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### In vivo reflectance confocal microscopy for evaluating common facial hyperpigmentation.

Zeng X, Qiu Y, Xiang W. *Skin Res Technol.* 2020 Mar;26(2):215-219. doi: 10.1111/srt.12782. Epub 2019 Sep 23.

#### ABSTRACT

**BACKGROUND:**In clinical settings, atypical facial hyperpigmentation such as nevus of Ota, acquired bilateral nevus of Ota-like macules (ABNOM), melasma, and café-au-lait spots are often missed and misdiagnosed. Summarizing in vivo reflectance confocal microscopy (RCM) features of the hyperpigmentation is helpful in the diagnosis of ambiguous lesions. **METHODS:**We recruited 196 patients referred for unequivocal facial hyperpigmentation, including 55 patients with nevus of Ota, 45 patients with ABNOM, 62 patients with melasma, and 34 patients with café-au-lait spots. The RCM images were evaluated at the epidermis, the dermis-epidermis junction (DEJ), and the upper papillary dermis from both hyperpigmented patches and normal skin. **RESULTS:**In the superficial and middle dermis, 41 of 55 patients (74.5%) with nevus of Ota were characterized by a cord-like or lumpy structure between the collagen fibers. And there was no melanin deposition detected in the dermis in 14 of 55 (25.5%) patients. In ABNOM, 37 of 45 (82.2%) patients were characterized by a cord-like or lumpy structure in the superficial dermis and 8 of 45 patients (17.8%) was no melanin deposition detected in the dermis. The epidermis was no difference between nevus of Ota, ABNOM, and the normal skin. Melasma was detected increased cobblestone pattern in the epidermis of all patients, branching architecture in 21 of 62 patients (33.9%), and focally aggregated round to triangular cells in the upper dermis of 18 of 62 patients (29.0%). In all patients with café-au-lait spots, increased cobblestone pattern in the epidermis and regular and increased density of ringed pattern in the DEJ were visualized. **CONCLUSIONS:**Our findings indicate that RCM may be useful in the auxiliary diagnosis of nevus of Ota, ABNOM, melasma, and café-au-lait spots. © 2019 John Wiley & Sons A/S. Published by John Wiley & Sons Ltd.

**KEYWORDS:**acquired bilateral nevus of Ota-like macules; café-au-lait spots; face; hyperpigmentation; melasma; nevus of Ota; reflectance confocal microscopy PMID: 31544996 DOI: 10.1111/srt.12782