

〈教育セミナー〉

第48回教育セミナー (2023)・「皮膚を見る・観る・診る～最新の可視化技術レビュー～」

実臨床における皮膚及び皮膚付属器官の非侵襲的計測方法

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Non-Invasive Measurement Methods for Skin and Skin Appendages in Real Clinical Practice

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Abstract

Reconsidering what is measured non-invasively in actual clinical practice on the skin and its appendages, most of which are assessed through palpation and visual inspection. In this lecture, we particularly attempted to review existing reports and knowledge regarding the characteristics of the skin, hair, secretion, and function of sebum and sweat, and also introduced the sweating evaluation methods conducted in our facility. The specific contents are as follows: Hair evaluation focuses particularly on alopecia, including hair pull test, trichoscopy, and the Severity of Alopecia Tool (SALT). Blood flow assessment involves palpation, visual inspection, perfusion pressure, and laser Doppler. Skin color is evaluated using Wood's lamp (for vitiligo and infection assessment), spectrophotometer, and skin thickness (Modified Rodnan Total Skin Thickness Score). Sebum evaluation includes oil blotting papers and indirect methods. Skin temperature assessment involves palpation and thermography. Sweating tests include the Minor method and its variants (iodine-starch reaction-related methods: classical Minor method, Sato's iodine-starch method, Wada's modification), sweat droplet replica method using iodine paper, replica collection of sweat droplets and pores using silicone rubber, weight method using filter paper, ventilated capsule method, Quantitative Sudomotor Axon Reflex Test (QSART) using acetylcholine, sweat camera, and central nervous system evaluation (Schellong test, head-up tilt test, etc.) were outlined.

Key words: skin, skin appendages, measurement, method, real clinical practice.