Dermatology Practical & Conceptual

Nilotinib Induced Keratosis Pilaris in a Female with Chronic Myeloid Leukemia

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Citation: Beniwal R, Agrawal A. Nilotinib Induced Keratosis Pilaris in a Female With Chronic Myeloid Leukemia. *Dermatol Pract Concept.* 2024;14(2):e2024082. DOI: https://doi.org/10.5826/dpc.1402a82

Accepted: October 30, 2023; **Published:** April 2024

Funding: None.

Competing Interests: None.

Authorship: Both the authors have contributed significantly to this publication.

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Case Presentation

A 34-year old female on nilotinib 200 mg twice daily for chronic myeloid leukemia presented with multiple asymptomatic gradually progressive raised lesions over body for four years. She was not on any other medications and developed the lesions a few weeks after starting nilotinib. Examination revealed skin-colored-to-erythematous follicular hyperkeratotic papules over face, trunk, and bilateral upper and lower limbs. Routine investigations were within normal limits. Histopathology showed orthokeratosis, follicular plugging with perifollicular fibrosis, and a mild lymphocytic inflammatory infiltrate. Based on temporal correlation with drug intake and inexplicability of occurrence of the eruption due to disease or other drugs, it was diagnosed as a case of nilotinib-induced keratosis pilaris.

Teaching Point

Nilotinib is a second-generation BCR-ABL tyrosine kinase inhibitor (TKI) [1]. The various cutaneous adverse effects of TKIs include alopecia, xerosis, maculopapular rash, photosensitivity, hypopigmentation, and edema. Keratosis pilaris-like eruption has been reported with the more potent second and third generation multitargeted TKIs like nilotinib, dasatinib, and posatinib and is attributed to their expanded spectrum of activity against related kinase targets other than BCR-ABL [2]. The rash is usually asymptomatic

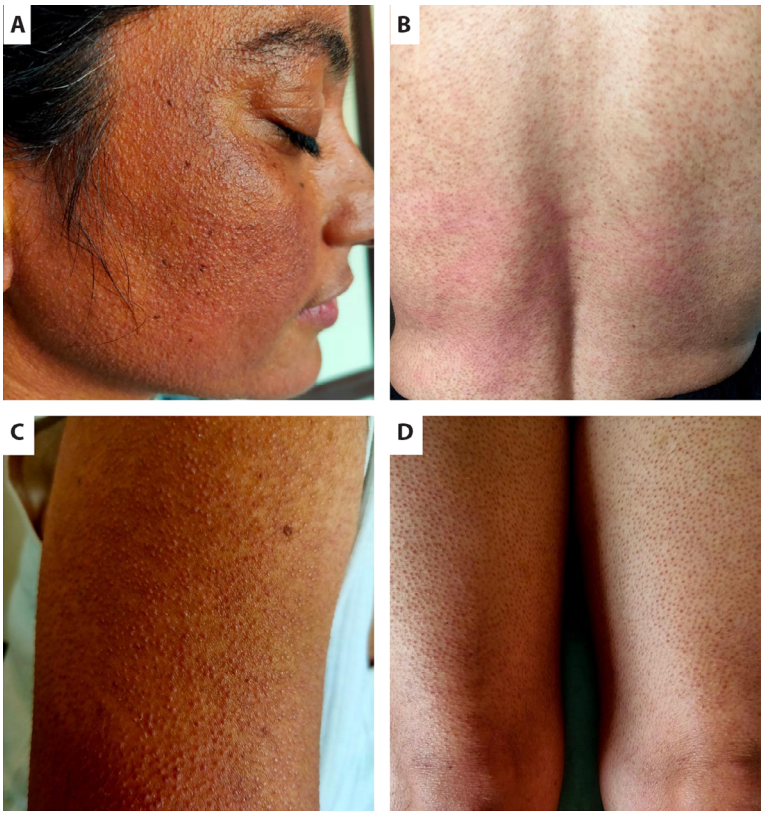

Figure 1. Multiple follicular keratotic papules present over face (A), trunk (B), upper arm, (C) and thighs (D).

or pruritic and characterized by a generalized distribution on the face, trunk, and extremities. It typically starts several weeks after initiation of the drug and is not dose-dependent. Currently, there is no consensus regarding treatment of keratosis pilaris-like eruption induced by nilotinib. The rash is usually refractory to treatment in the majority of cases and may resolve partially or completely after withdrawal of the treatment.

References

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