Benign Epidermal Tumours and Proliferations

Benign tumours of epidermal origin are among the most common lesions arising in the skin. Seborrhoeic keratoses and lichenoid keratoses comprise a large proportion of these lesions. There are however a number of less common benign epidermal proliferations which general practitioners may be unfamiliar with. Many of these benign lesions are biopsied or excised because they can clinically mimic more aggressive epidermal or non-epidermal neoplasms.

Psoriasiform Keratosis

This is a newly described form of benign keratosis. These solitary epithelial lesions usually arise in the lower extremities as erythematous, scaly papules or plaques in elderly patients. Other sites include upper extremities, neck, shoulders and back. The clinical differential diagnosis includes seborrhoeic keratosis, basal cell carcinoma, Bowen’s disease, solar keratosis and squamous cell carcinoma amongst others. The pathogenesis of psoriasiform keratosis is unknown. The histological features mimic psoriasis and patients may be misdiagnosed as having psoriasis if the clinician or pathologist is unaware of this entity. Psoriasis is excluded in the clinical setting of a solitary lesion and no known clinical diagnosis of psoriasis. This is a benign lesion and treatment is not required.

Epidermal Naevus

Epidermal naevi present as verrucous papules usually at birth or develop during childhood. The lesions occasionally appear in adulthood. They may present as solitary or multiple, unilateral or bilateral linear clusters. Most lesions consist of skin-colored to brown papillomatous papules or plaques distributed along Blaschko’s lines (Fig.1).

A number of epidermal naevus syndromes have been described: naevus comedonicus syndrome, Schimmelpenning syndrome, pigmented hairy epidermal naevus syndrome, Proteus syndrome and CHILD syndrome. These syndromes present with epidermal naevi in association with developmental abnormalities in other organ systems, most commonly involving the neurological, ocular and musculo-skeletal systems.

The histopathology of epidermal naevus resembles seborrhoeic keratosis or stucco keratosis. Surgical excision is curative. Recurrence is common if the lesion is incompletely removed. Infants and children with multiple or widespread lesions need to be evaluated for abnormalities in other organ systems. Very rarely, do other neoplasms such as basal cell carcinoma and squamous cell carcinoma arise within epidermal naevi.

Inflammatory Linear Verrucous Epidermal Naevus (ILVEN)

This uncommon condition resembles linear psoriasis clinically and histologically. It presents as a pruritic linear scaly erythematous plaque following the lines of Blaschko invariably on the lower limbs of infants and young children. Most cases are unilateral. The condition is difficult to treat and requires referral to specialist dermatologists.

Seborrhoeic Keratosis

Seborrhoeic keratoses are extremely common lesions in adults. The lesions may arise de novo or from pre-existing lentigines. They present as solitary or multiple light brown, black, or waxy yellow papules, nodules or plaques. The lesions can involve virtually any cutaneous surface except the glabrous skin. Clinically, they can mimic non-malignant and malignant lesions including acrochordons, verruca, condyloma acuminatum, solar keratosis, squamous cell carcinoma, solar lentigo, melanocytic naevus, or melanoma.

The sign of Leser-Trelat is characterised by eruptions of multiple pruritic seborrhoeic keratoses in association with an internal malignancy, most often gastro-intestinal adenocarcinomas. Transformation into in-situ carcinoma in a seborrhoeic keratosis can but rarely occurs. Even rarer, is the development of basal cell carcinoma and squamous cell carcinoma. A more common event is the ‘collision’ of seborrhoeic keratosis with an adjacent neoplasm.

There are least five histological types of seborrhoeic keratoses – hyperkeratotic, acanthotic, reticulated, clonal and melanoacanthoma.
Melanoacanthoma is a darkly pigmented variant that contains numerous pigmented dendritic melanocytes. Clinical variants of seborrhoeic keratosis include dermatosis papulosa nigra and stucco keratosis. Dermatosis papulosa nigra presents as multiple hyperpigmented papules typically on the cheeks and foreheads of darkly pigmented individuals. Stucco keratosis presents as multiple small dry rough grey/white papules, most frequently on the lower extremities of older adults.

**Inverted Follicular Keratosis**

Inverted follicular keratosis is regarded by some as a variant of seborrhoeic keratosis. It presents as an asymptomatic white to pink papule in middle-age to older Caucasian individuals, usually on the face although other areas of the head and neck can also be affected. Clinically, they can resemble verruca, seborrhoeic keratosis, trichilemmoma, basal cell carcinoma and squamous cell carcinoma.

Microscopically, it is characterised by psoriasiform epidermal hyperplasia composed of enlarged keratinocytes with pale to clear cytoplasm. The pale appearance is due to an abundance of cytoplasmic glycogen (Fig. 2). The dermis often contains dilated blood vessels accounting for the vascular appearance. Simple surgical excision is curative.

**Large Cell Acanthoma**

This benign squamous lesion typically presents as an asymptomatic solitary, skin coloured, pigmented or hypopigmented flat to barely elevated patch on sun damaged skin of middle aged to elderly patients, most frequently on the face or neck and less often on the extremities and the trunk (Fig. 3). The lesion is often clinically confused with solar lentigo, solar keratosis, seborrhoeic keratosis and melanoma.

The lesion is characterised by uniform enlargement of keratinocytes with abundant cytoplasm and enlarged nuclei. There may be cytological atypia and misdiagnosed as solar keratosis by pathologists. The basal layer of the lesion can be pigmented as in solar lentigo. Some regard these lesions as a variant of solar lentigo in a stage evolving into seborrhoeic keratosis. These lesions can be removed by simple excision or local destruction.

**Porokeratosis**

The lesion of porokeratosis presents as an annular plaque or papule with an atrophic centre bordered by a peripheral keratotic ridge-like border (Fig. 4). At least five clinical variants of porokeratosis have been described.

1. Porokeratosis of Mibelli – Usually presents in adulthood. These patients develop one or several plaque-like lesions on the extremities.
2. Disseminated superficial actinic porokeratosis – This is the most common variant and presents as numerous small shallow lesions in sun damaged skin. The extremities and back are the most commonly affected sites. The lesions range from 2mm to 7mm in diameter and appear during the third to fourth decades of life.

3. Disseminated superficial non-actinic porokeratosis – Presents with asymptomatic lesions involving the trunk, genitalia, palms and soles.

4. Linear porokeratosis – These lesions follow the lines of Blaschko usually on the extremities and presents during infancy or early childhood.

5. Punctate porokeratosis – Presents in the second or third decade of life. The lesions appear on the peripheries especially the palms and soles as small seed-like keratotic papules with a raised rim.

The choice of treatment depends on the size and number of lesions, anatomical locations and risk of malignancy. Treatment options include topical 5-fluorouracil, topical imiquimod, cryotherapy, curettages or excision. Regular monitoring for development of squamous cell carcinoma is essential.

Warty dyskeratoma
This uncommon lesion presents as a solitary umbilicated skin-colored, white or grayish papule or nodule with a keratotic plug usually on the head or neck. The lesion most often appears between the fifth and sixth decades of life and range in size from several millimeters to up to 2cm in diameter. Clinically, the lesion can resemble a verruca, seborrhoeic keratosis, keratoacanthoma or squamous cell carcinoma.

Simple excision is adequate for removal.

Lichenoid keratosis
Also known as lichen planus-like keratosis, these common skin lesions present as a solitary pink, tan or brown, often scaly papule or plaque. It shows a predilection for the face, forearm, and upper chest and less frequently in other chronically sun exposed sites. They are often clinically misdiagnosed as basal cell carcinoma, Bowen’s disease, solar keratosis, or irritated seborrhoeic keratosis. When they demonstrate a change in pigmentation, they can be also mistaken for dysplastic melanocytic naevus or melanoma. Lichenoid keratoses may undergo auto-regression.

Although their pathogenesis remains uncertain, it is widely believed that they represent inflammation of benign solar lentigo because of their frequent association with solar lentigines. As its name suggests, the histopathological features closely resemble lichen planus. Lichen planus is excluded in the clinical setting of a solitary lesion.
Epidermolytic Acanthoma

Epidermolytic acanthoma presents as a solitary papule or small nodule during adulthood. This uncommon lesion can appear on any site on the body. Rare disseminated forms have been described. The lesions are usually asymptomatic, have no distinctive clinical features or resemble verrucae and seborrhoeic keratoses.

The histopathological features are quite distinctive. The epidermis shows clearing of the cytoplasm of keratinocytes, coarsening of keratohyaline granules and hyperkeratosis (Fig. 6). The changes are a result of defective keratin 1 and keratin 10 expression in lesional skin. Treatment is not required, although simple excision or local destruction of the lesion may be considered.

Acantholytic acanthoma

Acantholytic acanthoma is an uncommon lesion that occurs as a solitary asymptomatic scaly papule or small nodule on the trunk, arm or neck in older individuals. It has no distinctive clinical features. Microscopy shows suprabasal acantholysis (discohesion) of squamous cells in thickened epidermis similar to pemphigus and Hailey-Hailey disease. Treatment by simple excision may be considered but not required.

References


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