Short Communication

Diabetic xerosis: A neglected complication deserving greater attention

Thamir A Kubaisi

[1]Department of Internal Medicine/Dermatology, College of Medicine, University of Anbar; Head of Ramadi Center of Iraqi Board of Dermatology and Venereology, Ramadi Teaching Hospital; Ramadi, Anbar, Iraq.

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Dear Editor,

Xerosis (dry skin) is a very common dermatologic manifestations in patients with type 2 diabetes mellitus, occurring in 40% of patients.[1] It is characterized by scaling and flaking, and may involve almost any region of the body. However, xerosis frequently regarded as a mere cosmetic concern, but it carries clear clinical significance, being closely linked to the same pathogenic mechanisms responsible for neuropathy, microangiopathy, increased susceptibility to infection, and poor wound healing.[2,3] While preceding studies and clinical efforts predominantly focus on protecting the cardiovascular, kidneys, and retina, it remains essential to offer comparable scientific and clinical attention to the skin, which is the largest body organ and a vital sentinel of metabolic health.[4]

Although prevalence rates differ across studies, xerosis remains one of the most commonly encountered dermatologic manifestations in diabetes, particularly on the feet, where skin fissures may serve as precursors to ulceration and secondary infection.[3,5] Several researches have reported no direct association between the duration of diabetes mellitus and the occurrence of xerosis.[2] Two intersecting mechanisms underlie diabetic xerosis, including: Firstly, increased systemic and cutaneous advanced glycation end-products levels, that disrupt the antimicrobial defenses, normal permeability, and compromised ceramide absorption. Consequently, leading to biological barrier instability.[6] Secondly, the hypohidrosis and autonomic dysfunction weaken eccrine sweat production and skin hydration, mostly affecting the distal feet and shins. These demonstrated as xerosis, pruritus, and an elevated risk of fissuring.[7,8]

The clinical consequences of xerosis are itching, erythema, infection, and sometimes ulcers. Xerosis provokes pruritus, which in turn drives red scratch marks and the formation of micro-fissures; these disruptions facilitate microbial entry, thereby amplifying the baseline risk of cellulitis and diabetic foot complications. Epidemiologic studies indicate that itch is common in type 2 diabetes and correlates with both suboptimal glycemic control and cutaneous dryness. At the same time, diabetes yields a 1.5-4 fold greater susceptibility to infections overall, with foot infections being particularly prevalent, where barrier failure is a probable cofactor.[6,9]

Moreover, healthcare professionals are increasingly

Address for correspondence
Dr. Thamir A Kubaisi, MD, FICMS (Dermatology)
Department of Internal Medicine/Dermatology, College of Medicine, University of Anbar; Head of Ramadi Center of Iraqi Board of Dermatology and Venereology, Ramadi Teaching Hospital; Ramadi, Anbar, Iraq.
Ph: +9647901431836
Email: med.thamer.alkubaisi@uoanbar.edu.iq

aware of the prevention and management of diabetic xerosis; nevertheless, numerous randomized controlled trials, consistently demonstrate the superiority of 5-10% urea-based emollients (occasionally combined with glycerol, lactic acid, arginine, or carnosine) in enhancing hydration, reducing scaling of skin, as well as promoting fissure healing in diabetic feet.[10] Systematic reviews identify (urea twice-daily application for a minimum of two weeks) as the most extensively studied agent, while newer investigations continue to optimize formulations and dosing regimens.[11]

Patients with a high-risk diabetic foot ulcer, due to underlying neuropathy or vasculopathy, requires strict infection control, appropriate management of nails and calluses, regular use of emollients, and prompt closure of skin fissures.[6] The author recommends avoiding the use of Loofa during showers, episodes of profuse sweating, wet work, and prolonged sun exposure. In addition, regular daily moisturization and proper personal hygiene are advised.

In conclusion, xerosis necessitates prompt and full management, dry skin warrants treatment with comparable in urgency and attention as early retinopathy. Despite its prevalence and functional impact, xerosis is frequently overlooked and inadequately addressed in clinical practice. Accordingly, instructive agendas designed by dermatologists and diabetologists may help patients with diabetes avoid xerosis and its complications, thereby reducing their overall disease problem. “Small interventions early can prevent larger problems later”.

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