Teledermatology, Mpox, and Dermatological Emergencies

Mustafa Tümtürk

Department of Dermatology, İstanbul Atlas University Faculty of Medicine, İstanbul, Türkiye

Dear Editor,

The term "dermatologic emergency" encompasses skin disorders or conditions that necessitate urgent medical intervention because of their acute onset and potential for rapid progression to severe outcomes. These conditions pose significant risks to patient health, and early diagnosis and timely treatment are critical for preventing life-threatening complications.[1] Prompt and effective management of dermatologic emergencies is essential in mitigating morbidity and mortality.[1]

Mpox, caused by the monkeypox virus, is a viral infection characterized by symptoms such as pruritic skin eruptions, fever, and human-to-human transmission.[2] The typical clinical presentation of mpox includes high fever, chills, headache, lymphadenopathy, myalgia, and a painful cutaneous rash that often manifests as raised lesions, predominantly affecting the face, genital regions, and extremities.[2,3] The evolution of the rash typically follows a progression from macules to papules, vesicles, pustules, and eventually crusts. Not all lesions may be present simultaneously, and eruptions may appear in different stages across the body.[2,3]

In emergency settings, the accurate recognition of dermatologic emergencies, such as those caused by mpox, presents a substantial diagnostic challenge.[4] Although emergency departments and infectious disease units are proficient in identifying viral infections, the differential diagnosis of dermatologic conditions often proves difficult.[5] Moreover, other dermatologic emergencies frequently encountered in emergency departments, such as severe infections, acute allergic reactions, burns, Stevens-Johnson syndrome (SJS), and toxic epidermal necrolysis (TEN), can result in significant morbidity and even mortality.[6,7]

The expanding field of non-surgical esthetic procedures has drawn considerable attention from healthcare professionals, including dermatologists, with many shifting their focus toward esthetic medicine.[8] The non-surgical esthetics industry has experienced remarkable growth in recent years. By 2023, the global medical esthetics market was valued at approximately $60 billion, with an anticipated annual growth rate of 10-12% through 2028.[8,9] In Türkiye, the medical esthetics sector has also seen rapid expansion, with annual growth rates ranging from 15-20% between 2020 and 2022.[8,10] As of 2023, the market was valued at approximately $2 billion in Türkiye alone.[8,10] Dermatologists, due to their expertise in skin health and appearance, have become key players in the esthetic medicine landscape, offering a variety of procedures that address both esthetic and therapeutic needs.[10,11] However, this shift in focus has led to a reduction in the number of experienced dermatologists working in public hospitals, which may compromise the care of dermatologic emergencies.

A promising solution to this challenge lies in the advancement and implementation of teledermatology. Teledermatology, which integrates technology with dermatologic care, has gained significant traction in many developed countries and has demonstrated potential in addressing dermatologic emergencies in regions with limited access to specialists. The application of teledermatology could prove especially

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Adress for correspondence: Mustafa Tümtürk, MD, Department of Dermatology, İstanbul Atlas University Faculty of Medicine, İstanbul, Türkiye,
Email: mustafatumturk@yahoo.com
ORCID ID: 0000-0002-6616-9920

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valuable in future pandemics, where rapid diagnosis and treatment are paramount. By facilitating timely consultation and diagnosis, teledermatology holds promise in reducing mortality rates associated with dermatologic emergencies. For example, in Türkiye, the National Poison Consultation Center operates 24/7, offering real-time access to toxicologists via telephone consultation at 114. Similarly, teleradiology services enable the evaluation of radiologic images from distant locations, providing expert opinions across different continents. The establishment of a teledermatology system could address the shortage of dermatologists and improve access to care in underserved areas, significantly enhancing the management of dermatologic emergencies.

Teledermatology is an effective method for remote diagnosis and treatment of dermatological issues, but it has certain limitations. First, a lack of physical examination is a significant constraint. Dermatologists often rely on palpating the skin and conducting a physical exam to diagnose skin lesions, but teledermatology does not offer this option. Second, image quality and lighting are critical for teledermatology. Low-resolution images or inadequate lighting can complicate diagnosis. Additionally, teledermatology may not be suitable for complex cases; some rare or complicated dermatological conditions require in-person evaluation. Another limitation is color discrepancies, as devices and screens may not accurately reflect skin tones, leading to potential misdiagnoses. Finally, some invasive diagnostic methods, like biopsies, cannot be performed remotely, making teledermatology insufficient for certain cases.

Teledermatology is a valuable tool for improving the diagnosis and management of dermatologic emergencies, such as SJS and TEN, as well as emerging infectious diseases like mpox. By providing more accurate and timely diagnosis, teledermatology has the potential to reduce mortality and improve patient outcomes in both acute and pandemic settings.

Footnotes

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