

Serpiginous seborrhoeic keratosis: An unusual presentation following an eczematous dermatitis

Sir,
Seborrhoeic keratoses (SK) are common benign nevoid epidermal tumors, frequently pigmented, with proliferation of basaloid and squamous keratinocytes and pseudo-horn cysts on histopathology. Though multiple lesions distributed in a linear or even a nevoid distribution may occur, a solitary lesion distributed in a serpiginous band has not been reported previously.

A 46-year old male presented with complaints of a dark patch on the back of 21 years duration. At the time of onset he had developed an itchy rash on the back with oozing. The dark patch appeared at the site of the rash and gradually increased in size and extent. A band like serpiginous dark pigmented plaque with a dull verrucous surface was observed on the right scapular region [Figure 1]. The possibility of a verrucous epidermal naevus was considered. However, light microscopy examination of skin biopsy specimen revealed a papillomatous acanthotic epidermis with basaloid cells. A few horn cysts and pseudo-horn cysts were observed [Figure 2]. On clinicopathological correlation, we arrived at a diagnosis of serpiginous SK.

Gene expression of the tyrosinase kinase receptor, FGF receptor-3 and the transcription factor, forkland

box N1 has been implicated in the formation of SK. The expression of these genes has been found to be enhanced in SK and suppressed in squamous cell carcinoma.^[1]

SK may occur on any body site except the palms, soles or mucosae. Discrete dull, tan or brown papules or plaques with a verrucous surface and a 'stuck-on' appearance may be aligned along skin folds. Nevoid distribution of lesions along Blaschko's lines may occur.^[2]

The histopathological features of SK are hyperkeratosis, acanthosis and papillomatosis with horny invaginations known as pseudo-horn cysts.^[2] Proliferation of squamous cells and basaloid cells occurs in the acanthotic epidermis. Various clinical and histopathological variants of SK have been described [Table 1].

The occurrence of eruptive SK after eczema was initially noted by Williams.^[3] There are several reports of the development of SK following an inflammatory dermatosis such as erythrodermic eczema,^[2] erythrodermic psoriasis and erythrodermic drug eruption^[3] but mostly as eruptive SK. Elevated

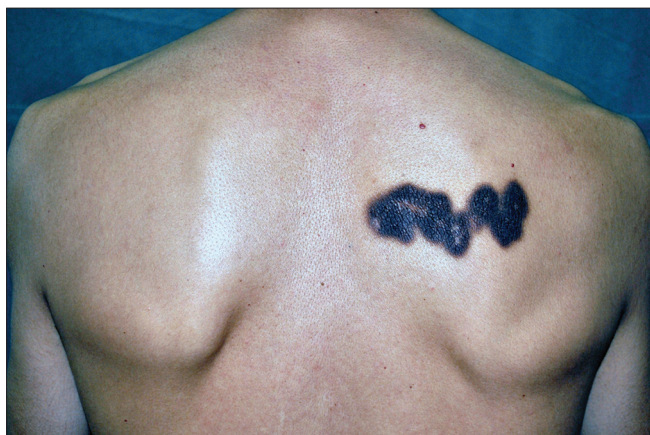


Figure 1: Serpiginous band like dark pigmented plaque with a dull verrucous surface on the right scapular region

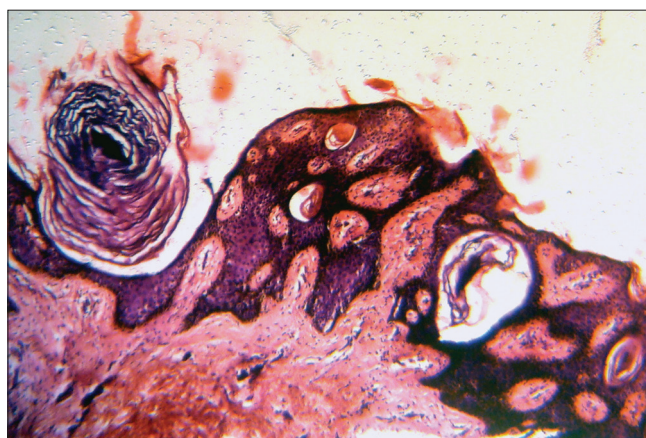


Figure 2: Epidermis showing papillomatosis and acanthosis with proliferation of basaloid cells as well as horn cysts. A pseudo-horn cyst is opening to the surface (H and E, $\times 100$)

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Table 1: Clinical and histopathological variants of seborrheic keratoses

Clinicopathological variant	Clinical characteristics	Histopathology
Acanthotic SK	Stuck-on verrucous papule	Hyperkeratosis, acanthosis and papillomatosis with pseudo-horn cysts
Acrochordons	Pedunculated papules	Loose fibrous tissue in the papillary dermis
Reticulated SK	Pigmented papules or patches	Strands of basaloid cells with small horn cysts in some areas
Hyperkeratotic SK	Histopathological variant with clinical features consistent with SK	Hyperkeratosis and papillomatosis with digitate upward extensions of papillae resembling church spires
Stucco keratosis	Flat topped white or tan papules on lower legs	Hyperkeratic type with papillae extending upwards in church-spire pattern
Clonal SK	Histopathological variant with clinical features consistent with SK	Intraepithelial nests of basophilic keratinocytes with melanocytes
Irritated SK	Histopathological variant resulting from trauma or friction to SK lesion	'Squamous eddies' composed of eosinophilic flattened squamous cells
Melanoacanthoma	Deeply pigmented slow-growing tumor	Large dendritic melanocytes with retained melanin scattered through the tumor
Dermatitis papulosa nigra	Small brown to black papules face resembling melanoacanthoma	Acanthosis with few basaloid cells. Horn cysts are common

SK: Seborrheic keratoses

epidermal growth factor binding site activity correlates with actively growing SK.^[4] An aberrant response to enhanced epidermal growth factor activity may explain eruptive SK after an inflammatory dermatosis.

The development of a solitary serpiginous SK lesion at the site of eczema in our patient however may be due to the isotopic phenomenon. Occurrence of an unrelated dermatological disease at the site of a healed disease is termed as isotopic phenomenon and cases have mostly occurred at the site of healed herpes zoster.^[5] The cause of this phenomenon has been proposed to be locus minoris resistentiae or site of lowered resistance. Isotopic phenomenon occurring at the site of erstwhile eczematous dermatitis has not been reported.

Ajay Kumar, Meena Kashyap¹, Vikas Pathania

Departments of Dermatology and ¹Pathology,
Military Hospital, Ambala, India

Address for correspondence: Dr. Ajay Kumar,
Military Hospital, Ambala-133 001, India.
E-mail: ajaykmathur@rediffmail.com

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