

under 30 ng/ml.

3) Remarkably high amounts of astroprotein were detected in patients with cerebral contusions, cerebral hemorrhages and acute subdural hematomas.
4) Serial measurement of astroprotein in cerebrospinal fluid showed it reached to the maximum value within several hours after cerebral damage and then gradually decreased to the control

value in 7–14 days.

From these results, it might be concluded that measuring astroprotein in cerebrospinal fluid is clinically valuable in the cases with cerebral tissue damages as an examination not only for making diagnosis but also for evaluating the grade of tissue injuries and the prognosis.

Re-examination of Regional Time-activity Curve with ^{99m}Tc -Pertechnetate in Cerebral Disease

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Several parameter which reflect changes in regional circulation has been measured. Regional cerebral circulation is commonly evaluated by imaging the first transit of ^{99m}Tc -pertechnetate, a relatively nondiffusible radiotracer, following an intravenous bolus injection, because of simplicity and safety as screening test for an out-patient.

Wagner et al. reported that the mean transit time (MTT) of ROIs can not be determined from the T/A curve because the shape of the T/A curve is a function of the physical shape of bolus of radiotracer as it enters the ROI as well as its mean transit time through the ROI.

The time in the ROI from injection to positive and negative peak by differentiating the T/A curve were measured. (MAT, MDT).

Difference of MAT, MDT were measured for each cerebral hemisphere as linear index of MTT whereas the detection of bolus division in the aortic arch was difficult clinically (dMAT, dMDT).
(Methods)

A-gamma-camera interfaced to computer was used to monitor the head from vertex position. Data frame were accumulated at a rate of 1/sec for about 50 sec after injection by Oldendorf's method.

Thirty cerebral dynamic records were studied in 11 patients with brain tumor, 19 patients with cerebrovascular disease.

(Results)

dMAT (difference of Mode of Appearance time) increased in the group of cerebrovascular disease in affected hemisphere except one patient.

dMDT (difference of Mode of Disappearance time) increased in the group of brain tumor in affected hemisphere except one patient.

Ratio of abnormal/normal relative volume from equilibrium count increased only the group of brain tumor. The parameter (dMAT, dMDT) presents very useful additional information to other routine examination for the screening and following study of the clinical case.