was a significant reduction in the occurrence and duration of postoperative symptom with this method.

In order to test this method we have performed pneumoencephalography in 97 cases.

The frequency and grade of postpneumoencephalographic headache and nausea was small in number and slight. Patient's discomfort was about 1/3 less than in the replacement method group.

The cerebrospinal fluid pressure raised 50-100 mm H₂O after the injection of 20-40 cc of air but it rapidly fell to preoperative level within 6-9 minutes, even though no cerebrospinal fluid has been removed.

65. Positive Contrast Medium Ventriculography Using Myodil

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In spite of its excellent diagnostic value, there are prevailing disadvantages in the positive contrast medium ventriculography, because of undesirable reactions sometimes encountered due chiefly to irritative effects of lipiodol.

Recently, we have performed ventriculography using MYODIL (ethylidophenylundecylate) in several cases of brain tumor causing obstructive hydrocephalus. Ventriculograms are clear and distinct with this medium, hence a precise diagnosis can be obtained. Side effects of MYODIL are milder than in case of lipiodol. In particular, hardly any side effects were recognized, when ventricular drainage has been done 2 or 3 days before introducing MYODIL.

Macroscopic and microscopic findings in brains of cats, following the introduction of MYODIL into their ventricles using stereotaxic apparatus are also reported.

66. Diagnosis of Brain Tumors etc. by Intracarotid Injection of I^{131} Solution

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There are many authors, who are trying to use isotope for the diagnosis of brain tumors etc. by measuring the intratumoral absorption of it. It is said that cerebral blood flow is lowered in brain tumors. I also confirmed it by Kety-Schmidt's N_2O method and supposed that there would be a difference of cerebral blood flow rate between each hemisphere, when space occupying lesions

existed. Then, I tried to measure cerebral blood flow rate directly by intracarotid injection of I^{131} physiologic salt solution on each side. The results were very prominent, showing remarkable differences between both sides, when lesions were proved surgically. Very characteristic waves were shown by scintillation probe. They were not only characteristic in their figures but also very useful for decision of prognosis. The isotope I used was under $50 \mu\text{c}$ on one side.

67. Relationship between the Localization of Brain Tumor and Temperature, Electrical Resistance and Perspiration Volume of the Skin

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The materials were fifty cases with brain tumor and seventy one cats lesioned experimentally in several parts of central nervous system. The results were as follows. 1) In cases with tumor or injury of the frontal lobe, skin temperature and perspiration volume lowered, but skin electrical resistance increased on the lesioned side other than on the healthy side. 2) In cases with tumor of the other brain lobe, the results were similar to the cases of frontal lobe lesion. But this tendency was gradually decreased going away from the frontal to the occipital lobe. 3) In cases with tumor of cerebellar hemisphere and cerebello-pontine angle, in contrast to supratentorial tumor, skin temperature rose, electrical resistance increased and perspiration volume decreased on the lesioned side. This tendency was more marked in cases with tumor of cerebellar hemisphere than in cerebello-pontine angle tumor. But the tendency could be scarcely observed in cases with tumor of the median part of cerebellum, although when agents affecting the autonomic nervous system like adrenalin etc. was administrated, there was a striking change of these values. 4) When chlorpromazine was administrated, the differences of skin temperature, electrical resistance and perspiration volume on either side markedly increased in proportion to the time after administration. These results suggest that measurement of the above-mentioned three factors is one of the guide-boards in deciding localization of brain tumors.