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Two adjacent individual fibroepithelioma of Pinkus of the umbilicus—one pink, one pigmented—a case report and review of the literature

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ABSTRACT We present a unique case of separate and independent adjacent fibroepitheliomas of Pinkus (FeP) arising from the umbilicus in an 83-year-old man. Of further interest, one is pigmented and the other nonpigmented. Clinical, dermatoscopic and histopathological images are provided.

A review of the published literature is undertaken to attempt to assess the incidence of pigmented versus nonpigmented FeP. Of 24 published FeP cases, 10 (41.7%) have been pigmented. Thus to date pigmented FeP comprise approaching one-half of all reported cases.

Introduction

Fibroepithelioma of Pinkus (FeP) is generally considered a rare basal cell carcinoma subtype [1] although some consider it a variant of trichoblastoma [2,3]. FeP was first described by Pinkus in 1953 as a premalignant fibroepithelial tumor [4].

The clinical appearance of FeP is typically that of a solitary, flesh-colored, dome-shaped sessile papule or plaque, but large pedunculated, polypoid or ulcerated cases have also been reported [5]. Clinically it can resemble several benign skin tumors, including dermal nevus, pedunculated fibroma, acrochordon and seborrheic keratosis [1,5].

FeP is more common in females and is most frequently located on the lumbosacral region, although it may occur anywhere on the body surface [6]. It typically develops after the fourth decade of life, but two pediatric cases have also been described [7,8].

The dermatoscopy of FeP, since first described in 2005 [9] has been well summarized by Reggiani et al. [1] as follows:

- polymorphous vessels consisting mainly of fine, focused, short arborizing and dotted vessels, the latter mainly located at the periphery of the lesion
- short white streaks—also called "chrysalis/crystalline structures" (visible only on polarized dermoscopy)

- in pigmented FeP, gray-brown areas and gray-blue dots

In addition to dermatoscopy, reflectance confocal microscopic findings also have been well described [10]. The hallmark of FeP is a fenestrated pattern constituted by "holes" that correspond to the fibrous stroma. In pigmented lesions, a variable amount of plump, bright cells corresponding to melanin-laden macrophages were also present.

Case report

An 83-year-old man presented to a primary care skin cancer clinic in Melbourne, Australia for a routine skin cancer examination. He pointed out two adjacent soft, exophytic lesions arising from the superior aspect of his umbilicus. These had first appeared some seven years earlier and had been slowly growing in size since. These lesions had never been tender, irritated or bled at any time.

He had a history of multiple non-melanoma skin cancer excisions since the age of 70. In the last five years, three separate basal cell carcinomas had been excised from his lumbar back and one from his left upper arm. A well-differentiated squamous cell carcinoma had been excised from his left forearm six months previous. The umbilical lesions had been overlooked on several previous examinations as most likely dermal nevi or acrochordons.

A whole body skin examination was undertaken with the aid of a Heine Delta 20 non- polarizing dermatoscope (Heine Optotechnik, Herrshing, Germany). Digital clinical and dermatoscopic images were taken with a Medicam 800 Fotofinder non-polarizing camera (Fotofinder Systems GmbH, Aichner, Birnbach, Germany) the dermatoscopy images being at 20x magnification. There was severe actinic damage skin of face, upper trunk and distal limbs with multiple solar lentigines and scattered actinic keratoses. The lower trunk and proximal limbs were relatively spared.

The lesions of interest were immediately adjacent and appeared to arise from the superior aspect of the umbilicus. Each measured 10 x 12 mm diameter and were both of soft, polypoid nature. The right-hand lesion was pale pink with patchy yellow surface exudate. The left-hand lesion had no exudate and notable brown/gray pigmentation distally (Figures 1 and 2).

Dermatoscopy

Dermatoscopy of the right-hand, nonpigmented lesion revealed the presence of multiple small erosions along with fine polymorphic peripheral vessels on a pink/white background (Figure 3).

Dermatoscopy of the left-hand, pigmented lesion showed small ovoid gray structures, fine brown dots, arborizing vessels and a single erosion as might be found in a basal cell carcinoma (Figure 4).

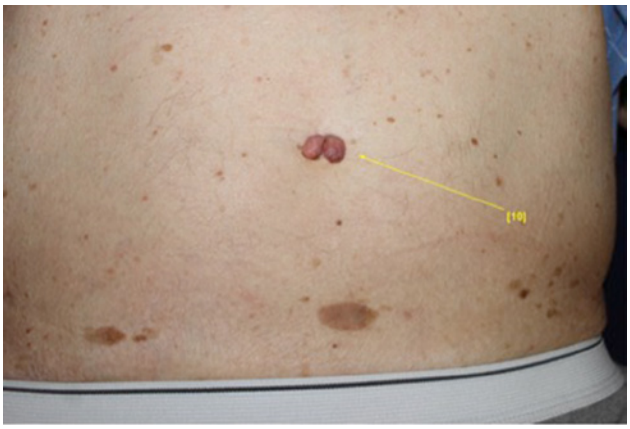

Figure 1. Abdomen showing twin soft, polypoid lesions arising from the umbilicus. [Copyright: ©2015 Inskip.]

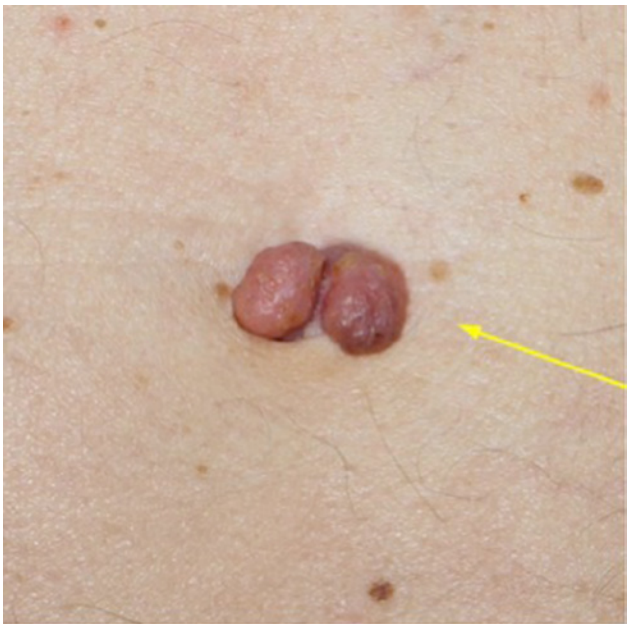

Figure 2. Close-up of twin umbilical lesions. [Copyright: ©2015 Inskip.]

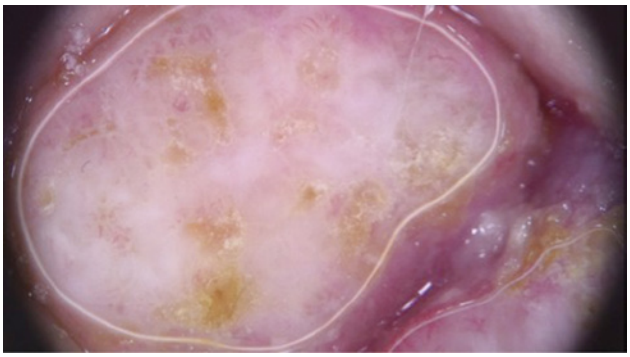

Figure 3. Right-hand, nonpigmented umbilical lesion—dermatoscopy 20x magnification—non-polarized. Note the multiple small erosions along with fine polymorphic peripheral vessels on a pink / white background. [Copyright: ©2015 Inskip.]

An excisional biopsy of both lesions was performed and the specimens were submitted for assessment by a specialist dermatopathologist.

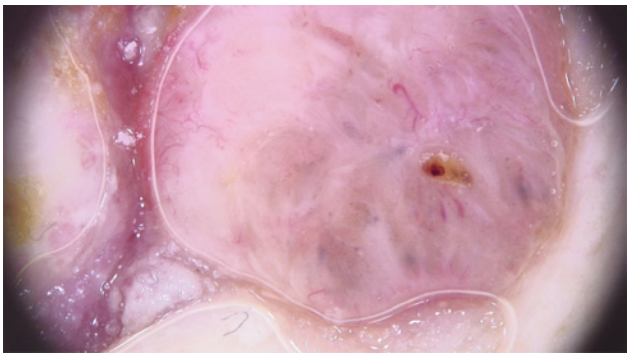

Figure 4. Left-hand, pigmented umbilical lesion—dermatoscopy 20x magnification—non-polarized. Note the small ovoid gray structures, fine brown dots, arborizing vessels and a single erosion as might be found in a basal cell carcinoma. [Copyright: ©2015 Inskip.]

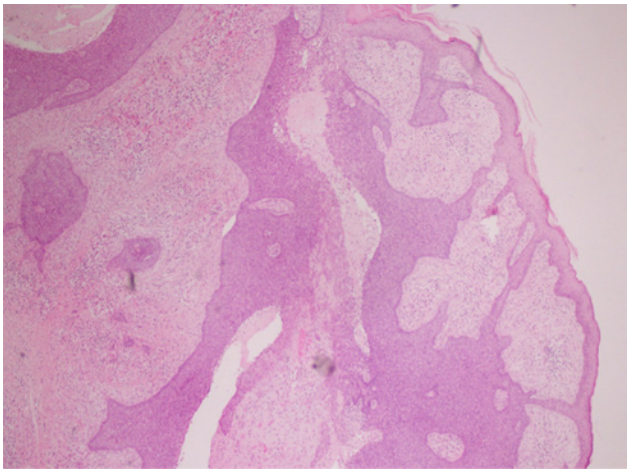

Figure 5. 40x magnification (hematoxylin & eosin stain) showing ramifying trabeculae of basaloid epithelium. [Copyright: ©2015 Haddad.]

Histopathology

Two separate and independent tumours were apparent. These were ***not*** two clones of a single tumor. Both lesions showed interconnecting and ramifying cords of basaloid epithelium set in a loose stroma, infiltrating through most of the dermis (Figures 5 and 6). In the pigmented lesion, melanophages with distinct brown cytoplasmic granules were present within the stroma separating the basaloid trabeculae (Figure 7). The infiltrative and arborizing pattern of both lesions was characteristic of fibroepithelioma of Pinkus.

Conclusions

The case we present is unique in that no previous case of two adjacent separate and independent adjacent FeP has ever been described in the literature.

The case is also most unusual in in two further respects:

1) Only one previous case of FeP arising from the umbilicus has been reported [11].
2) Of further interest, one lesion is pigmented and the other nonpigmented.

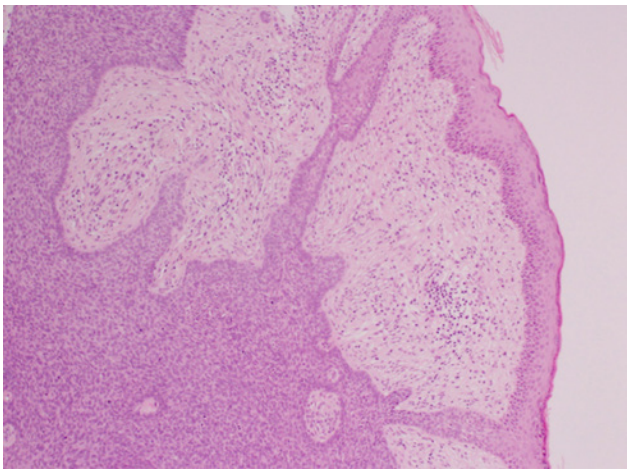

Figure 6. 100x magnification (hematoxylin & eosin stain) showing detail of the interconnecting trabeculae of basaloid epithelium and loose stroma. [Copyright: ©2015 Haddad.]

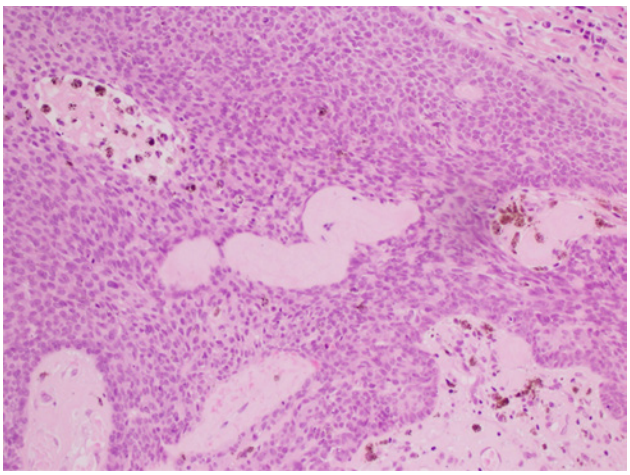

Figure 7. 200x magnification (hematoxylin & eosin stain) showing pigmented macrophages within the intervening stroma of the pigmented lesion. [Copyright: ©2015 Haddad.]

It is worth examining the progression of currently published literature on pigmented FeP. The first case of a pigmented FeP in the literature dates back to 2004. It was suggested by the authors at that time that a pigmented FeP was "a statistically very unlikely event" [12].

A year later, in 2005, Zalaudek presented the first published dermatoscopy image of an FeP. This lesion was also pigmented and showed the most unusual feature of white peripheral leaf-like structures [13].

In 2006 the first case series detailing the dermatoscopic features of 10 histologically proven FeP was published [5]. Four of these 10 FeP were pigmented. In the same year the first pediatric case of pigmented FeP was published. This was a pigmented plaque FeP in a 13-year-old girl, which had slowly been growing on her abdomen since the age of 3 years [7].

Up to and including the Reggiani et al. review of the literature in 2013 [1], the dermoscopy and reflectance confocal microscopy of 24 FeP had been reported. Of these, 14 (58.3%)

were nonpigmented and 10 (41.7%) were pigmented. Thus, to date pigmented FeP approaches one-half of all reported cases—not as statistically unlikely as first proposed in the sentinel case report of 2004. It is possibly not prudent to draw conclusions on incidence based on a single case. Twenty-four published cases is statistically a very small number, however. More reports are needed to verify these observations.

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