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Assessment methods for the evaluation of vitiligo.

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ABSTRACT

There is no standardized method for assessing vitiligo. In this article, we review the literature from 1981 to 2011 on different vitiligo assessment methods. We aim to classify the techniques available for vitiligo assessment as subjective, semi-objective or objective; microscopic or macroscopic; and as based on morphometry or colorimetry. Macroscopic morphological measurements include visual assessment, photography in natural or ultraviolet light, photography with computerized image analysis and tristimulus colorimetry or spectrophotometry. Non-invasive micromorphological methods include confocal laser microscopy (CLM). Subjective methods include clinical evaluation by a dermatologist and a vitiligo disease activity score. Semi-objective methods include the Vitiligo Area Scoring Index (VASI) and point-counting methods. Objective methods include software-based image analysis, tristimulus colorimetry, spectrophotometry and CLM. Morphometry is the measurement of the vitiliginous surface area, whereas colorimetry quantitatively analyses skin colour changes caused by erythema or pigment. Most methods involve morphometry, except for the chromameter method, which assesses colorimetry. Some image analysis software programs can assess both morphometry and colorimetry. The details of these programs (Corel Draw, Image Pro Plus, AutoCad and Photoshop) are discussed in the review. Reflectance confocal microscopy provides real-time images and has great potential for the non-invasive assessment of pigmentary lesions. In conclusion, there is no single best method for assessing vitiligo. This review revealed that VASI, the rule of nine and Wood's lamp are likely to be the best techniques available for assessing the degree of pigmentary lesions and measuring the extent and progression of vitiligo in the clinic and in clinical trials.