Seven cases of other brain diseases such as CVA, AVM, or traumatic hemorrhage, were studied also by these two labels. In these cases, conventional ^{99m}Tc-pertechnetate scan were found to be of value since no accumulation of ^{99m}Tc-Ps. to these not malignant brain diseases was observed. This fact could be used for the immediate differentiation of CVA from malignant brain neoplasma.

Animal study was also performed in tumor bearing rabbit with VX_2 tumor. Tumor size was approximately 5 cm in diameter had central necrosis and subcutaneous infiltration to the back of the animal. Tumor accumulates ^{99m}Tc-Ps, however, no activity was found in the necrotic areas.

In summary, in addition to the previously reported tumor scan agents, ^{99m}Tc-Ps. were found to be of value as a tumor scan agents. Among several soft tumor visualizations, authors are especially impressed by the value of brain tumor diagnosis by ^{99m}Tc-Ps. Some cases with faint visualization by ^{99m}Tc-pertechnetate were clearly visualized by ^{99m}Tc-Ps. This strongly suggest us, the brain scan with two ^{99m}Tc-labels, ^{99m}Tc-pertechnetate and ^{99m}Tc-Ps. should increase diagnostic accuracy and probably serve for immediate differentiation of brain tumor from CVA.

Study for Diagnosis of Breast Carcinoma by the Measurement of Tumor Blood Flow using ^{133}Xe Clearance

H. MUNECHIKA, I. AIDA, Y. KOGA and S. HIRABAYASHI
Department of Radiology, School of Medicine, Showa University, Tokyo
T. SATO and K. SHIMIZU
Department of Surgery, School of Medicine, Showa University, Tokyo

The investigation on correlation among blood flow, histological pattern and capillary quantity was carried out in the breast carcinoma.

The blood flow of tumor was calculated from a half time ($T\ \frac{1}{2}$) examined by ^{133}Xe clearance curve and following formula.

$$\text{BLOOD FLOW (ml/100g/min)} = 100 \cdot \lambda \cdot \log_e 2/T\tfrac{1}{2}$$

The angiography was performed on the resected breast tissue. The resected breast tissue was made into slices of 2–4 mm thick after fixation and microangiography was taken.

As a results, 1) significant difference was observed in blood flow between scirrhous carcinoma and others but not between medullary tubular carcinoma and papillary tubular carcinoma. 2) Capillary quantity was poorer in scirrhous carcinoma than in medullary tubular carcinoma as well as in papillary tubular carcinoma.

In the breast carcinoma, blood flow as well as capillary quantity were by no means identical according to the histological pattern and there was a good correlation between blood flow and capillary quantity.

It is possible to differenciate scirrhous carcinoma and benign tumors at 10.0 of blood flow but could not necessarily be confirmed.