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A case of melanonychia and stained plaques in a Pediatric patient: Consider potassium permanganate

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Introduction: Complementary and alternative medicine (CAM) is frequently utilized by dermatologic patients in the United States, with estimates ranging from 35-69%. Dermatologists need to be aware of naturopathic remedies, as they can mask underlying skin pathology. This case report aims to highlight the presentation of potassium permanganate, a Chinese herbal medicine, in a pediatric patient.

Case Presentation: A seven-year-old male presented to a dermatologist with a persistent itchy rash on his bilateral feet. Despite using hydrocortisone 2.5% ointment without relief, his symptoms improved with the use of a Chinese medicated soak containing purple pills. Physical examination revealed hyperkeratotic moccasin-patterned plaques with mild erosion on the plantar arches and violaceous brown discoloration of all toenails. The patient was advised to discontinue the soak and initiated on clobetasol 0.05% under occlusion and protopic for suspected contact dermatitis or dyshidrotic eczema. On follow-up after three months, the rash had improved, and the discoloration resolved.

Discussion: Potassium permanganate, a dark-purple crystal, is commonly diluted in water for the treatment of various dermatoses. Soaks with potassium permanganate have demonstrated efficacy in managing vesicular and bullous lesions, infected dermatoses, and weeping eczematous lesions. However, potential adverse effects include staining, irritation, erythema, melanonychia, chemical burns, and toxicity. Improper dilution can cause severe burns, ocular injury, and poisoning if ingested. Dermatologists should consider alternative therapies, such as potassium permanganate, in atypical scenarios. Patients need to be educated about the risks associated with over-the-counter therapies.

Conclusion: Potassium permanganate is a commonly used alternative therapy in dermatology. Dermatologists should be vigilant in recognizing its use, as it can obscure skin pathologies and pose significant risks. Clinicians should inquire about alternative therapies to aid in accurate differential diagnoses and develop appropriate treatment plans. Patient education regarding the potential hazards of over-the-counter remedies is crucial.

Recent Publications:

1. Mary E Lohman, et.al, (2022): An Evidence-Based Approach to Pediatric Melanonychia. *Dermatol Clin* 2022 Jan;40(1):37-49
2. Geani, S., Widia, Y., Citrashanty, I., Sawitri, Zulkarnain, I., Astindari (2022). Longitudinal Melanonychia in Pediatric Patient. In: Lotti, T.M., Arcangeli, F. (eds) *Clinical Cases in Middle-Years Pediatric Dermatology*. Clinical Cases in Dermatology. Springer, Cham.

Biography

Alexandra Baczynski works in Chicago, IL and specializes in Internal Medicine. Now, she is a member of Advocate Illinois Masonic Medical Center in USA. Her research interests are Neonatal and Pediatric Dermatology, Internal Medicine, Skin Diseases, Regeneration and repair. She has attended many international conferences in various countries.

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