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QUIZ SECTION

A Dermoscopic Figure of Polymorphous Atypical Vessels with Colour Gradation: A Quiz

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An 88-year-old Japanese man with dementia presented with two gradually expanding, asymptomatic dark plaques on the right cheek that had been present for 18 months (Fig. 1a). Dermoscopy revealed polymorphous atypical vessels with colour gradation, dotted vessels, linear irregular vessels, and irregular and branching vessels (Fig. 1b). The colour gradation was from reddish-purple to bright red or pinkish-red. A skin biopsy was performed and stained with haematoxylin and eosin (Fig. 1c). Immunohistochemical staining was positive, with cytokeratin 7, gross cystic disease fluid protein-15 (GCDFP-15), and epithelial membrane antigen, and the endothelial cells of the lumens containing atypical cells were positive with D2-40 (not shown). The right submandibular lymph nodes were palpable and positron emission tomography–computed tomography showed enhanced cervical lymph nodes.

What is your diagnosis? See next page for answer.

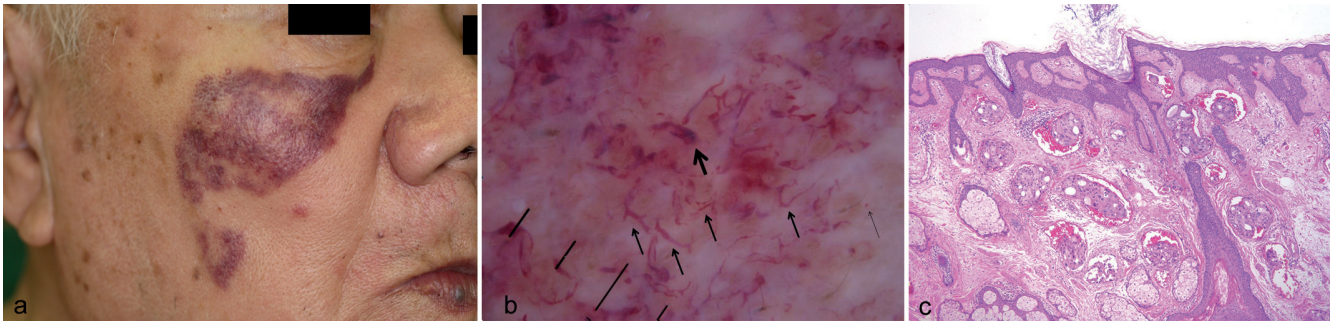

Fig. 1. (a) Clinical presentation. (b) Dermoscopy. Dotted vessels (*fine arrow*), linear irregular vessels (*arrow*), and irregular and branching vessels (*bold arrow*). (c) A histopathological specimen showed variously dilated vessel structures containing both atypical cells and red blood cells in the dermis (H&E×100).

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ANSWERS TO QUIZ

A Dermoscopic Figure of Polymorphous Atypical Vessels with Colour Gradation: A Comment

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Diagnosis: Metastatic Cutaneous Carcinoma into the Lymphatic Vessels

Dermoscopy and blood vessel morphology has been used as a diagnostic examination for various skin disorders (1). In this case we described the dermoscopic features of the lymphatic vessels in a man with metastatic cutaneous carcinoma from a possible occult breast cancer. As biopsies were not taken from the submandibular and cervical lymph nodes, we could not obtain histopathological evidence of occult breast carcinoma from the lymph nodes. However, positive immunohistochemical staining with GCDFP-15 of the tumour cells infiltrated into the lymphatic vessels in the upper dermis indicated that the tumour was occult breast cancer or another carcinoma with apocrine differentiation, such as apocrine sweat gland carcinoma.

The appearance of polymorphous atypical vessels represents phenomena such as neovascularization (2). The dermoscopic features prompted taking a biopsy to establish a definitive diagnosis for a non-pigmented neoplasm or cutaneous metastasis (2, 3), although we initially thought that the patient had carcinoma telangiectodes with purplish plaques. The immunohistochemical staining verified the dilated lymphatic vessels with the infiltration of tumour cells and red blood cells. The darker reddish-brown colour reflected the abundant infiltration of tumour cells with fewer red blood cells. We hypothesized that the tumour cells inside the lymphatic system invaded directly into the peripheral blood vessels, and that communicating lumens were constructed between the lymphatic system and blood vessels.

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