DX ACROSS THE SKIN COLOR SPECTRUM

Key Features of Dermatosis Papulosa Nigra vs Seborrheic Keratosis

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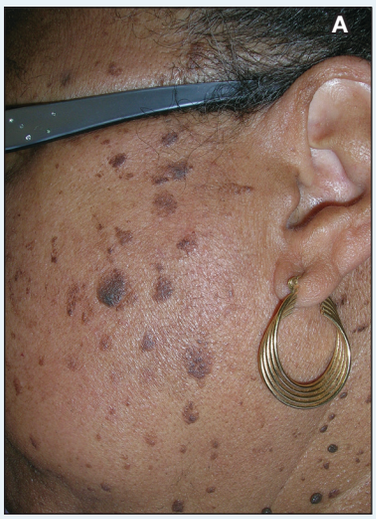

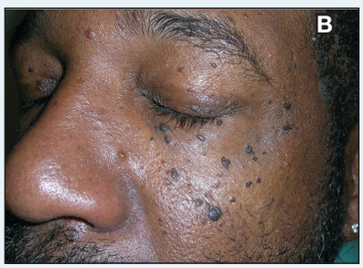

A A Black woman with dermatosis papulosa nigra manifesting as a cluster of light brown flat seborrheic keratoses that covered the cheeks and lateral face and extended to the neck.

B A Black man with dermatosis papulosa nigra manifesting as small black papules on the cheeks and eyelids involving the central face.

Photographs courtesy of Richard P. Usatine, MD.

Dermatosis papulosa nigra (DPN), a subvariant of seborrheic keratosis (SK), is characterized by benign pigmented epidermal neoplasms that typically manifest on the face, neck, and trunk in individuals with darker skin tones (Figure).[1,2] While DPN meets the diagnostic criteria for SK, certain characteristics can help distinguish these lesions from other SK types. Treatment of DPN in patients with skin of color requires caution, particularly regarding the use of abrasive methods as well as cryotherapy, which generally should be avoided.

EPIDEMIOLOGY

The incidence of SKs increases with age.[3,4] Although it can occur in patients of all skin tones, SK is more common in lighter skin tones, while DPN predominantly is diagnosed in darker skin types.[1,4] The prevalence of DPN in Black patients ranges from 10% to 30%, and Black women are twice as likely to be diagnosed with DPN as men.[2] One study reported a first-degree relative with DPN in 84% (42/50) of patients.[5] The number and size of DPN papules increase with age.[1]

KEY CLINICAL FEATURES

Dermatosis papulosa nigra and SK have distinctive morphologies: DPN typically manifests as raised, round or filiform, sessile, brown to black, 1- to 5-mm papules.[2] Seborrheic keratoses tend to be larger with a "stuck on" appearance and manifest as well-demarcated, pink to black papules or plaques that can range in size from millimeters to a few centimeters.[3,4] In DPN, the lesions usually are asymptomatic but may be tender, pruritic, dry, or scaly and may become irritated.[1,2] They develop symmetrically in sun-exposed areas, and the most common sites are the malar face, temporal region, neck, and trunk.[1,2,6,7] Seborrheic keratoses can appear throughout the body, including in sun-exposed areas, but have varying textures (eg, greasy, waxy, verrucous).[3,4]

WORTH NOTING

Dermatosis papulosa nigra and SK can resemble each other histologically: DPN demonstrates a fibrous stroma, papillomatosis, hyperkeratosis, and acanthosis at the intraepidermal layer, which are diagnostic criteria for SK.[2,4,8] However, other histologic features characteristic of SK that are not seen in DPN include pseudohorn cysts, spindle tumor cells, and basaloid cell nests.[8]

Dermoscopy can be useful in ruling out malignant skin cancers when evaluating pigmented lesions. The most common dermoscopic features of SK are cerebriform patterns such as fissures and ridges, comedolike openings, and pigmented fingerprintlike structures.[3,4] To a lesser degree, milialike cysts, sharp demarcation, and hairpin-shaped vascular structures also may be present.[4] The dermoscopic findings of DPN have not been well evaluated, but one study revealed that DPN had

similar dermoscopic features to SK with some predominant features.[6] Ridges and fissures were seen in 59% of patients diagnosed with DPN followed by comedolike openings seen in 27% of patients. The coexistence of a cerebriform pattern with comedolike openings was infrequent, and milialike cysts were rare.[6]

While DPN and SK are benign, patients often seek treatment for cosmetic reasons. Factors to consider when choosing a treatment modality include location of the lesions, the patient's skin tone, and postprocedural outcomes (eg, depigmentation, wound healing). In general, treatments for SK include cryotherapy, electrodesiccation and curettage, and topical therapeutics such as hydrogen peroxide 40%, topical vitamin D3, and nitric-zinc 30%-50% solutions.[4,8] Well-established treatment options for DPN include electrodesiccation, laser therapies, scissor excision, and cryotherapy, but topical options such as tazarotene also have been reported.[1,9] Of the treatments for DPN, electrodesiccation and laser therapy routinely are used.[10]

The efficacy of electrodessication and potassium titanyl phosphate (KTP) laser were assessed in a randomized, investigator-blinded split-face study.[11] Both modalities received high improvement ratings, with the results favoring the KTP laser. The patients (most of whom were Black) reported that KTP laser was more effective but more painful than electrodessication (P =.002).[11] In another randomized study, patients received 3 treatments—electrodessication, pulsed dye laser, and curettage—for select DPN papules.[10] There was no difference in the degree of clearance, cosmetic outcome, or postinflammatory hyperpigmentation between the 3 modalities, but patients found the laser to be the most painful.

It is important to exercise caution when using abrasive methods (eg, laser therapy, electrodesiccation, curettage) in patients with darker skin tones because of the increased risk for postinflammatory pigment alteration.[1,2,12] Adverse effects of treatment are a top concern in the management of DPN.[5,13] While cryotherapy is a preferred treatment of SK in lighter skin tones, it generally is avoided for DPN in darker skin types because melanocyte destruction can lead to cosmetically unsatisfactory and easily visible depigmentation.[9]

To mitigate postprocedural adverse effects, proper aftercare can promote wound healing and minimize postinflammatory pigment alteration. In one split-face study of Black patients, 2 DPN papules were removed from each side of the face using fine-curved surgical scissors.[14] Next, a petrolatum-based ointment and an antibiotic ointment with polymyxin B sulfate/bacitracin zinc was applied twice daily for 21 days to opposite sides of the face. Patients did not develop infection, tolerated both treatments well, and demonstrated improved general wound appearance according to investigator-rated clinical assessment.[14] Other reported postprocedural approaches include using topical agents with ingredients shown to improve hyperpigmentation (eg, niacinamide, azelaic acid) as well as photoprotection.[12]

HEALTH DISPARITY HIGHLIGHT

While DPN is benign, it can have adverse psychosocial effects on patients. A study in Senegal revealed that 60% (19/30) of patients with DPN experienced anxiety related to their condition, while others noted that DPN hindered their social relationships.[13] In one US study of 50 Black patients with DPN, there was a moderate effect on quality of life, and 36% (18/50) of patients had the lesions removed. However, of the treated patients, 67% (12/18) reported few—if any—symptoms prior to removal.[5] Although treatment of DPN is widely considered a cosmetic procedure, therapeutic management can address—and may improve—mental health in patients with skin of color.[1,5,13] Despite the high prevalence of DPN in patients with darker skin tones, data on treatment frequency and insurance coverage are not widely available, thus limiting our understanding of treatment accessibility and economic burden.

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