doi:10.36849/JDD.7221

BRIEF COMMUNICATION

Journal of Drugs in Dermatology

Pityriasis Alba in Pediatric Patients With Skin of Color

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ABSTRACT

As we continue to work toward a more equitable future of medicine, it is necessary to recognize the needs distinct to pediatric dermatology to decrease health disparities that affect this patient population. Currently, there is very little research investigating the predominate risk factors and management of pityriasis alba in children with skin of color. Herein, we discuss existing literature on pityriasis alba in children with skin of color, as well as the research and educational needs in this area.

J Drugs Dermatol. 2023;22(4): 417-418. doi:10.36849/JDD.7221

COMMENTARY

The most recently suggested curricular guidelines presented by the Pediatric Dermatology Research Alliance Special Interest Group in Pediatric Skin of Color (PSOCG) listed pityriasis alba (PA) as the second most important childhood skin condition to be included in pediatric skin of color education for medical students and dermatology residents.[1] Despite it being an educational priority, there is insufficient literature on PA in patients with skin of color. PA presents with poorly-defined hypopigmented macules and patches that predominate on the face and upper body. It occurs most often in children and has a higher incidence in patients with darker skin tones.[2] The hypopigmentation of PA is especially noticeable in Fitzpatrick skin types (IV-VI), while it may be less noticeable in lighter phenotypes. Though typically a benign dermatosis, the hypopigmented lesions seen in PA may be a point of cosmetic concern for patients, especially in patients with darker skin whose lesions are more pronounced. Two rarer types of PA include the extensive and pigmenting types, both of which are typically more disfiguring and may significantly impact patients' quality of life. The extensive type presents with widespread, generalized hypopigmented patches that are not confined to the face. Pigmenting PA presents with hyperpigmented bluish patches surrounded by a ring of hypopigmentation, typically on the face. One study showed that there may be an association between pigmenting PA and dermatophyte infection.[3] There have also been case reports of the ocular features of PA, such as poliosis and decreased pigment in retinal pigment epithelium.[4]

Classic PA, extensive PA, and pigmenting PA have all been reported in pediatric patients with skin of color. Its exact pathogenesis is unknown, but it is often considered to be a minor manifestation or remnant of prior atopic dermatitis (AD), though it occurs in patients without atopy as well.[2] One study described lower levels of stratum corneum ceramides in Black patients, which leads to skin barrier disruption.[5] This, along with higher trans-epidermal water loss, may contribute to the increased xerosis and higher prevalence of AD seen in the African-American patient population.[6–8]

PA often resolves without intervention but may represent a significant cosmetic concern when refractory to treatment, especially for patients with darker skin. The percentage of cases that spontaneously resolve in children of color is currently unknown and may warrant further investigation, as patients with darker skin tend to more frequently experience complications such as post-inflammatory hypopigmentation. Topical tacrolimus and pimecrolimus have shown excellent results in the treatment of limited PA in patients with darker skin.[9,10] However, this may not be realistic in patients who have extensive or refractory involvement. Topical calcitriol works at the level of melanin synthesis promotion and was found to be comparable to tacrolimus for endemic PA.[11] Refractory cases of PA have been successfully treated with ultraviolet A (UVA) therapy[2,12] and 308-nm excimer laser, the latter of which has also been used in the management of plaque psoriasis, vitiligo, and alopecia areata, among other conditions.[13] This laser modality differs from narrow-band ultraviolet B and A phototherapy as it can selectively treat affected patches of skin, while sparing unaffected skin.[13] Anti-histamines may be beneficial in breaking the itch-scratch cycle seen in AD-type PA, but have limited utility in treating extensive PA.

Current literature on the pathogenesis and treatment of PA in patients with skin of color is sparse at best. Disorders of hypopigmentation are particularly crucial to identify in patients with skin of color, as post-inflammatory hypopigmentation from diseases such as PA may not always improve over time on darker skin.[14] Curricula on skin conditions in pediatric patients with skin of color should focus on both the diverse presentations of PA as well as the potential ramifications that may be unique in this patient population, such as increased social stigma due to hypopigmentation being more noticeable on darker skin. Trainees should receive training on the differential diagnosis of hypopigmented lesions on skin of color, including hypopigmented mycosis fungoides, progressive macular hypomelanosis, and pityriasis lichenoides chronica, among others. Such training is necessary to provide an accurate diagnosis and appropriate treatment.

DISCLOSURES

The authors have no conflicts of interest or funding sources to declare.

REFERENCES

1. Silverberg NB, Jacob S, Heath C, et al. Training in pediatric skin of color: Suggested curricular guidelines of the pediatric dermatology research alliance special interest group in pediatric skin of color. *Pediatr Dermatol.* 2021;38(S2). doi:10.1111/pde.14754.
2. Miazek N, Michalek I, Pawlowska-Kisiel M, et al. Pityriasis alba - common disease, enigmatic entity: Up-to-date review of the literature. *Pediatr Dermatol.* 2015;32(6). doi:10.1111/pde.12683.
3. du Toit MJ, Jordaan HF. Pigmenting pityriasis alba. *Pediatr Dermatol.* 1993;10(1). doi:10.1111/j.1525-1470.1993.tb00001.x.
4. Malik TG, Khalil M, Bhatti MM. Pityriasis alba with poliosis. *Journal of the College of Physicians and Surgeons Pakistan.* 2014;24(2):138-140.
5. Jungersted JM, Hiøgh JK, Hellgren LI, et al. Ethnicity and stratum corneum ceramides. *Br J Dermatol.* 2010;163(6). doi:10.1111/j.1365-2133.2010.10080.x.
6. Silverberg JI, Simpson EL. Associations of childhood eczema severity: A US population-based study. *Dermatitis.* 2014;25(3):107-114. doi:10.1097/DER.0000000000000034.
7. Vachiramon V, Tey HL, Thompson AE, et al. Atopic dermatitis in African American children: Addressing unmet needs of a common disease. *Pediatr Dermatol.* 2012;29(4):395-402. doi:10.1111/j.1525-1470.2012.01740.x.
8. Proksch E, Fölster-Holst R, Bräutigam M, et al. Role of the epidermal barrier in atopic dermatitis: Academy CME. *Journal of the German Society of Dermatology.* 2009;7(10). doi:10.1111/j.1610-0387.2009.07157.x.
9. Fujita WH, Mccormick CL, Parneix-spake A. An exploratory study to evaluate the efficacy of pimecrolimus cream 1% for the treatment of pityriasis alba. *Int J Dermatol.* 2007;46(7). doi:10.1111/j.1365-4632.2007.03145.x.
10. Rigopoulos D, Gregoriou S, Charissi C, et al. Tacrolimus ointment 0.1% in pityriasis alba: An open-label, randomized, placebo-controlled study. *Br J Dermatol.* 2006;155(1). doi:10.1111/j.1365-2133.2006.07181.x.
11. Moreno-Cruz B, Torres-Álvarez B, Hernández-Blanco D, et al. Double-blind, placebo-controlled, randomized study comparing 0.0003 calcitriol with 0.1 tacrolimus ointments for the treatment of endemic pityriasis alba. *Dermatol Res Pract.* 2012;2012:303275. doi:10.1155/2012/303275.
12. França TF, Diniz AV, da Silva IL, et al. Phototherapy with PUVA: Versatility and efficacy in dermatoses. *Rev Assoc Med Bras.* 2017;63(5):393-396. doi:10.1590/1806-9282.63.05.393.
13. Al-Mutairi N, al Hadad A. Efficacy of 308-nm xenon chloride excimer laser in pityriasis alba. *Dermatologic Surgery.* 2012;38(4). doi:10.1111/j.1524-4725.2011.02223.x.
14. Halder RM, Richards GM. Management of dyschromias in ethnic skin. *Dermatol Ther.* 2004;17(2):151-157. doi:10.1111/j.1396-0296.2004.04015.x

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