

A Flat-Topped Plaque over the Mammary Area

Question

A 40-year-old female with skin phototype IV presented with 8 months history of a solitary asymptomatic slow-growing lesion over the left breast. Cutaneous examination revealed solitary 2 × 1.5 cm firm nontender flesh-colored to erythematous plaque with a polycyclic border and surface erosions over the lower outer quadrant of the left breast [Figure 1]. The nipple-areola complex was within normal limits. There was no palpable lump in the breasts. Under nonpolarized contact dermoscopy, the plaque showed a large polycyclic central erosion, multiple small erosions, white lines arranged in a network, interlacing and orthogonal fashion, white structureless area, milia-like cysts, blue-gray dots, and coarse peppering, fine brown peppering, and polymorphous vascular structures (a combination of ≥ 2 vessels) comprising of hairpin, branched vessels with rounded endings (branched vessels with looped or coiled terminal endings that characteristically have a rounded silhouette), linear, and linear irregular vessels [Figure 2a and b]. Histopathology of the excised plaque showed lobular aggregates of small cuboidal epithelial cells descending from the epidermis and extending up to the reticular dermis [Figure 3a]. Areas of mucin deposition were evident between the proliferating cuboidal cells,

and in the dermis, around the tumor lobules [Figure 3b]. The cuboidal cells had abundant eosinophilic cytoplasm, monomorphic ovoid nuclei, and inconspicuous nucleoli [Figure 3c]. These cells were admixed with mature sebocytes [Figure 3d] and had a connection with the preexisting follicular infundibulum. The lobules contained variably sized duct spaces, which were more prominent at the lesion's base, with few lining epithelia showing a decapitation secretion [Figure 3e]. Immunohistochemistry for CD117 stained positive for poroid cells [Figure 3f].



Figure 1: Solitary flat-topped flesh-coloured to erythematous plaque with a polycyclic border

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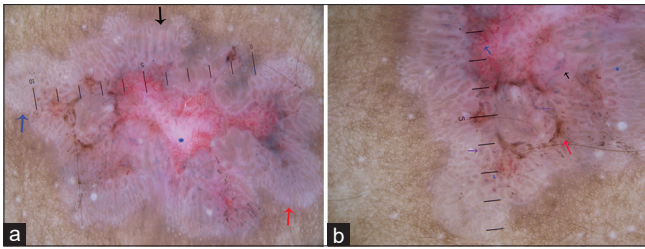


Figure 2: (a) Under nonpolarized contact dermoscopy (HEINE DELTA20® Dermatoscope, 10X magnification), the plaque is demonstrating a pattern comprising of multiple erosions, white lines, white structureless area (Asterix) and polymorphous vascular structures. The white lines are arranged in a network (blue arrow), interlacing (red arrow), and orthogonal fashion (black arrow). (b) Close-up view demonstrating multiple milia-like cysts, fine brown peppering (red arrow), blue-gray dots, and coarse peppering (purple arrows), and polymorphous vessels comprised of a dotted, hairpin (Asterix), branched vessels with rounded endings (blue arrow), linear (pin), and linear branching vessels (black arrow)

Answer

Apocrine poroma

Discussion

Poroma with sebaceous differentiation, foci of apocrine-like features, and occasional follicular differentiation is defined as apocrine poroma (AP).^[1] As compared to its eccrine counterpart, AP is rare.^[1] AP, as a separate entity, was initially described in 1988 by Requena *et al.*^[1] It usually presents as solitary flesh-colored to erythematous nodule or plaque over the nonacral region. The preferred sites are the shoulders, extremities, and trunk.^[1] Due to its nonspecific morphology and nonacral distribution, AP can be confused with other benign and malignant cutaneous neoplasms. In the index case, the thin plaque with surface erosion needed to be excluded from superficial basal cell carcinoma (BCC), Bowen’s disease, extramammary Paget’s disease, amelanotic superficial spreading malignant melanoma (MM), and non-pigmented lichen planus-like keratosis.^[1]

Data regarding dermoscopic features of AP is scanty, includes focal arborizing vessels, irregular pigment globules, and milia-like cysts.^[2] Dermoscopic features described for eccrine poroma with sebaceous differentiation (falls under the umbrella of apocrine poroma) are orange-beige color, yellow dots, pink to whitish irregularly shaped structures, hairpin, linear, and telangiectatic vessels.^[3,4] The present case demonstrated a pattern consisting of multiple erosions, interlacing white lines, and polymorphous vascular structures. The dermoscopic features in the index case are very similar to those described for eccrine poromas.^[5] It indicates that, despite the different origins of poroid cells, the dermoscopic features are similar, and so is the pattern of growth. The white network’s presence has been reported in dermatofibroma, Spitz nevus, dysplastic melanocytic nevi, and amelanotic/hypomelanotic/early melanoma.^[6] In our case, in addition to the white network, the lesion also showed orthogonally arranged white cords, a feature not described in Spitz nevus/atypical nevus/MM. The

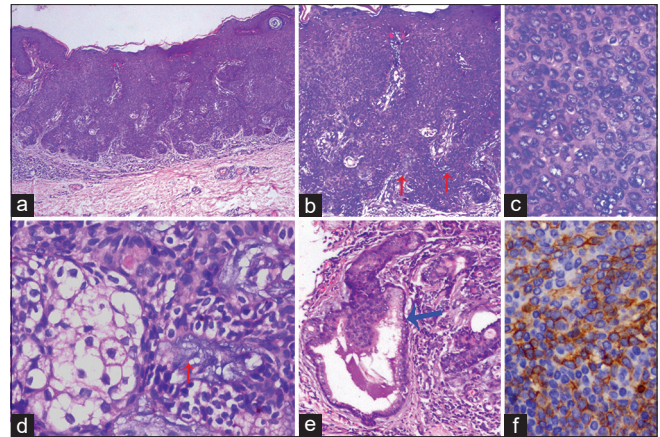


Figure 3: (a) Proliferating cuboidal cells descending from the epidermis into the reticular dermis (H and E, x50). (b) The proliferating cuboid cells are attached to the epidermis. Note the mucin deposition (red arrows) (H & E, x100). (c) The characteristic poroid cells (H & E, x400). (d) The cluster of sebocytes and mucin deposition (arrow) (H and E, x400). (e) Dilated ducts with lumen containing eosinophilic amorphous secretion along with an apocrine-like feature. (arrow) (H and E, x100). (f) Immunohistochemistry showing positive staining for CD117 (Immunohistochemistry, x400)

absence of atypical pigment network, variegation of color, radial streak, starburst, and globular pattern rules against MM and Spitz nevus.^[6] The presence of a fine brown pigment network with or without a central white homogenous area is a common feature of dermatofibroma.

Histopathologically, the following points will differentiate apocrine from eccrine poroma: (a) features of follicular differentiation like epithelial lobules as seen in trichoblastoma; (b) eosinophilic amorphous secretion in the lumen along with “decapitation secretion”; (c) presence of sebocytes, isolated or in small clusters and (d) a connection between the neoplastic cells and preexisting follicular infundibulum. In addition to the classic features of AP, the present case showed mucin deposition.

In conclusion, we are describing the clinical and dermoscopic features of a rare case of apocrine poroma. The presence of a thin plaque over a nonacral area with a dermoscopic pattern consisting of multiple erosions, interlacing white lines, white structureless area, and polymorphous vessels should raise suspicion of apocrine poroma.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the legal guardian has given his consent for images and other clinical information to be reported in the journal. The guardian understands that names and initials will not be published and due efforts will be made to conceal identity, but anonymity cannot be guaranteed.

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Nil.

Conflicts of interest

There are no conflicts of interest.

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