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DIAGNOSTIC VALUE OF RADIOISOTOPE CISTERNOGRAPHY COMBINED WITH INTRANASAL PLEDGETS IN CSF RHINORRHEA. H.Hiratsuka, T. Fukumoto, M.Aoyagi, T. Yamaguchi, K.Okada, Y.Inaba and M.Hasegawa. Departments of Neurosurgery and Otolaryngology, Tokyo Medical and Dental University. Tokyo.

The experience with the use of radioisotope cisternography in 18 cases collected in 1971-1980 at the Department of Neurosurgery, Tokyo Medical and Dental University is reported. In addition to the usual cisternography, we used intranasal pledgets for localisation of CSF rhinorrhea. The cotton pledgets are placed in the following regions; 1) sphenoid recess, 2) middle meatus and 3) cribriform region. The radioisotopes (^{131}I -RISA, ^{125}I -DTPA, ^{111}In -DTPA) are introduced by lumbar puncture. After scans are made at 4 or 5 hours, the pledgets are removed and the radioactivity are counted by well-type scintillation counter. Seven patients without CSF rhinorrhea are also examined for control of intranasal pledgets count. The usefulness of these combined method for identifying the fistulous tract so that the neurosurgeon can carry out a direct operation is emphasized.

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COMPARISON OF HIGH RESOLUTION CT AND RI SCINTIGRAPHY IN VARIOUS BRAIN LESIONS. H. Arai, M.Takahashi, Y.Tamakawa, H.Kurokawa. Department of Radiology, Akita University School of Medicine, Akita

Since the introduction of high resolution CT, brain scintigraphy has been performed in only selected cases. However the usefulness of brain scintigraphy in comparison with CT has not been settled yet. We compared CT and brain scintigraphy in 35 cases of brain tumors and 16 other cases. The detection rate of CT was higher than brain scintigraphy, especially in cases of posterior fossa tumors and recurrent tumors. In addition, CT was superior to brain scintigraphy to predict the nature of tumors or to demonstrate brain edema and accompanying conditions.

Brain scintigraphy is no more necessary in cases of tumors and other organic lesions if CT is available.

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INDICES OF INDICATION FOR SHUNT OPERATION OF NPH CASES IN THE AGED: EVALUATION BY RN, CT AND INFUSION TEST. S.Kawaguchi, M.Iio, Y.Hoshi, M.Fuse, K.Chiba, H.Yamada, H.Murata, M.Noguchi, E.Ohtake and S.Takaoka. Department of Nuclear Medicine and Radiological Sciences, Div. of Neurosurgery, Tokyo Metropolitan Geriatric Hospital, Itabashi, Tokyo.

The diagnosis of NPH have been performed by RN cisternography, metrizamide CT, infusion test etc. We reported also that there existed no relation between ventricular reflux in RN study and ventricular dilatation & PVL in CT study. The current therapy for NPH is shunt operation. In this report we evaluated the prognostic values of various findings in the selection of the cases for shunt operation of NPH by retrospective examination of various findings of RN, CT & infusion test.

Twenty-seven NPH cases performed L-P shunt operation were evaluated. They were 9 males & 18 females with average age of 72 (52-85). Post operation results were excellent in 9 cases, good in 7 cases, fair in 7 cases and unchanged in 4 cases.

Study of the successful surgery cases showed that those cases showed ventricular reflux, delayed CSF circulation in RN, A type in infusion test and less cerebral atrophy, less enlarged ventricle & less PVL in CT. The unsuccessful cases showed severe cerebral atrophy, enlarged lateral ventricle and marked PVL.

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SEQUENTIAL CHANGE OF CEREBROSPINAL FLUID cAMP CONCENTRATION AFTER CEREBROVASCULAR ACCIDENT. Hiroshi Ishimitsu, Shimpei Namba, Ken Nishimoto, Chiho Honada and * Susumu Nakasone. Department of Neurosurgery, Iwakuni National Hospital, Iwakuni. * Department of Neurologicalsurgery, Okayama University Medical School, Okayama.

(Method) The sequential changes of CSF adenosine 3'5' monophosphate (cAMP) concentrations after cerebrovascular accident (CVA) were investigated. Mainly lumbar and occasionally intraventricular concentration were measured in 100 patients of CVA (74 cases of them were intracerebral hemorrhages or cerebral infarctions, 26 were subarachnoid hemorrhages) at the various intervals until 3 months after the last attack. Values of cAMP were determined by radioimmunoassay.

(Results) Generally CSF cAMP concentration were increased to reach the peak at around a week after the attack followed by the gradual decrease to return to the control value. As we have mentioned about the correlation between the lower than 5 pmol/ml of cAMP concentration and the poor prognosis of disturbed consciousness in the acute stage, consistent lower cAMP levels were detected in the severe consciousness deterioration in the chronic stage CVA as well. From these results it might be mentioned that the correlation of CSF cAMP level with consciousness disturbance may serve as a prognosticating factor in CVA.