

The Pathologic Physiology of the Patient with Aphasic Syndrome— with the Special Reference to the Regional Cerebral Blood Flow and Cerebral Metabolism—

H. ENDO, T. OOUCHI, T. OYAMA, K. OANA and H. KANAYA

*Department of Neurosurgery, School of Medicine,
Iwate Medical University, Morioka*

Regional cerebral blood flow (rCBF) was measured bilaterally by means of 8 channel scintillation detectors after intracarotid injection of Xe 133 in 7 patients with akinetic mutism. The findings obtained are as follows:

1) In the 4 patients with neurological difference between the left and right hemispheres, it was statistically significant that lower values of rCBF and higher values of cerebral vascular resistance (CVR) in the defective hemisphere were found when compared with the rCBF and CVR of the intact hemisphere and with postoperative cases with acute sub-

dural hematoma.

- 2) It is clear that vascular response for the changes of intravascular pressure is different between left and right hemispheres in akinetic mutism with symmetric neurological findings.
- 3) In the defective hemisphere of akinetic mutism, cerebral circulation has disautoregulation but maintained vascular responses for PaCO₂.
- 4) Cerebral metabolism of akinetic mutism decreases to an abnormal level and it may have an effect on cerebral circulation.