

3. There was no adverse reaction, such as aseptic meningitis, following ^{111}In -DTPA cisternographies.
4. The effective half-life of ^{111}In -DTPA was 16 hours, and that of ^{169}Yb -DTPA 22 hours in this series. This means the men were exposed to radioactivity less with ^{111}In -DTPA than with

^{169}Yb -DTPA.

5. However, there was no difference in diagnostic value between these two radiopharmaceuticals, even 48 hours after intrathecal administration. From this study ^{111}In -DTPA appears to be more suitable for RI cisternography than ^{169}Yb -DTPA.

A Comparative Study of Qualitative and Quantitative Radioisotopic Cisternography

K. SENDA, T. IMAEDA and S. MATSUURA

Department of Radiology, Gifu University School of Medicine, Gifu

It is the purpose of this study to compare qualitative and quantitative findings of RI cisternography with reference to CSF pressure.

RI cisternography was performed using scintillation camera in seventy two cases in which the disturbances of CSF dynamics were suspected. In addition to scintiphotos, external count rates in anterior and bilateral projections of the head were also computed at 3, 6, 24 and 48 hours after injection of ^{169}Yb -DTPA ^{111}In -DTPA into lumbar subarachnoid space. Quantitative finding was evaluated by means of the ratio of count rate at 24 hours or 48 hours to 6 hours after injection (respectively C_{24}/C_6 , C_{48}/C_6).

In comparison of qualitative and quantitative findings, it was evident that the ratio varied considerably from case to case recognized abnormal image of bilateral sylvian cistern though

abnormal accumulation image of parasagittal convexity had closed interrelationship with elevation of the ratio. The ratio showed significant ($p < 0.01$) difference between two groups in which narrow image and wide image of bilateral sylvian cistern. The group (14 cases) with the narrow image and the low ratio revealed high CSF pressure with a mean value of 272 mmH₂O and the pressure for 9 cases in this group were more than 200 mmH₂O. And, the group (8 cases) with the wide image and the high ratio revealed relatively low CSF pressure with a mean value of 149 mmH₂O and the pressure for 3 cases in this group were less than 80 mmH₂O. On the other hand, the group (6 cases) recognized ventricular filling and nondilatated ventricle revealed high CSF pressure with a mean value of 299 mmH₂O.