Management of Kyrle's Disease in a Patient with Diabetes Mellitus and Chronic Kidney Disease

Shivani Ambardekar[1*], Nancy Parquet[2]

[1]Student, College of Medicine and Life Sciences, 3000 Arlington Avenue, University of Toledo, Toledo, OH 43615

[2]Faculty, Division of Dermatology, Department of Medicine, 3000 Arlington Avenue, University of Toledo, Toledo, OH 43615

Email: shivani.ambardekar@rockets.utoledo.edu

Received: 2024-08-05

Accepted: 2024-09-16

Published: 2025-06-30

Introduction: Kyrle's disease (KD) is a rare skin disorder characterized by elimination of abnormal keratin through the epidermis. It is a subtype of the acquired perforating dermatosis (APD) and occurs more commonly in patients with diabetes mellitus and renal disease. Clinically, KD presents as multiple discrete eruptive papules with central keratin plugging accompanied by intense pruritus.

Case Presentation: A 45-year-old female with type II diabetes mellitus and stage V chronic kidney disease on hemodialysis presented to the outpatient dermatology clinic for management of known KD and hidradenitis suppurativa (HS). She complained of pruritic lesions on the distal lower extremities and extensor elbow region. Previous treatment with ammonium lactate 12% cream, a first-line keratolytic treatment for KD, had failed to provide adequate relief. Narrowband ultraviolet B (NBUVB) phototherapy was initiated 2-3 times weekly, starting at 330 millijoules (mJ) and increasing by 15% each session for a maximum dose of 4000 mJ. The patient reported decreased pruritus after the first phototherapy session, with complete resolution of the pruritus following the third session. She then completed 25 sessions of phototherapy over two months, resulting in sustained improvement of the skin lesions. She continues to receive phototherapy at the time of this report with no adverse effects.

Conclusion: KD is a rare disorder that typically arises in adults with underlying systemic disease and significantly impacts quality of life. While management of the underlying systemic condition leads to improvement in KD, effective treatment of the skin condition remains challenging and lacks evaluation in randomized trials. In addition to topical and systemic therapies, phototherapy should be considered as a valuable approach in the management of KD.

Keywords: Phototherapy

