Dermoscopic Features of A Case of Intradermal Nevus with Foreign Body Granulomatous Inflammation

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A 40-year-old male presented with 1-month history of increase in the size of a previous swelling over the right side of the face. Cutaneous examination revealed solitary 3cm × 3cm nontender solid-cystic swelling over the right cheek. The superior part of the swelling was a firm brown nodule and had multiple hairs over the surface. The inferior part was a reddish-yellow cystic lesion that showed surface telangiectasia [Figure 1]. A differential diagnosis of intradermal nevus with either basal cell carcinoma, hidrocystoma, sebaceous neoplasm or granulomatous inflammation was considered. Under nonpolarized contact dermoscopy (NPD, HEINE DELTA20® Dermatoscope, Germany, 10 × magnification), the superior part showed a gray cobblestone pattern, and the inferior part showed different shades of yellow homogenous areas, shiny pink-white area, arborizing vessels (AV, stem vessels of a large diameter (≥0.2 mm) with irregular treelike branching), arborizing telangiectasia (AT, fine, kinked vessels of small caliber and length with few branches), blue-gray ovoid nest, brown to blue-gray dots, globules and homogenous areas [Figure 2]. Shave excision of the lesion was done and due to the purulent nature of the content of the cystic part, tissue was sent both for histopathology and tissue culture. Histopathology of the solid nodule showed nests of nevus cells in the dermis that showed progressive maturation as they descended downwards without any junctional activity. The cystic area showed a foreign body granulomatous inflammation consisting of multiple multinucleate giant cells, lymphocytes, numerous plasma cells, neutrophils and occasional eosinophils [Figure 3] along with dispersed nevus cells. Special stains for bacteria, mycobacteria, fungus, and spirochetes were negative. Tissue culture did not grow any bacterial, fungal, and mycobacterial (*Mycobacterial tuberculosis* and atypical Mycobacteria) organisms. A diagnosis of intradermal nevus with foreign body granulomatous inflammation was made and 1 year after shave excision, no regrowth was noticed.

Figure 1: Solitary solid-cystic swelling over the right side of the face consisting of a superior brown nodule and inferior reddish-yellow cystic part

Foreign body granulomatous inflammation in a melanocytic nevus, otherwise called as Duperrat nevus is thought to be due to the follicular damage either by trauma, infection or pressure on the hair follicle by nevus cells.[1]The present case clinically gave a false impression of collision tumor as the inferior part of the lesion mimicked cystic BCC/apocrine hidrocystoma (AH)/sebaceous neoplasm due to the yellow color and surface telangiectasia.

The use of dermoscope as a diagnostic tool is evolving. But at times it can misguide the clinician as evident in our case. The dermoscopic features of the cystic area favored a diagnosis of cystic BCC, or sebaceous neoplasm or AH. The presence of the AV, maple leaf-like areas, and blue-gray ovoid nests are considered to be very reliable markers of BCC.[2]Apart from various

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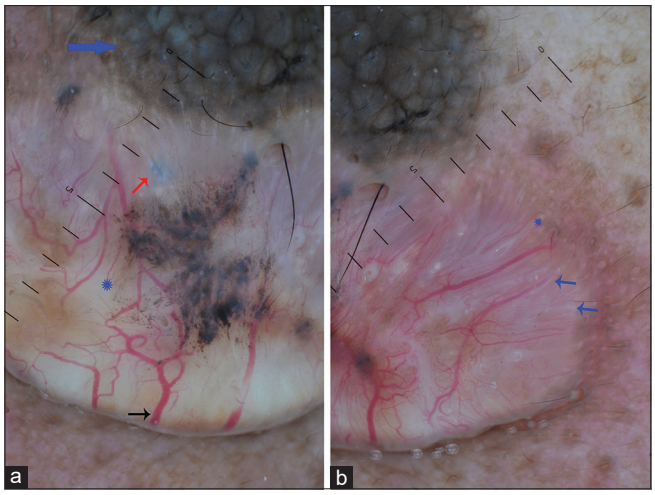

Figure 2: (a and b) Under nonpolarized contact dermoscopy the superior part of the lesion showing gray cobblestone pattern (broad arrow), and inferior part showing AV (black arrow), AT (starburst), yellow homogenous area and shiny pink-white area (blue arrows), blue-gray ovoid nest (red arrow), brown to blue-gray dots, globules and homogenous areas (flower) (HEINE DELTA 20 Dermatoscope, 10 × magnification)

subtypes of BCC (nodular, cystic, and sclerodermiform), AV has been also described in solitary reticulohistiocytoma, eccrine spiradenoma, cellular neurothekeoma, hidradenoma, and intraepidermal poroma.[3]The AV in this case are well focused due to the use of NPD and their superficial nature. The presence of yellow dot, globule or homogenous area along with AV or AT under dermoscopy in a lesion over the face favors a diagnosis of either AH or sebaceous adenoma or sebaceoma.[4-7]The other dermoscopic features described for AH are homogenous skin colored, pinkish blue and blue pigmentation, linear irregular vessels and white structures including chrysalis. In our case, all the dermoscopic features in the inferior part of the lesion were the result of granulomatous inflammation within the intradermal nevus. The brown to blue-gray dots, globules and structureless area histologically corresponds to the dispersed nevus cells as single unit and nests that are hugging the epidermis [arrow, Figure 3c], blue-gray ovoid nest to the deeper location of the nest of nevus cells and the yellow homogenous area to the presence of numerous neutrophils [Figure 3d].

In conclusion, the present case demonstrates that at times dermoscopic findings can be misleading.The dermoscopic features of a granulomatous inflammation can mimic a cutaneous tumor, and hence, a biopsy is warranted for the diagnosis.

Declaration of patient consent

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

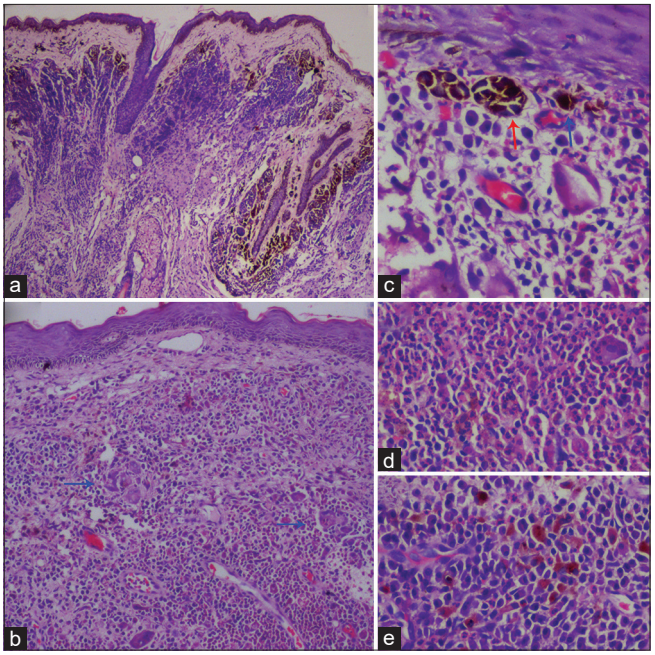

Figure 3: (a) The superior nodule showing nests of nevus cells in the dermis with progressive maturation as they descend downwards (H and E: × 50). (b) Granulomatous inflammation within the nevus consisting of multinucleate giant cells (arrows), lymphocytes, numerous plasma cells, neutrophils and occasional eosinophils (H and E: × 100). (c) Dispersed nevus cells as single unit (blue arrow) and nests (red arrow) lying below the epidermis (H and E: × 400).Higher magnification showing extensive neutrophilic (d) and plasma cell (e) infiltration (H and E: × 400)

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Conflicts of interest

There are no conflicts of interest.

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