

Thermal symmetry of skin temperature: normative data of normal subjects in Taiwan.

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Abstract

BACKGROUND:

The aims of this study were (a) to establish normative data of thermal symmetry (left vs. right) in normal subjects; (b) to compare the skin temperature in various regions between young and old people in Taiwan and between male and female.

METHODS:

The skin surface of 57 healthy volunteers (aged 24 to 80 yr) was divided into 25 areas and measured by an infrared thermography (Avionics TVS-2000, Japan). The average temperatures of these 25 regions were compared: (a) left vs. right side, (b) young (< or = 60 yr, n = 37) vs. old (> 60 yr, n = 20), and (c) male vs. female. Student's t-test was used to assess means between both groups.

RESULTS:

The neck carried the highest skin temperature (31.9 degrees C +/- 0.6; mean +/- SD) of the body in comparison with the toes that had the lowest one (27.5 degrees C +/- 2.0). The side-to-side temperature differences were subtle, which did not exceed 0.5 degrees C. The average skin temperature of elderly was slightly lower than that of young subjects in 11 out of 25 areas ($p < 0.05$), especially the distal parts of extremities. Elderly female had lower skin temperature in various truncal areas as compared with their counterpart. However, the skin temperature was higher in the distal extremity ($p < 0.05$).

CONCLUSIONS:

The thermoregulatory system is substantially symmetrical. The result of this study offered valuable normative database on skin thermal symmetry in normal population of Taiwan, and may be useful as a diagnostic aid in patients with various states of disorders associated with autonomic dysfunctions.

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