REGIONAL CEREBRAL BLOOD FLOW ANALYSIS BY Xe-133 INTRA-ARTERIAL INJECTION METHOD: A COMPARISON WITH CEREBRAL INFARCTION AND CEREBRO-VASCULAR DEMENTIA. S. Watanabe, K. Miyakawa, G. Kamijima, Y. Sasaki, H. Kurosawa, M. Takano, Y. Miura and Y. Maruyama. Toho University School of Medicine, Tokyo.

After bolus injection of 5 mCi Xe-133 saline solution into the internal carotid artery, 16 lateral head images were taken at ten-second intervals by LFOV γ Camera. Simultaneously, data was acquired by scinti-pac 1200 at five-second intervals using lateral projection, 120 frames. Regional CBF was measured on 80 ~ 100 ROI by two-compartmental analysis and the height-over-area method. Ten cases of cerebral infarction were investigated. Four were cerebro-vascular dementia. Nine were male and one was female. Ages ranged from 38 to 72, with a mean age of 57.6 years. Cases of cerebro-vascular dementia tended to have a lower mean CBF value by two-compartmental analysis. In a comparison of regional CBF and cerebro-angiographical findings, cases of cerebro-vascular dementia tended to have a lower mean CBF value in proportion to the severity of angiographical findings. In addition, regional CBF showed a tendency to agree closely with angiographical findings.