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### DIFFERENTIAL DIAGNOSIS BETWEEN SUBDURAL COLLECTION AND DILATED SUBARACHNOID SPACE BY RADIONUCLIDE CISTERNOGRAPHY

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Radionuclide cisternography in a group of 20 patients with a low density band between skull and brain parenchyma on CT was performed for differentiating subdural collection from dilated subarachnoid space due to brain atrophy or subarachnoid hygroma.

Radionuclide cisternography was done by the intrathecal administration of  $^{169}\text{Yb}$ -DTPA or  $^{111}\text{In}$ -DTPA, and images of four projections were obtained at 3, 24, 48, occasionally 96 and 120 hours after the injection.

The characteristic findings of cisternograms of subdural collection were decreased activity [cold area] on the lesion with delayed or asymmetrical convexity CSF flow. On the other hand, patients with dilated subarachnoid space showed a hot area or other abnormal CSF circulation, such as ventricular reflux or stasis, delayed CSF circulation or abnormal filling in the basal cisterns.

Seven cases of subdural collection and one case of subarachnoid hygroma were confirmed by the operation and all cases of the former showed cold areas on the cisternograms.

Radionuclide cisternography should be added to CT in the differential diagnosis of subdural collection from dilated subarachnoid space, if CT alone is equivocal.

### STUDIES ON SCINTICISTERNOGRAPHY IN SUDDEN DEAFNESS

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Scintiscisternography using  $^{169}\text{Yb}$ -DTPA or  $^{111}\text{In}$ -DTPA was performed in 19 cases with sudden deafness between September, 1976 and March, 1978. Normal patterns were seen in 6 (31%), and abnormal patterns were in

13 (69%). Exploratory tympanotomy was performed in 9 of all cases and round window ruptures were seen in 7. Of these 7 cases, 2 cases showed normal patterns, 4 cases showed slight delayed flows and 1 case showed transient ventricular reflux. The improvement in hearing of 7 cases in

whom round window ruptures were repaired was obvious in 3, slight in 1, but not changeable in 3. The recovery rate was 57%. On the other hand, the recovery rate 17% in the patients in whom round window ruptures were not repaired.

Scintiscisternographic findings were compared with the degree of the improvement in hearing. Of the normal patterns (6 cases), the improvement in hearing was obvious in 4, not changeable in 2. The recovery rate was 57%. Of the slight delayed flow patterns, the improvement in hearing was obvious in 1, slight in 1, not changeable in 5. The recovery rate was 29%.

The improvement in hearing was not observed in the obvious delayed flow pattern and persistent ventricular reflux pattern.