

## Adrenaline and noradrenaline concentration in the organ surface Bonghan sample measured by enzyme-linked immunosorbent assay

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### Abstract

**Objectives:** We measured hormones in the organ-surface Bonghan corpuscles (BHC) of rabbits by using ELISA method. Possible neurophysiological connection to the Bonghan samples was investigated through the measurements of the hormones such as adrenaline and noradrenaline.

**Design:** Rabbits were anesthetized with the urethane solution administered intraperitoneally and the samples were searched on the organ surface. For the control samples, pieces of the adrenal gland, heart tissue, blood and urine were also prepared. Quantitative determination of the catecholamine concentrations were made by using commercially available ELISA kits for the enzyme immunoassay.

**Results:** The data showed higher concentration of adrenaline but lower concentration of noradrenaline in the BH samples compared with those in blood plasma. In addition the ratio of the adrenaline and noradrenaline in the BHC was exceptionally high compared with that of the control tissues.

**Discussion:** The large difference in the ratio of adrenaline and noradrenaline concentrations may imply that the BH samples have different physiological functionality compared with those of the control samples. The relationship between this findings and the acupuncture effects are not yet understood, but they may be an important clue for finding further relations between the samples and acupuncture.

**Keywords:** Adrenaline, Noradrenaline, Organ surface Bonghan sample, Enzyme-linked immunosorbent assay

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