

Objective assessment of vitiligo with a computerised digital imaging analysis system

Abstract

An objective tool to quantify treatment response in vitiligo is currently lacking. This study aimed to objectively evaluate the treatment response in vitiligo by using a computerised digital imaging analysis system (C-DIAS) and to compare it with the physician's global assessment (PGA). Tacrolimus ointment 0.1% (Protopic; Astellas Pharma Tech, Toyama, Japan) was applied twice daily on selected lesions which were photographed every 6 weeks for 24 weeks. The primary efficacy end-point was the mean percentage of repigmentation (MPR), as assessed by the digital method (MPR-C-DIAS) or by the PGA. The response was categorised into none (0%), mild (1–25%), moderate (26–50%), good (51–75%) and excellent (76–100%). MPR-C-DIAS: Out of 56 patients, 44 (79%) responded. Overall, the response was mild in 22 (39%), moderate in 21 (40%) and good in one (2%) patient(s). A total of 39 (70%) patients responded as measured by PGA. The repigmentation was mild in 27 (48%), moderate in 10 (18%) and good to excellent in two (4%) patients. The κ test of consistency was 0.17 ($P = 0.053$), which shows poor agreement between the two assessment methods, although this is not statistically significant. The C-DIAS can be used to perform an objective analysis of repigmentation or depigmentation in vitiligo skin lesions in response to treatment.

Keyword: Assessment method; Vitiligo; Objective; Computerised; Digital imaging analysis