Dermoscopic and confocal microscopic presentation of apocrine poroma

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Key words: apocrine poroma; dermoscopy.

CLINICAL PRESENTATION

An 85-year-old woman presented with a 2-year history of a slow-growing, asymptomatic pedunculated flesh-colored papule on the left arm (Fig 1). The patient denied any history of skin cancer.

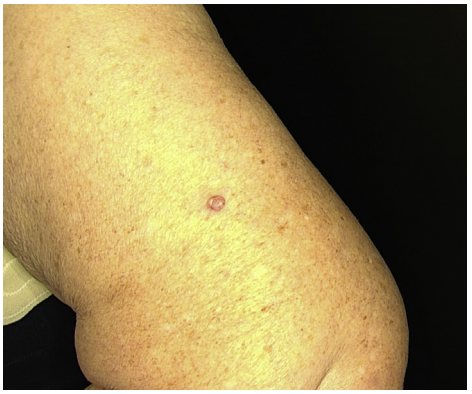

Fig 1. Apocrine poroma, clinical appearance. Solitary, 6 mm in diameter, flesh-colored papule on the left arm.

DERMOSCOPIC APPEARANCE

Dermoscopy revealed sharply focused arborizing and linear-irregular polymorphic vessels. Some of them were seen blurred within the pink structureless areas, where shiny-white strands under polarized light and orange or brownish erosions were additional features (Fig 2).

CONFOCAL MICROSCOPY APPEARANCE

The diagnoses of fibroepithelioma of Pinkus and adnexal tumor were considered. Further, in vivo reflectance confocal microscopic examination, whose presentation is detailed in Fig 3, allowed the immediate exclusion of the former.

HISTOLOGIC DIAGNOSIS

Histopathologic examination after an excisional biopsy confirmed the diagnosis of apocrine poroma (Fig 4).

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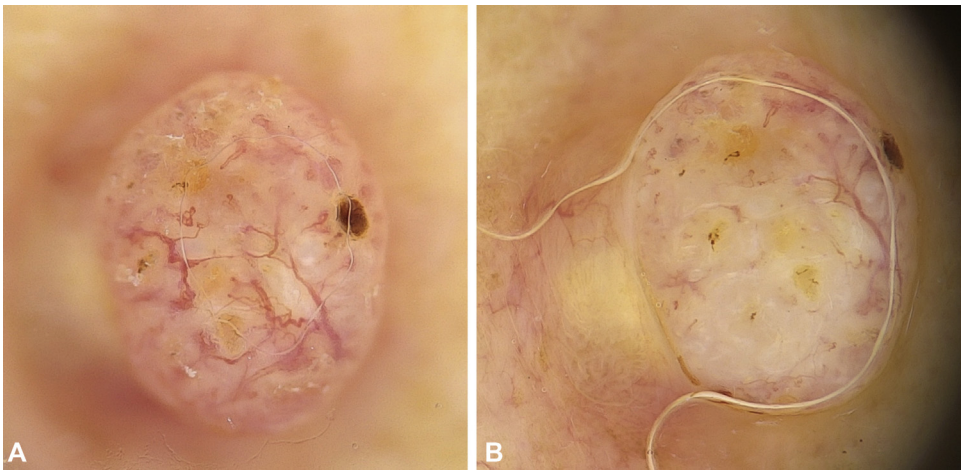

Fig 2. Apocrine poroma, dermoscopic presentation. Focused and blurred polymorphic vessels, including arborizing and linear-irregular types, are diffusely distributed within a pink-whitish structureless area where shiny-white strands and erosions are also observed. (**A**, top view). The branching of central large-caliber vessels into progressively smaller ones is well detailed, also at the basal part of the lesion next to a yellowish structureless area (**B**, lateral view).

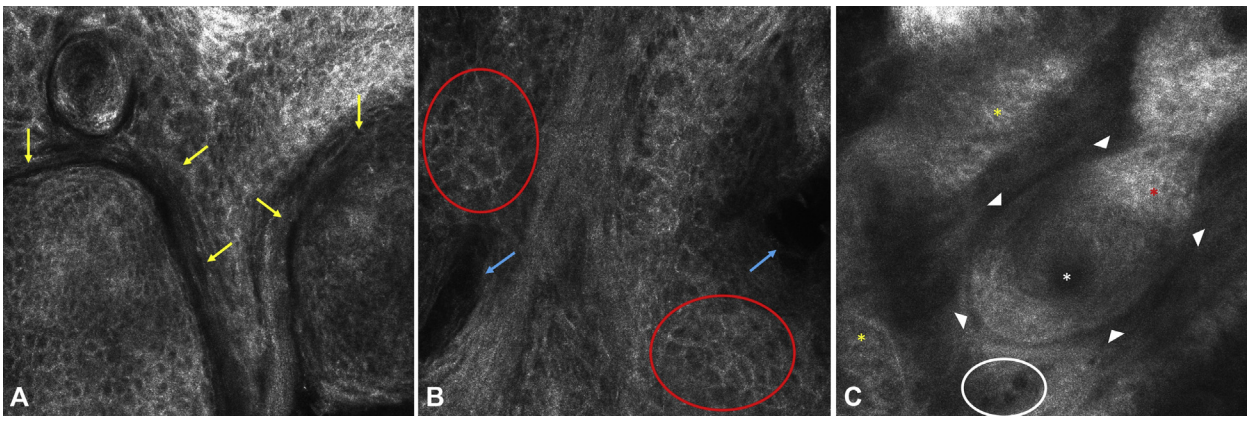

Fig 3. Apocrine poroma, reflectance confocal microscopy. At the epidermal examination, well-demarcated strands of monomorphic, small, and cuboidal cells are seen projecting into the spinous layer (*yellow arrows*) and lacking palisading. The cell contour appears bright, correlating to the presence of eosinophilic cytoplasm (**A**, basic image 0.5 × 0.5 mm). Hyporefractile and dark structures (*blue arrows*) within the tumor correspond to ductal differentiation and are surrounded by uniform, cuboidal, poroid (*red circles*) cells (**B**, basic image 0.5 × 0.5 mm). At the papillary dermis, it is possible to confirm the simultaneous sebaceous differentiation (*white arrowheads*), consisting of cuboidal cells (*red asterisk*) and a centrally located dilated sebaceous duct (*white asterisk*), together with peripheral small-sized black and round structures corresponding to the lumen of the ducts (*white circle*), and a bright fibrous (*yellow asterisks*) stroma (**C**, basic image 0.5 × 0.5 mm).

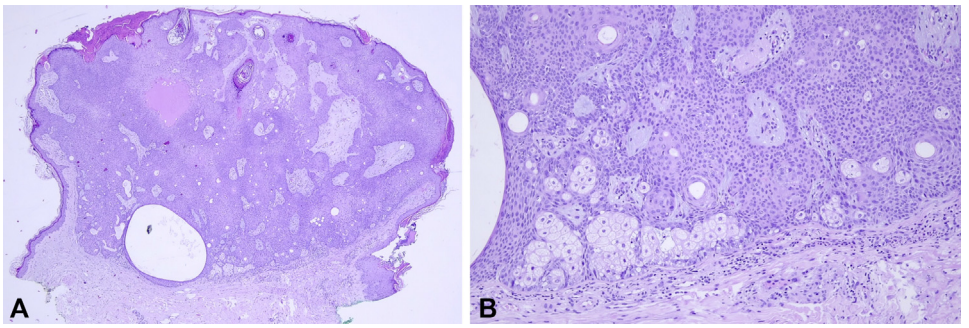

Fig 4. Apocrine poroma, histopathologic examination. A well-circumscribed tumor that extends into the dermal layer, which is composed of multiple and anastomosing trabeculae that are formed by cuboidal cells with monomorphous ovoid nuclei and a compact eosinophilic cytoplasm. These strands limit spaces of ductal differentiation, where occasional foci of lamellar orthokeratotic cornification are seen (**A**). In depth, the lesion also discloses small clusters of sebaceous differentiation surrounded by poroid cells. The tumor has a highly vascularized fibromyxoid stroma (**B**). (**A** and **B**, Hematoxylin-eosin stain; original magnifications: **A**, ×20; **B**, ×100.)

KEY MESSAGE

Apocrine poroma is a rare benign adnexal tumor combining the features of apocrine, sebaceous, and follicular differentiation.[1] As it might simulate malignant tumors like basal cell carcinoma due to nonspecific clinical appearance, we highlight the potential usefulness for dermoscopy and second-level noninvasive techniques, including reflectance confocal microscopic examination.[2]

Dermoscopy revealed an important distribution and combination of colors: yellow, white, and red in correlation with sebaceous differentiation, fibrosis of the stroma, and increased vascularization, respectively. It also showed different vascular morphologies, possibly resulting from the patterns of tumor growth both in the epidermis and dermis.

Reflectance confocal microscopy has a quasi-cellular resolution. It was helpful for the recognition of individual cells (uniform, bright poroid cells in strands), adnexal differentiation (dark ductal areas and sebaceous structures), and fibrous stroma. The absence of basaloid islands, peripheral palisading of nuclei, and peripheral clefting also allowed the immediate exclusion of basal cell carcinoma.

Conflicts of interest

None disclosed.

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