THE EFFECTS OF ACUPUNCTURE VIEWED FROM POSITRON CT (PET) REPORT

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The positron CT (PET) was used to trace the effects of electro-acupuncture stimulation on CBF, OEF and CMRO2.

(Method)
Subjects included healthy volunteer, and brain tumor and CVA patients.

As a quantitative measurement of C15O2 and C18O2 gas radioactively labeled as 15O and 18O were inhaled through the use of a spirometer. For stimulation points, Shosanli-Hoku selected, with 2Hz voltage and current applied locally for 10 minutes at an intensity capable of causing light muscle twitching.

The ROI were established inside the PET images, with values traced for CBF, OEF and CMRO2.

(Results)
The PET images in term of CBF and OEF was different following electro-acupuncture stimulation. Subjects of accelerated activity in both sides of the cortex were recorded.

COMPARISON OF RI-CISTERNOGRAPHY WITH CT-CISTERNOGRAPHY

RI- and CT-cisternograms were compared regarding ventricular filling and convexity flow in 29 aged patients. Ventricular reflux was observed in 27 cases by both cisternograms, while in two cases no ventricular reflux was shown by either method. As far as concerning ventricular reflux, there was no disparity between two methods. Arrival time of agents into ventricular les was not significantly different between these methods. However, amount of the dye entered into ventricles seems to be significantly different in 6-hour CT-cisternogram in several cases. But RI-cisternogram showed no difference by RI-cisternogram. Convexity flow was more accurately delineated by CT-cisternogram. Total of the head counts at 6 hour divided by total counts at 24 hours was expressed as C24/C6, indicating an absorption rate of CSF by RI-cisternogram. A counterpart of C24/C6 by CT-cisternogram was calculated by summing densities of the Sylvian fissure, ventricles, brain tissue and sulci. A good correlation was obtained between both RI and CT C24/C6 ratio. RI-cisternogram was concludes as a sensitive method as CT-cisternogram regarding diagnosis of ventricular reflux.


Regional cerebral blood flow (rCBF) changes in epidural hematoma model rats were analyzed by reference sample method using N-isopropyl-p-I-125-iodoamphetamine. Gummy balloon was set in epidural space of the rat brain and arterial and venous catheterization was performed. After 0.1mL of water was injected into the balloon by one minute, I-125-IMP was injected intravenously and continuous arterial blood sampling was immediately performed for three minutes. Rats were decapitated and autoradiography was performed. Perfusion defect was observed at the compressed area but increase of perfusion that shows the increase of rCBF was also observed around the compressed area. rCBF value was almost 0 at the perfusion defect area but that of the perfusion increased area where normal rCBF value was under 200ml/100g/min. was over than 300ml/100g/min. This technique seems to be useful for understanding the pathophysiology of subdural hematoma.