the isotope counting rates of the lesion.

As commonly said, pathological cell activity or tumoral edema might be important factor to express the positive scan, and vascularization and volume of vessel in tumor tissue were seen more important factor than above two.

Now, to obtain better corrected diagnosis, and to get an attempt of preoperative histological verification of brain tumor, ultrasonotomographic procedure was adopted together.

By the way brain tumor localization, the isotope scanning was successful on cerebral cortex and comparatively good at infratentorial portion, but had less value in deep midline.

On the other hand, ultrasonotomography was successful at supratentorial lesion except occipital lobe, and rather favourable at midline existence, but it was impossible to detect infratentorial lesion because of anatomical reason.

For these two procedures the difference of histopathological or morphological charactors of tumor tissues were thought to be influenced very much by contraries.

Cystic tumors were rather easily detected by ultrasonotomography, but reratively difficult by brain scan, especially in case of microcystic type.

On the contrary, infiltrative type of tumors were somewhat difficult to detect by ultrasonotomography.

The brain scan, as above mention, was much influenced by its vascularization and cell activity, and such tumors as meningioma, glioblastoma and metastic tumors were very succesfully diagnosed.

Thus we could have good results to diagnose the location of brain tumors, and rather interesting result of preoperative histological verification of brain tumor.

Brain Scanning with ^{113m}In-Fe-EDTA

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Brain scans with the new agent ^{113m}In-Fe-EDTA, made after the method of Stern et al, were performed. Scans are started 30 minutes after the intravenous injection of a dose of 100 to 300 microcuries per kg body weight. Positive scans were obtained in 11 out of 13 histologiscally verified cases. The 85 percent diagnostic accuracy of the brain scan with the new agent is fairly close to that of angiogram. Double scans with ^{203}Hg-Chlormerodrin and ^{113m}In-Fe-EDTA were performed in 7 cases. Four out of them were positive with ^{203}Hg-Chlormerodrin, while all cases were positive with ^{113m}In-Fe-EDTA. The 52.2 percent diagnostic accuracy of ^{203}Hg-Chlormerodrin scan is far lower than that of ^{113m}In-Fe-EDTA, but the rate of ^{99m}Tc scan is equal to that of ^{113m}In. Short half life (1.7 hr) and no beta emission of the new agent allows us to increase the dosage necessary for the clear delineation of the brain tumor. Besides, long-lived parent ^{113}Sn practically produces ^{113m}In in the generator for as long as about 6 months.