

Flagellate Rash in Chikungunya: A Comprehensive Review of Dermatological Manifestations

Nikhil Mehta¹, Sonali Gupta¹, Sathvi K M¹, Neetu Bhari¹

¹ Department of Dermatology and Venereology, All India Institute of Medical Sciences, New Delhi, India

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Corresponding Author: Neetu Bhari, MD, Associate Professor, Department of Dermatology and Venereology, All India Institute of Medical Sciences, 110029, New Delhi, India. ORCID: 0000-0002-4604-3917. E-mail: drntbhari@gmail.com

Case Presentation

A middle-aged male presented with moderately itchy hyperpigmented streaks over the trunk and upper limbs along with transient fever and severe persistent joint pains over the previous two months. He was diagnosed to have chikungunya fever (CF) through IgM serology and was treated symptomatically. At the onset, he had severe itching and streaks of erythema which gradually transitioned to flagellate streaky/whip-lash pattern of hyperpigmentation (Figure 1). He was counselled about its expected resolution with time and was symptomatically treated with antihistamines and had complete resolution in the next two months.

Teaching Point

Cutaneous manifestations in CF are seen in 40%–75% cases, usually within the first week, and resolve without complications/sequelae except for pigmentation [1]. Maculopapular rash is the most common manifestation, appearing at the onset, during, or after the fever, lasting one

to seven days. Other manifestations include transient nasal erythema, generalized erythema, tender swollen hands and feet, multiple aphthous-like ulcers, vesiculobullous, purpuric/hemorrhagic, and vasculitic lesions. Pigmentary manifestations include centrofacial and freckle-like diffuse pigmentation of face, pinna, and extremities. Flagellate pigmentation is rare, reported in 2/145 (1.38%) suspected chikungunya cases [2].

Hypermelanosis is post-inflammatory. Chikungunya virus alters melanin dispersion or retention, with melanophages contributing to prolonged pigmentation. Flagellate pigmentation may result from microtrauma, inflammatory oncotoxicity, increased melanogenesis, or reduced epidermal turnover. Intense itching and scratching due to chemotherapeutic drugs (bleomycin, docetaxel), rheumatological diseases (dermatomyositis, Still's disease), and toxin-induced reactions (shiitake mushroom, poison ivy) can cause flagellate rashes.

In conclusion, CF presents diverse mucocutaneous manifestations, including flagellate pigmentation, emphasizing its complex dermatological impact.

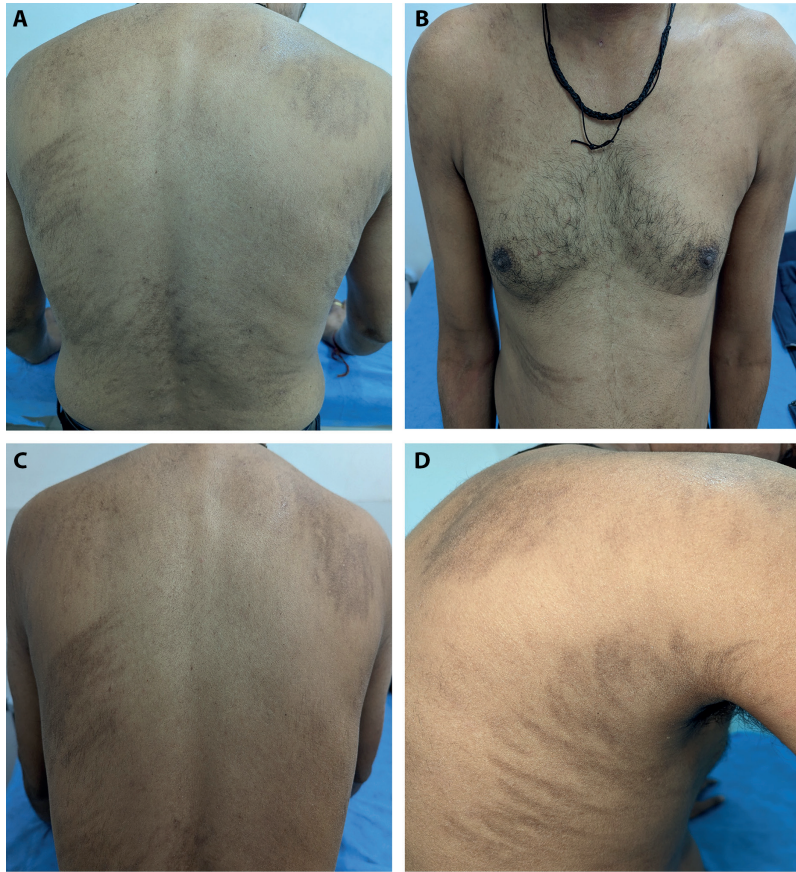


Figure 1. Chikungunya fever-associated flagellate rash over the trunk and extremities in a middle-aged male: (A) back; (B) chest; (C,D) closer view of side of chest and axilla.

References

1. Bandyopadhyay D, Ghosh SK. Mucocutaneous manifestations of Chikungunya fever. *Indian J Dermatol.* 2010;55(1):64-67. DOI:10.4103/0019-5154.60356. PMID: 20418979
2. Inamadar AC, Palit A, Sampagavi VV, Raghunath S, Deshmukh NS. Cutaneous manifestations of chikungunya fever: observations made during a recent outbreak in south India. *Int J Dermatol.* 2008;47(2):154-159. DOI:10.1111/j.1365-4632.2008.03478.x PMID:18289359