin America, and the Caribbean. The female flea burrows into the skin, commonly affecting the feet, leading to inflammation, pain, and secondary bacterial infections. In severe cases, repeated infestations can cause chronic disability, deformities, and difficulty walking, particularly among children and elderly individuals. This condition illustrates how parasitic skin diseases can extend beyond temporary discomfort to long-term physical impairment when left untreated.

Host factors also play a crucial role in determining susceptibility and disease severity. Children are particularly vulnerable due to close physical contact in schools and less developed hygiene practices. Immunocompromised individuals may experience more severe or prolonged infestations, and secondary bacterial infections are common in cases where scratching damages the skin barrier. These secondary infections can sometimes lead to complications such as cellulitis or systemic illness, illustrating the interconnected nature of parasitic and bacterial diseases. Beyond physical symptoms, parasitic skin diseases carry significant psychological and social consequences. Visible skin lesions, persistent itching, and the perception of poor hygiene can lead to stigma and discrimination. In children, repeated infestations can affect concentration, sleep quality, and academic performance. The psychosocial burden of these diseases is often underrecognized in clinical practice, despite its substantial impact on quality of life.

Antiparasitic resistance is an emerging concern in the management of some parasitic skin diseases. Overuse or improper use of treatments may reduce their effectiveness over time, complicating control efforts. At the same time, global health initiatives are increasingly recognizing neglected tropical diseases, including parasitic skin infections, as priorities for intervention. Integrating these conditions into broader health policies can help ensure more sustainable and equitable healthcare outcomes.

In conclusion, parasitic skin diseases remain a significant but often overlooked public health issue that reflects broader social and environmental inequalities. While many of these conditions are preventable and treatable, they continue to affect vulnerable populations due to persistent challenges related to hygiene, housing, healthcare access. Parasitic skin diseases requires a comprehensive approach that combines medical treatment, public health education, environmental improvement, and social intervention.

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