

II. Substantiation of the Existence of Acupuncture Meridians

1) Evidence of the Meridians - Triple heater meridian -

(1) Experimental Method

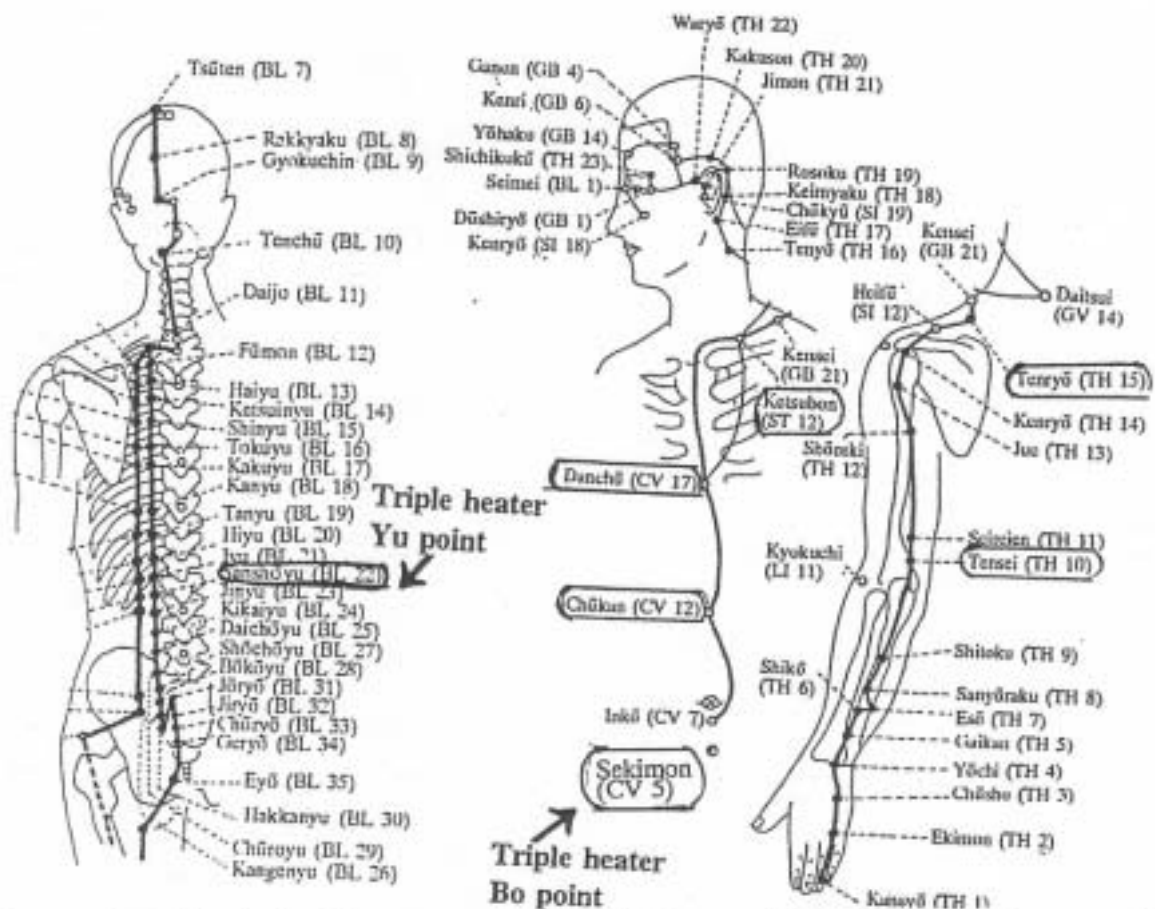


Figure 1: Points for Measurements - Evidence of the triple heater meridian -

(A) Small disk electrodes (of the type used for EEG measurements) were placed on selected acupuncture points of the left triple heater meridian and on the right palm, and an indifferent electrode was placed on the right wrist (Figure 1). First, a rectangular wave pulse stimulus of 20V was applied to the Sei point of the triple heater meridian (TH1) at the tip of the fourth finger, which caused an immediate sensation of pain, and a few milliseconds later GSR responses were obtained at each measuring point. This is an overall

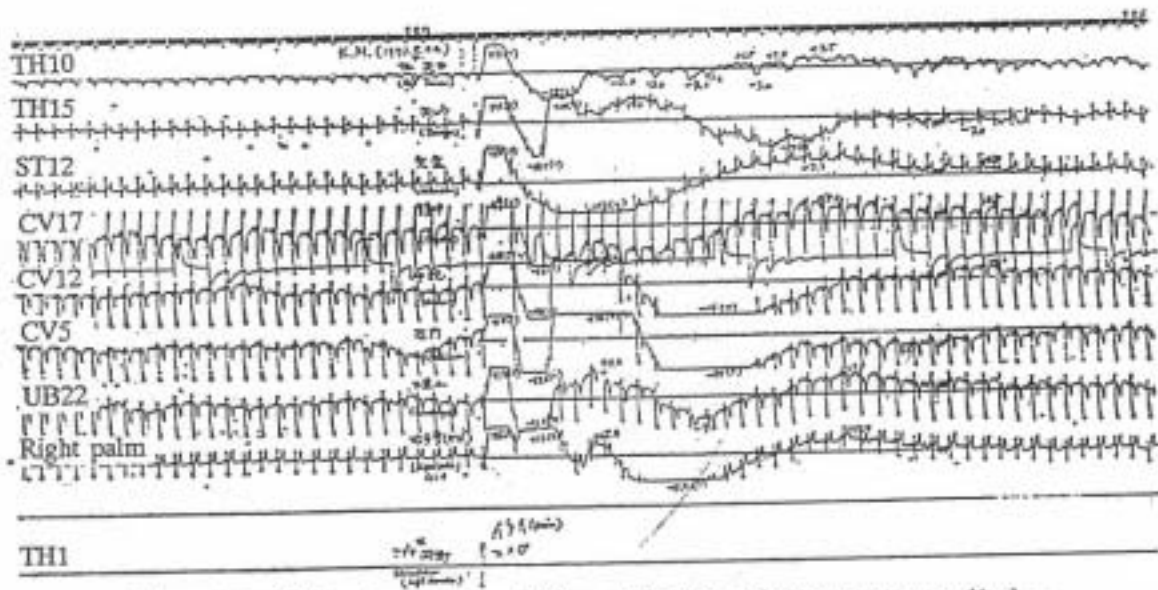


Chart 1: Stimulation on TH1 - 20V stimulation was applied -

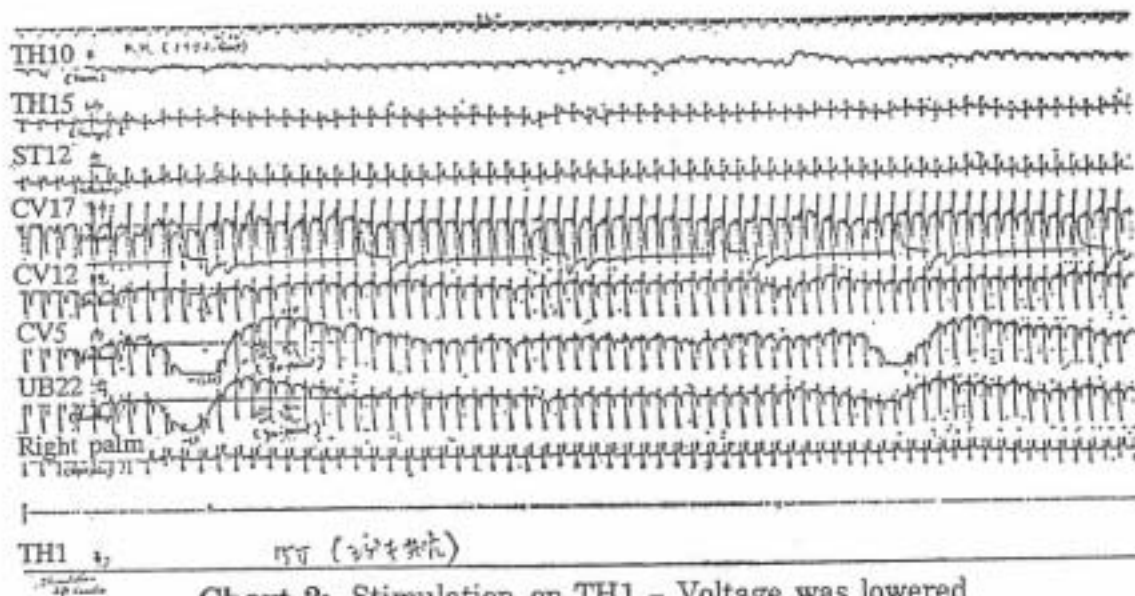


Chart 2: Stimulation on TH1 - Voltage was lowered to a point where no pain was felt -

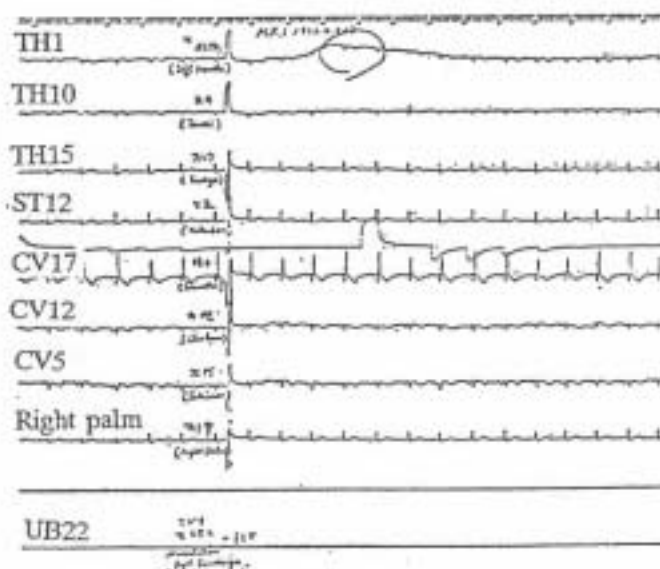


Chart 3: Stimulation on Left UB22

physical reaction caused by excitation of the sympathetic nervous system (Chart 1).

(B) Next, the voltage was lowered to a point where neither the sensation of pain nor the stimulation could be felt, and electricity was applied to TH1 point. Two to three seconds after this stimulation, the GSR response appeared only in triple heater meridian Yu point on the back and the frontal Bo point. Furthermore, a similar response was recorded again about 30 seconds later (Chart 2). When the stimulation point was changed to the left Yu point of this triple heater meridian (UB22) on the back, there was no response monitored from any of the points except the triple heater Sei point (TH1) on the tip of the fourth finger (Chart 3).

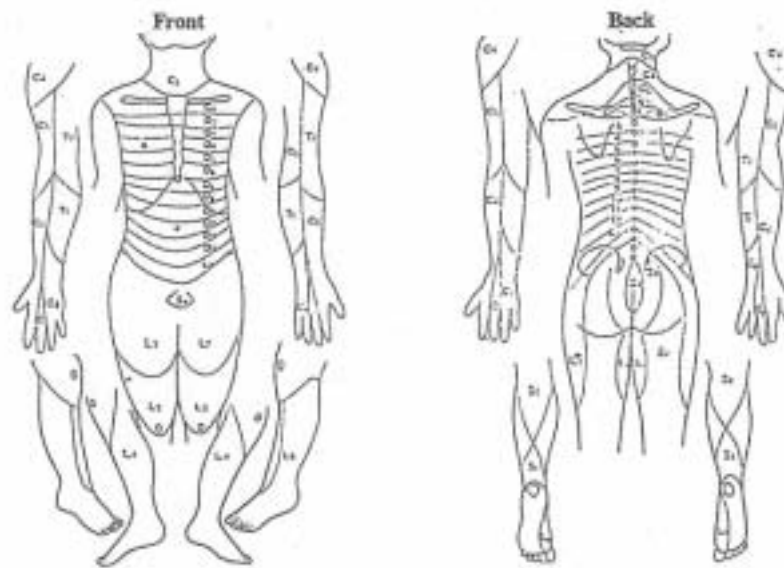


Figure 2: Spinal Nervous Dermatome

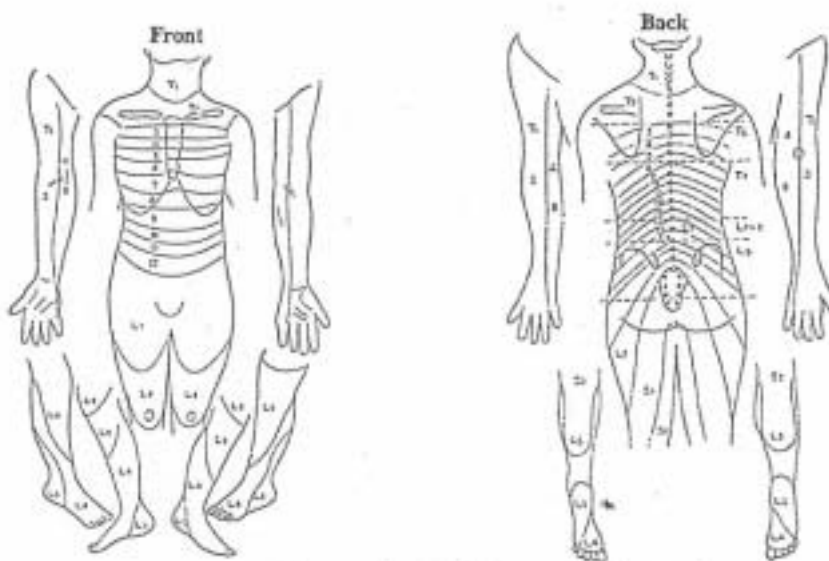


Figure 3: Sympathetic Nervous Dermatome

(2) Observations

The results of test (A) indicated a simultaneous overall physical reaction of the nervous system caused by excitation of the sympathetic nervous system due to electrical stimulation.

However, the results of (B) indicated a local response which cannot be considered to be an overall physical response of the sympathetic nervous system. Further, when the Sei point was stimulated, responses were recorded only from the Yu point on the back and the frontal Bo point (which are traditionally said to be closely connected to the stimulation point via the triple heater meridian). Also, when the Yu point on the back was stimulated, a response was obtained only at the Sei point at the tip of the finger. The present science of neurophysiology does not, however, know of a direct connection between these points.

From a knowledge of the dermatome related to both the spinal and sympathetic nervous systems (Figures 2 & 3), it can be presumed that there also exists a stimulus and response system which is different from that of the nervous system. Apparently this system is related to the electrical behavior of body fluid in the skin as mentioned in the previous section, because both of these behaviors are related to the polarization resistance of the skin. (Please refer to sections III. & IV. of this chapter.)