Dermoscopy of Primary Cutaneous B-cell Lymphoma

Paul M. Hoesly, Jason C. Sluzevich, Mark A. Cappel

Department of Dermatology, Mayo Clinic, Jacksonville, Florida, USA

A 71-year-old Caucasian man presented with a 2-year history of an asymptomatic, slowly growing lesion on the scalp. On physical examination, there was a well-marginated, indurated, red, smooth plaque on the left frontal scalp [Figure 1].Dermoscopy revealed branching vessels, white circles/lines, scale with a perifollicular component, and circle hairs with a salmon-colored background [Figure 2]. Histopathology showed a diffuse dermal B-cell lymphocytic (Bcl) infiltrate confirmed by strong positivity for CD-20 immunostain [Figure 3a and b]. Bcl-2 and Bcl-6 immunostains were also strongly positive. Evaluation for systemic involvement with positron emission tomography/computed tomography scan was negative, rendering a diagnosis of primary cutaneous B-cell lymphoma (PCBCL), follicle cell type.

The presentation of PCBCL is often nonspecific, and lesions may clinically resemble basal cell carcinoma (BCC), amelanotic melanoma, or scar/keloid. A limited number of studies have recently described dermoscopic features associated with PCBCL, which may aid in improving clinical identification of this entity.[1,2] The most commonly reported features were branching/arborizing vessels, scale, white circles, and a salmon-colored background. In our case, all of these dermoscopic features were present, and we additionally report a unique finding of circle hairs. Histopathologically, the white circles/lines and salmon-colored hue correlate with dermal fibrosis and deep dermal lymphocytic infiltrates, respectively.[1] Polymorphous vessels

Figure 1: Red, indurated plaque on the left frontal scalp. Subtle vessels are seen clinically

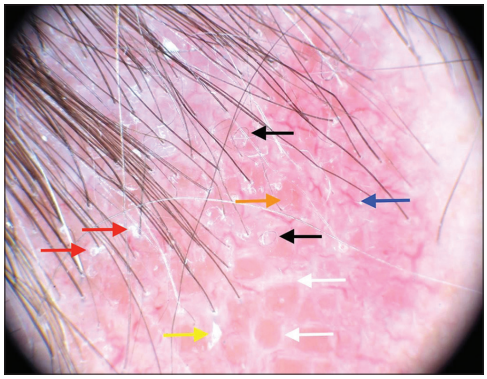

Figure 2: Dermoscopy (DermLite DL200 Hybrid; 3Gen; polarized mode, ×10 magnification) showing branching vessels (blue arrow), white circles/lines (white arrows), scale (yellow arrow) with perifollicular component (red arrows), circle hairs (black arrows), and salmon-colored background (orange arrow)

are attributed to angiogenesis common to neoplastic processes. Circle hairs could potentiallybe attributed to hair shaft distortion in the setting of a dense periadnexal infiltrate.

While arborizing/branching vessels may also be seen in BCC or keloids, they are distinguished from those of PCBCL by their larger caliber.Crystalline structures

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Address for correspondence:
Dr. Paul M. Hoesly, Department of Dermatology, Mayo Clinic, 4500 San Pablo Rd, Jacksonville, Florida, USA. E-mail: hoesly.paul@mayo.edu

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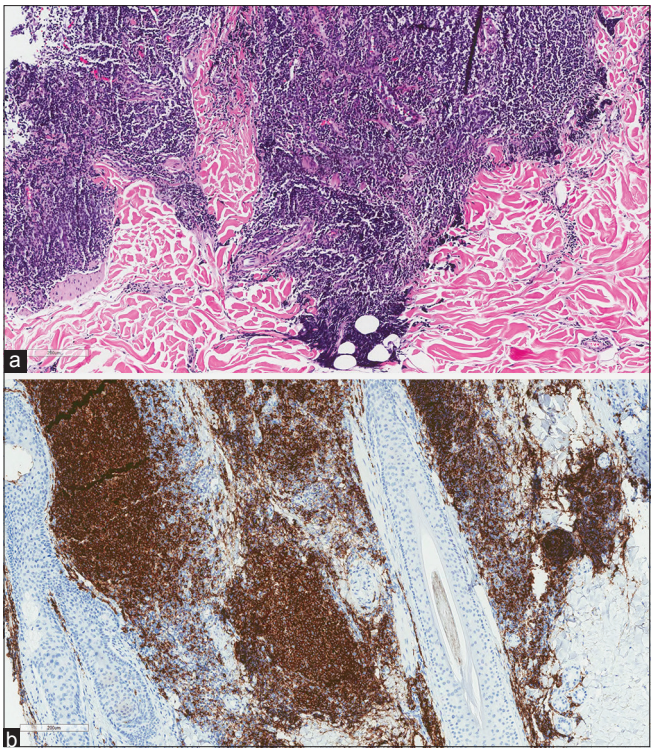

Figure 3: Histopathology of primary cutaneous B-cell lymphoma, follicle cell type. (a) Dense, diffuse lymphocytic infiltrate involving the dermis (hematoxylin-eosin, original magnification ×10). (b) The infiltrate was strongly positive for CD-20 immunostain (original magnification ×10). Bcl-2 and Bcl-6 immunostains were also positive (not shown)

of amelanotic melanoma may resemble the white lines/ circles of PCBCL, but milky-red areas and comma vessels predominate.[3]

Our case highlights a series of dermoscopic findings that may improve the clinical recognition of PCBCL.Although useful in clinical practice, these features are not sufficient for thediagnosis of PCBCL, and histopathology remains mandatory.

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.

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Conflicts of interest

There are no conflicts of interest.

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