VIA MEDICA

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# Fibroepithelioma of Pinkus — a dermoscopic mimicker of melanoma

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## ABSTRACT

Fibroepithelioma of Pinkus (FeP) is an uncommon variant of basal cell carcinoma (BCC) that usually presents as a solitary, well-demarcated tumor or plaque, predominantly located on the trunk. It is characterized by indolent course and surgical excision is the treatment of choice. Both pigmented and non-pigmented variants of FeP may display dermoscopic features suggestive of malignant melanoma. In the paper, a case of FeP is presented, and the dermoscopic findings in this entity are discussed.

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**Key words**: fibroepithelioma of Pinkus, dermoscopy, dermatoscopy, videodermoscopy, melanoma, basal cell carcinoma

## CASE REPORT

A 53-year-old woman presented with a 2-year history of a slowly growing pink tumor located on the right lateral thigh (Fig. 1). Her personal and family history for melanoma or other malignancies was negative. The lesion was not accompanied by pain or itch.

Apart from the well-demarcated pink tumor of 12 mm in diameter, no other suspicious lesions were found during the physical examination.

On polarized dermoscopy, polymorphous vascular pattern (consisting of multiple dotted, coiled and serpentine vessels) and white shiny lines intersecting the lesion were noted (Fig. 2). Yellowish crusts, most likely due to the presence of minor erosions, were also visible. Non-polarized videodermoscopy (Canfield Scientific GmbH, Bielefeld, Germany) showed clusters of polymorphous vessels on a whitish background (Fig. 3).

As amelanotic melanoma was taken into consideration in the differential diagnosis, the lesion was initially excised with a 1-mm margin. The histopathological evaluation showed dense stroma transected by strands of basaloid cells, which was consistent with the diagnosis of fibroepithelioma of Pinkus (Fig. 4A, B). The excision margin was widened to 4 mm. The patient was instructed to perform self-control of the skin at least once a month and to show for regular follow-up visits every 3 months. There was no recurrence in a 1-year follow-up period.

**Figure 1.** Clinical presentation — a 15-mm pink tumor located on the right lateral thigh (*black arrow*)

## DISCUSSION

Fibroepithelioma of Pinkus (FeP) is considered to be an uncommon variant of basal cell carcinoma (BCC) described by Hermann Pinkus in 1953 [1]. It usually presents as a solitary, non-pigmented, well-demarcated tumor or plaque, with peak incidence in the fifth and sixth decades of life [2, 3]. Trunk, especially the lumbosacral region, is the predominant site of involvement, followed by lower

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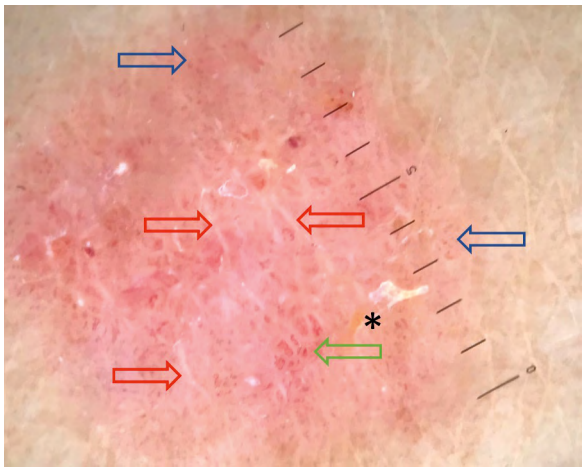

**Figure 2.** Polarized dermoscopy showing polymorphous vascular pattern, consisting of dotted (*blue arrows*), coiled and serpentine vessels (*green arrow*). White shiny lines (*red arrows*) intersecting the lesion and yellowish crusts (*asterisk*) are present

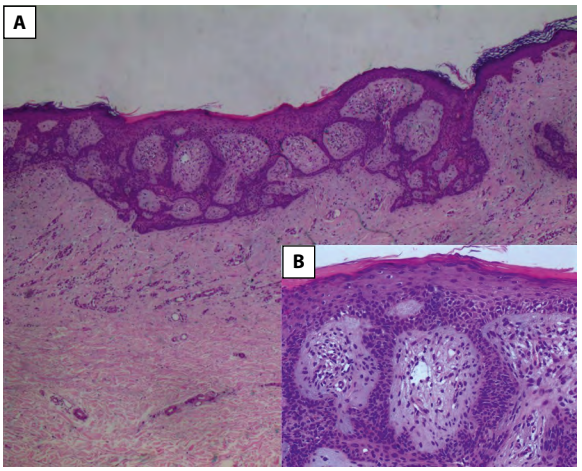


**Figure 4.** Histopathology showing dense stroma transected by strands of basaloid cells; **A.** Overview of the lesions (hematoxylin & eosin, 4x); **B.** Close-up view of anastomosing strands of basaloid cells extending from the epidermis (hematoxylin & eosin; 20x)

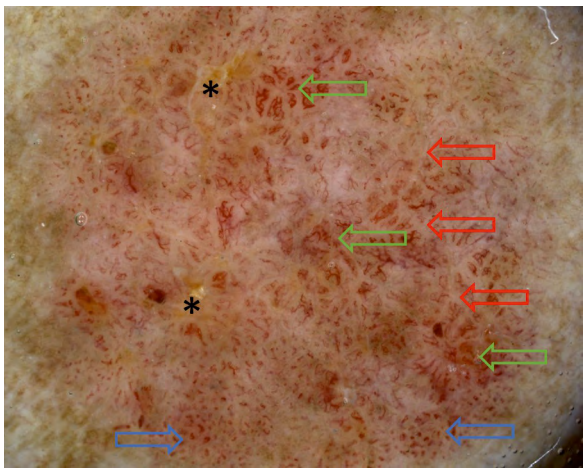

**Figure 3.** Non-polarized videodermoscopy (Canfield Scientific GmbH, Bielefeld, Germany) showing whitish background (red arrows) separating clusters of polymorphous vessels — dotted (*blue arrows*) and serpentine/coiled vessels (*green arrows*). Yellow crusts (*asterisk*) are also visible

extremities [4, 5]. On histopathology, anastomosing strands of basaloid cells extending from the epidermis into the dermis within a fibrotic stroma are typically observed [2]. FeP does not exhibit aggressive biological behavior, and complete surgical excision remains the mainstay of treatment [3]. According to the American guidelines, FeP is considered to be BCC of low-risk growth pattern, and the recommended excision margin in such case is 4 mm [6]. The European and Polish recommendations for the management of BCC are also consistent in this matter [7, 8].

FeP may simulate benign lesions including seborrheic keratosis, dermal nevus and acrochordon (skin tag) [9]. However, pigmented variants of FeP, clinically and dermoscopically mimicking melanoma, have been reported in the literature as well [10, 11].

The dermoscopic features of FeP were reported for the first time by Zalaudek et al. [2] in 2005. The authors observed "negative" leaf-like areas and spoke-wheel structures, which were analogous to the well-known leaf-like and spoke-wheel areas in pigmented BCC, but lacked pigmentation, and therefore were referred to by the authors as "negative".

The biggest study to date on the dermoscopy of FeP was carried out by Nanda et al. [5] and included 36 patients. The main dermoscopic findings were polymorphous vessels, with high frequencies of serpentine and dotted vessels, and hypopigmented or pink lines intersecting at acute angles. The latter term was introduced by the authors to differentiate these lines surrounding pink vascular areas from negative network, that refers to brown elongated structures surrounded by relative hyperpigmentation, which can be viewed as a hypopigmented network. In addition, shiny white lines (chrysalis structures) were observed in 50% of cases examined with the aid of contact polarized dermatoscope. It is worth noting that chrysalis structures are visible only in polarized light and will not be observed under non-polarized dermoscopy. The authors infrequently observed the presence of arborizing vessels, blue-gray ovoid nests or leaf-like structures, which in turn are considered typical of BCC.

Recently, Inskip et al. [9] highlighted high prevalence of pigmented variants of FeP, which typically demonstrate on dermoscopy presence of blue-gray dots and gray-brown areas. There are also two reports in the English language literature of heavily pigmented FeP, which showed under dermoscopy atypical pigment network, blue-white veil,

milky red areas or circumferential radial lines (starburst pattern), thus raising the suspicion of melanoma [10, 11].

On reflectance confocal microscopy (RCM), FeP presents with a fenestrated pattern, in which "frames" correspond histologically to the cords of basaloid cells, and "holes" represent the fibrous stroma [3]. In addition, plump, bright cells corresponding to melanophages are typically observed in pigmented variants of FeP [12].

## CONCLUSIONS

Fibroepithelioma of Pinkus (FeP) is characterized by indolent course and good prognosis. However, clinicians should be aware of the dermoscopic features of this entity, as many of them have been reported in melanoma as well. In the future, RCM may constitute a useful tool for the preliminary non-invasive diagnosis of FeP.

### *Conflict of interests*

None.

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