Although these values indicated that the efficacy of adding the SPECT images was not as good as we expected, there were cases in which the SPECT images were definitely helpful in identifying SOLs. One of the reasons of such unfavorable results with SPECT images might be due to the fact that the participants were unfamiliar with the images offered from other hospitals. Next trial is now being planned to be performed on the rest of the patients group.

A single photon ECT with N-isopropyl (I-123)-iodoamphetamine was performed in 20 patients who were suspected of cerebral vascular disorders. Dectability as to ischemic regions by ECT with I-123 IMP and transmission CT scan(TCT) was comparable in 11/14(78%) in cerebral infarction. ECT showed false positive findings in 2 cases without an infarction. Free false negative cases showed small low densities in a white matter, basal ganglia and pons and also were imaged using high sensitivity collimator for medium energy. As false positive causes, reconstruction technique might be appriciated. ECT with I-123 IMP could not be superior than TCT in demonstration of cerebral infarcted areas. However, this could be due to our immature experience as to a new technique and cloud not mean radiopharmaceutical inferiority of I-123 IMP for demonstrating cerebral disorder rather than by TCT.

I-123-IMP have recently been developed for tomographic measurement of cerebral blood flow in patients with cerebrovascular disease. This paper describes a fundamental study of I-123-IMP imaging by SPECT using phantom. The instruments used was a GE MaxiCamera 400A/T with various collimators such as low energy general purpose collimator(LEGP), low energy high resolution collimator(LERH) and medium energy general purpose collimator(MEOP). Reconstruction was performed by a filter back projection method using GE MaxiStar computer system with 64x64 matrix image. In our study in this series, high sensitivity was found in the data with LEP than those with LEHR or MEOP. In addition, high contrast resolution was shown in the data with LEP and with LEHR than those with MEOP. The sampling time for each projection was offered enough information density with 30 seconds per projection. From our data suggested that the clinical procedure for I-123-IMP imaging in patients with cerebrovascular disease recommended with LEGP collimator and with recorded the data for 30 seconds per projection.