Summary

Technical Investigation of Cerebral Blood Flow Measurements Using the Patlak Plot Method
—A Contrivance for Positioning of the Gamma Camera at Data Collection in Radionuclide Angiography—

Akihiro Takaki*, Kazuhiro Okada*, Johji Urata*, Toshiro Yonehara**, and Yoshihiko Mizuta***

*Division of Diagnosis Imaging Center, Saiseikai Kumamoto Hospital
**Division of Neurology, Stroke Center, Saiseikai Kumamoto Hospital
***Daiichi RadioIsotope Laboratories, Ltd.

The time-activity curve for the aortic arch obtained from radionuclide angiography (RNA) is handled as an input function parameter according to the method of Matsuda et al., which determines regional cerebral blood flow non-invasively. The data are collected from a frontal view of the thorax captured by RNA by their method, however we encountered a case in which it was difficult to identify aortic arch in the data collection from the frontal view. The precise identification of the aortic arch was implemented when the RNA data were collected from the left anterior oblique view of the thorax. No significant difference was noted in the measured values between the data collection from the frontal view and from the left anterior oblique view. Our method seems to be useful modification of the Patlak plot method.

Key words: 99mTc-ECD, Patlak plot, mCBF, Radionuclide angiography, BPI.