Summary

Evaluation of the Product Specific Standard Input Function for the IMP-ARG Method

Tohru SHIGA*, Tomohito KAJI*, Tomoya KOHNO*, Hiroyuki KAGEYAMA*, Chietsugu KATOH**, Jun HATAZAWA***, Naohiko OKU***, Isamu NARABAYASHI****, Hitoya OHTA****, Tsuyoshi KOMORI****, Masuo HAYASHI**** and Nagara TAMAKI*

**Department of Nuclear Medicine, Hokkaido University Graduate School of Medicine*
***Department of Health Sciences, Hokkaido University School of Medicine*
****Department of Nuclear Medicine and Tracer Kinetics, Osaka University Graduate School of Medicine*
*****Department of Radiology, Osaka Medical College*

To confirm the previous reports demonstrating the difference in the octanol extraction fractions between the currently available two *N*-isopropyl-4-iodoamphetamine (^{123}I) products (IMP_A and IMP_B), we newly developed the standard input function for IMP_B in 19 healthy volunteers and compared it with the established standard input function, which has been originally generated with IMP_A.

The octanol extraction fractions of IMP_B were stable from 5 minutes to 16 minutes post injection and significantly higher than those of IMP_A. The mCBFs calculated with IMP_B by using the established standard input function for IMP_A tended to be higher than those with the combination of IMP_A and the established standard input function though the difference was not significant.

When measured with IMP_B combined with the correspondent standard input function, mCBFs were identical to those calculated with IMP_A with the established standard input function, suggesting that the appropriate standard input function should be used according to the product used.

Key words: IMP, Standard input function, ARG method, CBF.