



Kawasaki Disease: A Dermatological Perspective on a Pediatric Vasculitis

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DESCRIPTION

The exact etiology of Kawasaki Disease remains elusive, though it is widely believed to result from an abnormal immune response to an infectious trigger in genetically predisposed individuals. This response leads to widespread inflammation of medium-sized arteries, with a particular predilection for the coronary arteries. The immune-pathogenesis of KD involves both the innate and adaptive immune systems. The activation of endothelial cells, macrophages, and neutrophils in the vascular wall is a hallmark of the disease, resulting in the release of pro-inflammatory cytokines and chemokines. Kawasaki Disease is characterized by a constellation of clinical features, with dermatological signs being prominent among them. The disease typically presents in three phases: acute, subacute, and convalescent. The most striking dermatological manifestation is the presence of a polymorphous rash. This rash can be highly variable, presenting as maculopapular, erythema multiforme-like, scarlatiniform, or less commonly, as urticarial or vesicular. It often begins on the trunk and spreads to the extremities, sparing the axillae and groin. This early rash is a critical diagnostic clue and should prompt consideration of KD in the appropriate clinical context. Another hallmark dermatological feature is bilateral, non-exudative conjunctival injection. The conjunctivitis in KD is usually painless and spares the limbus, giving the eyes a characteristic bright red appearance. This ocular manifestation often accompanies the acute phase and, along with the rash, is among the earliest signs of the disease. Periungual desquamation of the fingers and toes becomes evident. Desquamation can also extend to the palms and soles and is an important diagnostic feature during this phase. Oral mucosal changes are another cardinal feature of KD. Erythema and cracking of the lips and diffuse oropharyngeal erythema are common findings. These changes are typically observed in the acute phase and contribute significantly to the muco cutaneous presentation of KD. Cervical lymphadenopathy, often unilateral, is present in

a significant proportion of cases. Although not a dermatological feature per se, the presence of cervical lymphadenopathy in a child with the aforementioned skin and mucosal changes should heighten suspicion for KD. The diagnosis of KD is clinical, based on the presence of fever lasting at least five days and at least four of the five principal clinical features: Polymorphous rash, bilateral conjunctival injection, oral mucosal changes, cervical lymphadenopathy. Therefore, it is crucial for dermatologists to consider KD in any child presenting with a prolonged fever and a polymorphous rash, particularly in the presence of mucosal involvement or extremity changes. From a dermatological standpoint, the skin lesions of KD are generally self-limited and resolve without scarring. However, long-term management of KD requires close monitoring of cardiovascular health, and dermatologists should be aware of the potential for late-onset cutaneous sequelae, such as persistent erythema or peeling in areas of previous involvement. Kawasaki Disease is a complex vasculitis with significant dermatological manifestations that play a critical role in its diagnosis. Awareness of the characteristic skin findings, along with a thorough understanding of the disease's clinical course, is essential for prompt recognition and treatment. As research continues to uncover the immune pathogenic mechanisms underlying KD, dermatologists will remain integral to the multidisciplinary approach required to manage this potentially life-threatening pediatric disease. The ability to distinguish KD from other mimickers is crucial, as early intervention can prevent serious cardiac complications and improve patient outcomes.

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CONFLICT OF INTEREST

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