

CASE REPORTS

Dermoscopic Characterization of 3 Cases of Fibroepithelioma of Pinkus

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Abstract. Fibroepithelioma of Pinkus is considered to be a rare variant of basal cell carcinoma with well-defined histopathological features.

Clinical diagnosis often requires differentiation from benign lesions such as acrochordon, intradermal melanocytic nevus, neurofibroma, seborrheic keratosis, and even malignant lesions such as amelanotic melanoma.

Dermoscopy of this type of lesion is not extensively described in the literature, though it usually presents certain specific characteristics that suggest the diagnosis and, therefore, an appropriate therapeutic approach.

We present 3 cases of fibroepithelioma of Pinkus, describing their clinical, dermoscopic, and histopathological features.

Key words: fibroepitelioma de Pinkus, dermatoscopia.

FIBROEPITELIOMA DE PINKUS. DESCRIPCIÓN DERMATOSCÓPICA DE 3 CASOS

Resumen. El fibroepitelioma de Pinkus se considera una variante poco frecuente de carcinoma basocelular, cuyas características histopatológicas están bien definidas.

En muchas ocasiones plantea diagnóstico diferencial clínico con lesiones benignas, tales como acrocordón, nevus melanocítico intradérmico, neurofibroma, queratosis seborreica, o incluso lesiones malignas como el melanoma amelanótico.

La dermatoscopia de este tipo de lesiones está poco descrita en la literatura, no obstante suele presentar algunos rasgos específicos que orientan al diagnóstico y, por tanto, a una actuación terapéutica adecuada.

Presentamos tres casos clínicos de fibroepitelioma de Pinkus, reflejando sus características clínicas, dermatoscópicas e histopatológicas.

Introduction

Fibroepithelioma of Pinkus is a tumor that mostly affects patients aged between 40 and 60 years. It is usually found on the trunk. Often, the differential diagnosis includes benign lesions such as skin tags, intradermal melanocytic nevus, neurofibroma, and seborrheic keratosis.

Few authors have reported the dermoscopic features of fibroepithelioma of Pinkus, although there are some

features that can be used to guide diagnosis. We present 3 cases of fibroepithelioma of Pinkus which reflect the dermoscopic features of this tumor.

Case Descriptions

Case 1

The first patient was a 70-year-old man with nothing of relevance in his personal history who consulted for a lesion that had appeared 4 years earlier located on the posterior aspect of the upper third of the left lower leg. The lesion was asymptomatic and had been slow-growing.

On physical examination, a sessile plaque was observed 1.4 × 1 cm in diameter, with a pearly surface and a small excentric depression (Figure 1A). It did not infiltrate the

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Figure 1. A. Clinical image of case 1, showing a sessile plaque with a pearly surface and a small eccentric depression. B. Dermoscopic image of case 1, showing an amorphous whitish area with a streaky appearance towards the periphery. Fine arborizing vessels can be seen in the central depression. C. Hematoxylin-eosin $\times 40$. Typical honeycomb structure, with anastomosing strands formed from basaloid cells and a fibrovascular stroma.

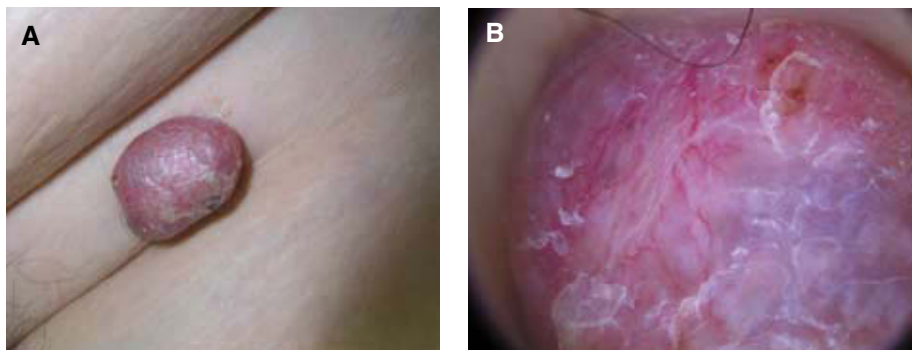


Figure 2. A. Clinical image of case 2, showing a pedunculated, erythematous-violaceous, tumor with occasional small ulcers. B. Dermoscopic image of case 2, showing whitish streaks, which are amorphous or homogenous in certain areas, and abundant arborizing telangiectasias.

deeper layers. On dermoscopic examination, of note were multiple whitish streaks radiating from a homogeneous central white zone. Hairpin vessels were apparent in the eccentric depression (Figure 1B).

The lesion was excised. The pathological study revealed a well-defined tumor, with a lobulated surface, and—in the dermis—anastomosing strands of basaloid cells embedded in well-vascularized tissue. These cells had scant cytoplasm and ovoid, hyperchromatic, isomorphic nuclei with occasional mitotic figures. A firm diagnosis of fibroepithelioma of Pinkus was made (Figure 1C).

Case 2

Our second patient was a 65-year-old woman with a history of fibrocystic mastopathy under observation who consulted for a lesion present for 5 years in the left inguinal region. This lesion was slow-growing and occasionally bled.

On examination, a pedunculated, erythematous-violaceous growth was found, measuring 2.5×1.5 cm with occasional small ulcers (Figure 2A). The dermoscopic image showed multiple arborizing telangiectasias of elongated appearance. Ulcerations, an amorphous white

structure, and gray pigmented areas could also be seen (Figure 2B).

The lesion was excised. In the pathological study, a raised nodular lesion was found, with a smooth surface, corresponding to nodular basal cell carcinoma with areas of fibroepithelioma of Pinkus.

Case 3

A 75-year-old woman, with a personal history of cataract surgery and bilateral knee replacement was referred to our clinic for assessment of a lesion in the left lumbar region. It had been present for several years and had been bleeding recently.

Physical examination showed an erythematous plaque measuring 1.6×1.4 cm, with well-defined and regular borders on most of the surface, and with ulceration covered by a scab and perilesional erythema on the left part (Figure 3A).

The dermoscopic image showed an erythematous lesion with an ulcerated area and fine arborizing telangiectasias with little branching. In the central part, a whitish amorphous structure was present with streaks in some

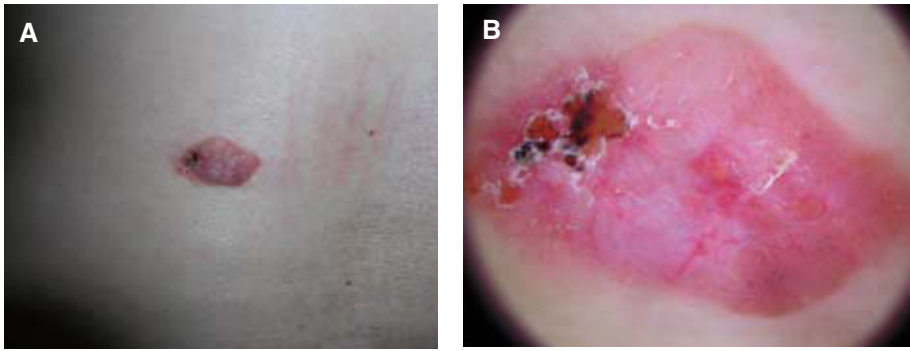


Figure 3. A. Clinical image of case 3, corresponding to an erythematous plaque with well-defined, regular borders and ulceration covered by a scab and perilesional erythema in the left part. B. Whitish structure which is amorphous in places and streaked or reticulated in others. Fine arborizing vessels and ulceration.

areas. On the right area of the lesion, this structure took on a reticulated appearance (Figure 3B).

Pathological study revealed a nodular basal cell carcinoma with pigmented and fibroepithelial areas.

Discussion

Fibroepithelioma of Pinkus is a rare tumor described by Hermann Pinkus in 1953. He originally coined the term “pre-malignant fibroepithelial tumor,” and defined the entity as one that gives rise to multiple small basal cell carcinomas in each lesion.^{1,2}

Currently, it is considered a rare variation of basal cell carcinoma, with characteristic histopathological features, although this view is somewhat controversial as some authors considered it to be a variant of trichoblastoma.¹⁻³

It most often affects individuals aged between 40 and 60 years,^{3,4} although childhood cases have been reported.^{2,3} It occurs with similar frequency in men and women, with a predilection for the lumbosacral region,⁴ although it has been reported at many other sites (head, abdomen, limbs, penis, scrotum, breasts, etc).

On physical examination it appears as an erythematous, skin-colored, or pigmented tumor.⁵ It often has a pedunculated or sessile morphology, although it can present as plaques.

It usually grows slowly, with little local invasion and, to date, no cases of distant metastasis have been reported. The treatment of choice is excision.

The clinical differential diagnosis usually includes benign lesions such as seborrheic keratosis, pedunculated fibroma, neurofibroma, intradermal melanocytic nevus, and skin tags. However, it is sometimes necessary to rule out amelanotic melanoma⁴ or pedunculated or polypoid basal cell carcinoma.⁶ In this sense, dermoscopy can be useful as the lesion has certain differential dermoscopic features.

Unlike typical basal cell carcinoma,⁷ the dermoscopic features of these lesions have received little attention in the literature. Zalaudek et al⁴ published a series of 10

fibroepitheliomas with their dermoscopic descriptions. The most prominent characteristics they reported were:

1. Fine arborizing vessels. These correspond to arborizing telangiectasias, which in fibroepithelioma of Pinkus are finer and more elongated than the telangiectasias typically seen in basal cell carcinoma. They have a smaller caliber and less branching.
2. Whitish streaks. These white septal lines are a common finding and are related to the fibrous septa that take on the typical honeycomb pattern on histological examination. This characteristic was present in all our cases. They have an amorphous morphology, with a streaky, branching, or even reticulated appearance in places. We consider this to be the most significant dermoscopic sign of fibroepithelioma of Pinkus. They can also be found in typical basal cell carcinoma, but they are less common and, if present, usually correspond to fibroepithelial areas.
3. Brown-gray pigmentation. These regions lack any defined structure. They have a brown-gray color and may contain few or numerous gray dots. They can usually be found in both fibroepithelioma of Pinkus and basal cell carcinoma.
4. Dotted vessels. These are vessels found more often at the periphery of the lesions, always in association with fine arborizing vessels.
5. Milia-like cysts. Uncommon cyst-like structures.

Also, in a previous publication, it was stated that fibroepithelioma of Pinkus has the leaf-like and cartwheel structures of basal cell carcinoma, but in this case they are of a whitish color due to the abundant fibrovascular stroma. Therefore, they are an equivalent to the whitish streaks in the morphology so characteristic of basal cell carcinoma⁸ (Table).

In the pathological study, these lesions are characterized by fine, elongated anastomosing strands of one or two basaloid-like cells, embedded in abundant fibrous stroma. This cell arrangement is responsible for the characteristic honeycomb appearance. Many of

Table. Studies Published on the Dermoscopic Features of Fibroepithelioma of Pinkus

<i>Authors</i>	<i>Cases Described</i>	<i>Dermoscopic Features</i>
Zalaudek et al (2005) ⁸	Case of fibroepithelioma of Pinkus	Whitish zone (leaf-like and cartwheel structure), fine linear vessels. Gray-brown pigmentation lacking structure. Follicular openings (comedo-like), brown dots
Zalaudek et al (2006) ⁴	Ten cases of fibroepithelioma of Pinkus	Fine arborizing vessels, whitish streaks, brown-gray pigmentation, dotted vessels, milia-like cysts
Zamberk et al (2009)	Three cases of fibroepithelioma of Pinkus	Whitish streaks, amorphous white area, hairpin vessels, arborizing telangiectasias, ulceration, brown-gray pigmentation

these strands are attached to the epidermis. Nuclear pleomorphisms and mitotic figures can be observed.⁹ A common finding within the tumor are areas that correspond to other variants of basal cell carcinoma, in particular the nodular form.^{1,3,4} Pedunculated basal cell carcinoma is, in contrast, of predominantly nodular form, whereas polypoid basal cell carcinoma is predominantly of adenoid appearance.⁶

A theory that explains the honeycombed arrangement of fibroepithelioma of Pinkus is the spread of basal cell carcinoma through eccrine sweat gland ducts.^{4,7}

We have presented 3 cases of fibroepithelioma of Pinkus which reflect the clinical, dermoscopic, and pathological features of this tumor. It must be distinguished from other benign tumors that it resembles. In this task, dermoscopy can be of great use as the dermoscopic features are very characteristic and can almost provide definitive diagnosis.

We therefore conclude that, once again, dermoscopy is a useful noninvasive tool, not only for assessing pigmented lesions, but also for differentiating between benign and malignant tumors.

Conflicts of Interest

The authors declare no conflicts of interest.

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