Effects of Acupuncture on Human Skin Characteristics

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Abstract

[Objective] As the Japanese medical system incorporates various holistic approaches, interest in acupuncture treatment is increasing. Acupuncture has been proven to be effective in the treatment of atopic dermatitis. This present study investigated whether or not acupuncture treatment can affect the skin condition. [Methods and Results] Tape stripping was performed on inner forearm skin of fourteen healthy male subjects, to disrupt the skin barrier functions. Subsequently, a 15-minutes-acupuncture treatment was given to half of the subjects by inserting a needle to a depth of 5 mm into 6 points around the tape-stripped area and 6 acupoints on the legs and arms. Capacitance and trans-epidermal water loss (TEWL) levels were measured at hour 0, 1, 3 and 24 after the treatment. At hour 24, rate of recovery in TEWL in the acupuncture treatment group was higher than non-treatment group. Long-term repeated treatment: A total of 20 healthy men with higher TEWL levels on the cheek were chosen as subjects. A 10-minutes-acupuncture treatment was given to half of the subjects on 20 acupoints once every week during a 12-weeks-period (Jan.–May). At 4-week intervals, the levels of capacitance and TEWL were measured on the cheek and inner forearm. Tape stripping was performed after the measuring on the inner forearm. Then, the level of TEWL on the tape-stripped area was measured at hour 0, 3, 24 and 48. On the cheek TEWL values were significantly lower in the acupuncture treatment group than the non-treatment group at weeks 4 and 12. And at week 12, the change in TEWL after tape stripping on the inner forearm was smaller in the acupuncture treatment group than the non-treatment group. [Conclusion] Acupuncture treatment was found to be effective in preventing skin from losing skin barrier function, as well as accelerating the recovery of skin barrier disruption. However, long-term repeated treatment would be necessary in clinical practice.

Key words: acupuncture, skin barrier function, tape stripping, TEWL, capacitance.

1. 緒 言

皮膚はそのみで機能しているのではなく、生体内と連動して機能していると考えられる。例えば、ストレス、栄養素などによる生体内の変化は皮膚に影響を与え、一方で皮膚においても外界から光、熱刺激などが高み、その影響は皮膚にとってとどまらず、生体内にも変化をもたらすことが考えられる。われわれは、現状ではほとんどわからていない皮膚と全身生理との関連性を解明するために、全身へ影響を及ぼすと言われている鍼灸に着目した。

鍼灸は鍼と灸という微細な物理的刺激を用いた非薬物療法であり、物理的刺激によって自然治癒力を最大限に引き上げ、自然の予防と治療に寄与することを目的としている。また、鍼灸医学特有の考え方として経絡経穴系があり、これは簡単に言うと体表（皮膚）と体内を結ぶネットワークで、すなわち全身の機能を正常に維持する調節系であると言える。このことや、鍼灸は精神と身体が相互に関連している心身一元という考え方に基づいていることなどから併せて考えると、皮膚と身体との関

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