Consultant360 Multidisciplinary Medical Information Network

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Plaque Psoriasis With Severe Hyperpigmentation in Skin of Color

Volume 59 - Issue 4 - April 2019

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Citation:

Rizvi SAA, Alvarez A, Alam R, Qureshi Z, Sikandar S, Khan S. Plaque psoriasis with severe hyperpigmentation in skin of color. *Consultant*. 2019;59(4):125-126.

A 51-year-old African American woman with a more than 20-year history of severe plaque psoriasis presented to the clinic due to a flare-up of her symptoms, including moderate joint pain (but no muscle aches or weakness), enlargement of plaques, severe pruritus, flaking, and erythema. Her family history was noncontributory.

Physical examination. At presentation, the woman appeared healthy, well-nourished, and well-

developed. The patient's height was 170.7 cm and her weight was 95.7 kg, corresponding to a body mass index of 34.1 kg/m2. Her vital signs were normal. Her mood was normal; she was active and alert, and oriented to time, place, and person; and she was in distress as a result of her skin discomfort. Plaques were noted all over the body, along with hyperpigmented annular lesions with crusting and silvery scales (**Figure**). The diagnosis of psoriasis had been confirmed previously by way of a skin biopsy while she had been receiving specialist treatment at a hospital. The rest of the physical examination findings were normal.

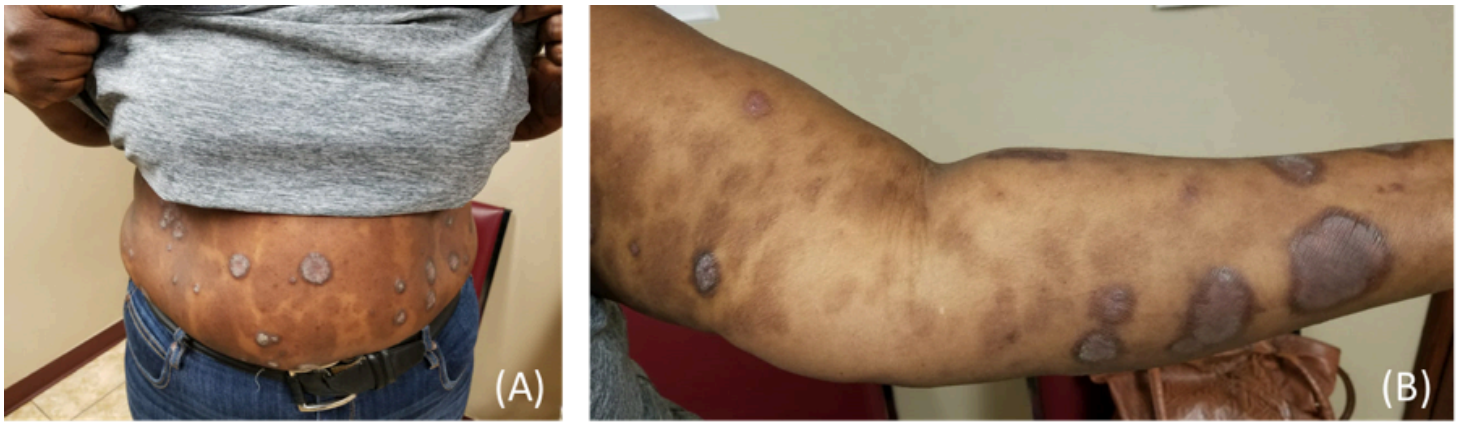

Figure. *Hyperpigmented scaly plaques were present on the patient's abdomen (A) and upper extremity (B).*

Discussion. Psoriasis is a chronic inflammatory and immune-mediated disorder with skin, joint, and systemic effects that often causes emotional and psychosocial effects leading to poor quality of life.1-3 It is estimated to affect 2.8% of the population worldwide with marked ethnic heterogeneity.4 In the United States, psoriasis affects 1.4% to 4.6% of the population, although this percentage is much lower (0.45%-0.7%) among black patients, albeit with generally more extensive involvement.2 Many studies have provided evidence of a genetic predisposition; however, the inherence patterns as well as the contribution from genetic and environmental factors is still not known.5-7

The diagnosis is mainly clinical. Psoriasis is classified as mild, moderate, or severe, and the most common type is chronic plaque psoriasis, classified as papulosquamous with erythematous plaques and silvery scales.8 Postinflammatory hyperpigmentation is reported to be mediated by tumor necrosis factor α and interleukin 17, and spots fade away over time once the flare is over.9,10 In darker skin types, proper diagnosis of psoriasis can be challenging due to overlapping features with other skin disorders.11 It has been reported that African American patients experience a higher degree of dyspigmentation with extensive disease involvement compared with white patients,7 and patches may take 3 to 12 months to resolve.

Recent advancements in molecular medicine have improved our understanding of the immune-pathogenesis of psoriasis, and newer treatment options are available.12 Most patients respond

well to topical therapy; however, patients with refractory and severe symptoms require systemic therapy.13

It is important for clinicians to be aware of known disparities in the diagnosis of psoriasis among various ethnicities and its effects on quality of life, thus necessitating customized and optimized treatment.

Outcome of the case. The patient was placed on a regimen of adalimumab (40 mg/0.8 mL) subcutaneous injection every 2 weeks; oral prednisone, 20 mg, twice a day; and topical calcipotriene cream, 0.005%, and fluocinonide solution, 0.05%, applied to the affected areas twice a day. Her symptoms had been improving significantly, and she makes follow-up visits as needed.

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