



Case report

Verruca plana mimicking seborrheic keratosis in the elderly: A case report



Thanadon Eksomtramage, Kumpol Aiempanakit*

Division of Dermatology, Department of Internal Medicine, Faculty of Medicine, Prince of Songkla University, Hat Yai, Songkhla, 90110, Thailand

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ABSTRACT

Verruca plana is a common viral infection in childhood and early adulthood caused by the human papillomavirus. The clinical presentation can mimic that of benign epithelial neoplasms, particularly seborrheic keratosis, which is common in the elderly. We report a case involving an Asian female patient in her eighties who presented with multiple skin papules resembling seborrheic keratosis on her forehead. Based on the dermatopathologic studies, verruca plana was diagnosed.

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Introduction

In the elderly, skin changes that accompany aging include photoaging, atrophy, xerosis, and skin tumors characterized with benign (seborrheic keratoses and cherry angiomas), precancerous (actinic keratosis), and malignant changes (keratinocyte carcinoma) [1]. Seborrheic keratosis is the most common benign skin epithelial neoplasm that is widespread among the elderly [1]. Herein, we report a case involving an elderly patient with clinical seborrheic keratosis on her forehead; dermatopathological studies revealed that the condition was verruca plana.

Case report

An 80-year-old Asian woman presented with pink-white papules on her forehead that had been progressing with time for five years. She had not experienced pruritus or pain. She sought treatment at a different hospital with electrical cauterization, but the lesions were recurrent. She was treated with low-potency topical corticosteroids; however, her symptoms remained unchanged.

Physical examination at our hospital showed discrete hypopigmented papules with a well-demarcated border that coalesce to form plaques on the forehead and hairline (Fig. 1). The differential diagnoses were seborrheic keratosis, verruca plana, appendage tumors, and lichen simplex chronicus.

Skin biopsy was performed for establishing a definite diagnosis. The section showed focal compact orthokeratosis and mild papillomatosis with epidermal acanthosis (Fig. 2A). The upper epidermal layer was characterized with koilocytes and hypergranulosis (Fig. 2B). Verruca plana was diagnosed. The patient was instructed to apply 5 % imiquimod cream three times/week and 0.025 % retinoic acid cream once daily, respectively. The clinical symptoms improved slightly after two months of follow-up.

Discussion

Verruca plana, also known as “flat warts,” is caused by the human papillomavirus, primarily types 3 and 10. Clinical



Fig. 1. Clinical photograph showing multiple whitish papules on the forehead and hairline.

* Corresponding author.

E-mail address: akumpol@medicine.psu.ac.th (K. Aiempanakit).

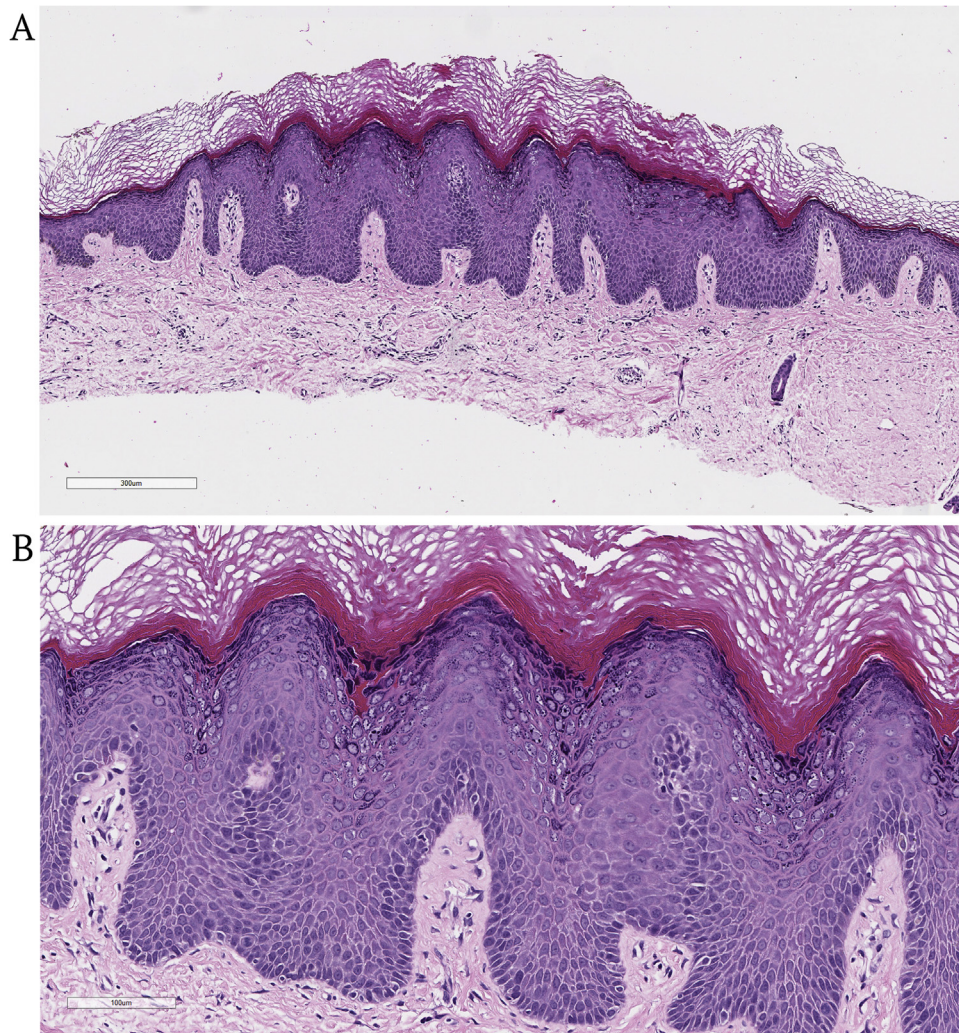


Fig. 2. Dermatopathology images showing (A) focal compact orthokeratosis, papillomatosis, and epidermal acanthosis (hematoxylin-eosin staining, original magnification 8×) and (B) hypergranulosis with koilocytes (hematoxylin-eosin staining, original magnification 20×).

manifestations include flat-topped skin-colored papules on the face and the dorsum of the hands. It is commonly noted during childhood and early adulthood. Mastkar et al. [2] studied 96 cases of verruca plana and found that the mean age of the patients was 21.6 years (range 3–45 years) and that the condition developed predominantly in men. The face was the most commonly affected site. In our case, the patient developed facial skin papules. Although the face is the typical site for verruca plana, the primary differential diagnosis is seborrheic keratosis, which is common in the elderly.

Verruca plana can be caused by traumatic inoculation on the face, including abrasion wound, eyebrow threading, and cosmetic procedures for hair removal [3–5]. The infection is proposed to occur from “Wolf’s isotopic-like response” or “Koebner’s isomorphic response.” Wolf’s isotopic response defines the development of a new skin lesion, at precisely the same at which a lesion that has now healed was previously located [6]. In contrast, Koebner’s isomorphic response is the development of isomorphic pathologic lesions at the site of trauma in patients with a prior skin disease [7]. However, the patient in this case report admitted no previous injury, cosmetic procedure, or skin infection in the affected area.

Differentiating between verruca plana and verruca plana-like seborrheic keratosis is difficult. Only one study has differentiated

between these conditions based on the clinical and dermoscopic findings [8]. Verruca plana showed clustered or grouped distribution, Koebner’s phenomenon, and dermoscopic features of more red dots or globular vessels than seborrheic keratosis [8]. Due to the discrepancy in treatment, tissue biopsy for dermatopathology is still the gold standard for a definite diagnosis.

Conclusion

Although seborrheic keratoses are common benign skin tumors in the elderly, warts should be a differential diagnosis, especially verruca plana when the lesions appear as flat top papules on the face. Skin biopsy should be recommended for a precise diagnosis and appropriate management.

CRedit authorship contribution statement

Thanadon Eksomtramage: Conceptualization, Data curation, Writing - original draft. **Kumpol Aiempnanakit:** Conceptualization, Data curation, Supervision, Writing - review & editing.

Declaration of Competing Interest

There are no conflicts of interest.

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