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EVALUATION OF INFANTILE LIVER CIRRHOSIS BY
DYNAMIC ANGIOSCINTIGRAM USING $^{99m}\text{TcO}_4^-$.
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Dynamic angioscintigraphic study of liver using $^{99m}\text{TcO}_4^-$ was originated for the evaluation of liver cirrhosis in children. It was examined on 50 cases of pediatric liver diseases including 26 cases of biliary atresia. After bolus injection of $^{99m}\text{TcO}_4^-$, count of RI on ROI of liver right lobe was measured by a scinticamera every one second and time activity curve was made. The curve got its peak at about 1 minutes after injection and gradually decreased thereafter. The ratio of the count of 8 minutes to the count of peak was calculated. The ratio ranged 49 to 98% according to the state of the cirrhoses of the cases. There is a significant correlation between the ration and liver fibrosis on cases with liver biopsy. Most of the cases (5/6) over 80% were associated with intestinal bleeding due to portal hypertension after liver cirrhosis, multiple examinations were performed on 6 cases that revealed the change of ratio according to the condition of liver cirrhosis of the cases. This is a simple and noninvasive method that can be easily performed on pediatric patients for evaluation and follow up of liver cirrhosis.

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COOPERATIVE STUDY ON THE CLINICAL EFFICACY
OF SPECT IMAGES OF THE LIVER
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Single photon emission computed tomogra-
phy (SPECT) were compared in 80 patients
examined to assess liver diseases. Liver
scintigraphic images and SPECT images of 453
were collected retrospectively from 9 medical
institution which were located in and around
Tokyo area. All cases were confirmed for
its final diagnosis. In order to evaluate
the results of image reading an input sheet
for computer was designed to describe the
confirmed diagnosis of each of 453 cases.
Among 453 cases, 80 were selected and the
reading were made with knowledge of patient
sex and age, palpatory information and
liver function tests by 13 doctors.

At the first study, the conventional
liver images only were read. The second,
both the conventional images and the SPECT
images were read. The results of reading
were recorded on the work sheet for computer
input.

By comparing the record of confirmed
diagnosis and the results of image reading
for individual case, various programs of
analysis are being undertaken.

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THALLIUM-201 PER-RECTAL SCINTIGRAPHY FOR
EVALUATING PORTAL CIRCULATION AFTER TREAT-
MENT. N.Tonami, K.Nakajima, N.Watanabe,
K.Yokoyama, M.Seto, H.Seki, T.Takayama,
K.Hisada and O.Sui. Dept. of Nuclear
Medicine, Kanazawa University.

We previously reported a new method for
evaluating portal systemic circulation by
Tl-201 per-rectal administration and indi-
cated that the heart/liver uptake ratio is
quite useful as an index of estimating the
degrees of portal-to-systemic shunt. (J.
Nucl. Med. 23:965-972, 1982). One mCi of
Tl-201 chloride was given rectally and
scintigram and heart/liver uptake ratio at
60 min. after administration (H/L) were
investigated before and after sclerosing
therapy of esophageal varices by direct
injection of ethanolamine oleate under
endoscopic guidance (9 patients, 13 studies)
and splenic artery embolization therapy
with gelatin sponge block (6 patients).
The mean value of H/L was decreased from
1.22±0.21 to 0.96±0.34 in 9 studies with
successful varices sclerosing therapy and
marked decrease of H/L and scintigraphic
change were observed in 2 studies, but
there were 7 studies showing no or a little
change, while in 4 studies of unsuccessful
sclerosing therapy, H/L was not signifi-
cantly changed. The mean value of H/L was
decreased from 1.15±0.26 to 0.84±0.27 in 6
patients who underwent splenic artery
embolization therapy but there was no
significant correlation between H/L change
rate and embolization volume of spleen.