

ABSTRACT
BACKGROUND: Flat pigmented facial lesions are difficult to diagnose even with dermatoscopy. It is controversial how additional information obtained by in vivo reflectance confocal microscopy (RCM) impacts the diagnosis and management. OBJECTIVE: To examine what in vivo reflectance confocal microscopy of flat pigmented facial lesions adds to clinical examination using dermatoscopy including digital dermatoscopic monitoring. METHODS: We prospectively collected 70 cases of flat pigmented facial lesions and recorded diagnoses and management decisions by experts based on direct clinical examination aided by dermatoscopy including digital dermatoscopic monitoring and by remote experts who reviewed the corresponding confocal images. The expert confocal readers were blinded to the clinical and dermatoscopic appearance of the lesion. RESULTS: The sensitivity of dermatoscopy plus digital dermatoscopic monitoring was 95.0% (95% CI 75.13% to 99.87%) and the specificity 84.0% (95% CI 70.89% to 92.83%). The sensitivity of RCM was 95.0% (95% CI 75.13% to 99.87%) and the specificity 82.0% (95% CI 68.56% to 91.42%). CONCLUSION: Although most flat pigmented facial lesions can be managed by clinical examination and dermatoscopy alone, confocal microscopy is a useful adjunct in selected lesions. If RCM is not correlated with clinical and dermatoscopic information there is risk of overdiagnosis of actinic keratosis, however. This article is protected by copyright. All rights reserved. PMID:28214381
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