

Reliability and inter-observer agreement of dermoscopic diagnosis of melanoma and melanocytic naevi (Article)

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Abstract

The aim of this study was to analyse the reliability and the inter-observer agreement of dermoscopy in the diagnosis of melanocytic skin lesions. Nine dermatologists, with a different training experience and who routinely used dermoscopy in different hospitals in Italy, evaluated clinical and dermoscopy photographs of 15 melanocytic lesions (four invasive melanomas, four histologically common naevi, and seven naevi with histological atypia). A further series of dermoscopic photographs of 40 melanocytic lesions was evaluated to quantify inter-observer concordance in recognizing dermoscopic criteria. Compared to the true (histological) diagnosis, clinical diagnosis (categories: melanoma, common naevus, atypical naevus) was correct in 40% of cases (range, 27-53%). The percentage raised to 55% (40-73%) by the use of dermoscopy, with an average improvement of 15.6%. Concerning melanoma, clinical diagnosis resulted in a sensitivity of 41.9%, specificity of 77.8%, positive predictive value (PPV) of 36.1%, negative predictive value (NPV) of 81.8%. By using dermoscopy, an improvement of diagnostic performance was found (sensitivity 75%, specificity 88.8%, VPP 71.0%, VPN 90.7%). The inter-observer agreement in melanoma diagnosis, by using dermoscopy, was similar to that obtained by clinical examination (k statistics = 0.54 and 0.52, respectively). Concerning dermoscopic criteria, the best agreement among observers was found for pseudopods, a dermoscopic parameter related to the radial growth phase of melanoma. We conclude that dermoscopy is an useful tool for a non-invasive diagnosis of

melanocytic skin lesions, improving the diagnostic performance compared to clinical examination.