Two Cases of Benign Hepatic Tumors (Echinococcus and Giant Hepatic Hemangioma)

Y. KOMATSU, M. KANO, S. TOMITA and A. SATO

The First Department of Internal Medicine, Hirosaki University, Hirosaki

Abstract:

Fifty-three cases of hepatic scintiphotos by gamma camera were studied after the intravenous administration of colloidal radioisotope gold—^{198}Au.

Among fifty-three cases, sixteen were hepatic cancer, one was hepatic fibrosarcoma and two were benign hepatic tumors, one of which was echinococcus, the other giant hepatic hemangioma and both of benign cases were presented in this report.

It is difficult to differentiate benign hepatic tumors from those of malignant ones on the scintiphotos.

It is noteworthy that the liver scintiphotos of both benign cases revealed large, round and sharp space-occupying lesions and those findings seemed to suggest some possibility in the differential diagnosis between benign and malignant groups.

Furthermore it seems possible to expect more objective and accurate findings in the differential diagnosis by use of the color scintiphotography jointly.

A Pathodynamic Study on the Liver and the Biliary System with ^{131}I-Labeled Rose Bengal

A. MATSUMOTO, T. MAEDA, I. NARABAYASHI and K. NARABAYASHI

Department of Radiology, School of Medicine, Kobe University, Kobe

In order to study the liver and the biliary system pathodynamically, we utilized ^{131}I-Rose Bengal. 300 μCi of ^{131}I-Rose Bengal was injected into 6 normal patients, 11 patients with cholelithiasis and 10 with liver disease.

The information was recorded on the videotape for 2 hours after the injection through a V.T.R. on line system, in which the γ-camera was connected directly with a videotape recorder. At 60 minutes after the injection, two yolk tablets were administered.

The information, recorded on the videotape, was led to the γ-camera to show the liver image on its C.R.T.; a split area was chosen with emphasis on the left lobe of the liver and on the gall bladder. Counts per 29.7 seconds in the split area were printed by the digital printer and plotted on the semilogarithmograph. This graphic pattern was divided into three compartments by half lifes of 6.5 minutes, 9.3 minutes and 100 minutes.

A distinct accumulation of ^{131}I-Rose Bengal in the gall bladder showed 20 minutes after the injection in the gall bladder area. Counts per 29.7 seconds in the gall bladder area increased until the administration of 2 yolk tablets; after that the counts began to decrease gradually.

In the case of cholelithiasis, the image of the liver first appeared on the C.R.T. just 20 minutes after the injection; that of the gall bladder was observed 50 minutes after the injection. The three phases for the accumulation curve on the left lobe of the liver were not different from those of normal cases. The gall bladder image on the C.R.T. appeared 25 minutes after the injection in the case of cholelithiasis—a slight delay compared with normal cases. But, in the graphic pattern the distinct accumulation in the gall bladder was

seen within normal range. This fact showed that the excretion of ^{131}I-Rose Bengal into the gall bladder was small in quantity.

In the case of cholangiolitic hepatitis, the half life time of the third phase was 228 minutes and a distinct appearance in the gall bladder showed up 40 minutes after the injection both on the graphic pattern and on the C.R.T. image.

Efficacy of Diagnostic Application of Scintillation Camera and ^{131}I Rose-Bengal in Biliary Dyskinesia

H. Kawakami, Y. Kodama, S. Yamashita and A. Miyoshi

The First Department of Internal Medicine, University of Hiroshima, Hiroshima

M. Kodama and H. Nishikawa

Central Radioisotope Laboratory, Hiroshima University Hospital, Hiroshima

K. Matsuda

Department of Internal Medicine, Kure National Hospital, Kure

Dynamic observation of various diseases of the biliary tract was made by reviewing the scintigraphic tracings of ^{131}I-Rose Bengal over time with a scintillation camera and 1600 channel analyzer. At the same time, gall bladder function was studied by oral administration of 2 egg yolks as a gall bladder constrictor 90 minutes after the injection of ^{131}I-Rose Bengal, and quantitative determination of changes in radioactivity in the gall bladder with time (at 3 minute intervals) was made by observing the ^{131}I-Rose Bengal excretion curve using the 1600 channel analyzer. Review was made of the diagnostic application of these precedures in biliary dyskinesia.

Subjects:

The subjects tested were individuals diagnosed as normal, chronic cholecystitis, cholelithiasis and biliary dyskinesia by cholecystogram. Case with biliary dyskinesia were further classified into those with and without symptoms.

Results:

1) No significant difference in the appearance time of radioactivity in the gall bladder was noted among the cases with various biliary tract diseases.

2) Appearance of radioactivity was noted in the intestines before the oral administration of eggs in the normal, chronic cholecystitis, cholelithiasis and biliary dyskinesia cases without symptoms, but in the biliary dyskinesia cases with symptoms, there was no excretion of radioactivity before the administration of eggs with the exception of 1 case.

3) Excretion pattern after egg administration showed that there was no case with B type (delayed type) among the normal cases, while there were 11/24 (45.8%) in the biliary dyskinesia cases (demonstrated by cholecystogram), but differential diagnosis between the other biliary tract diseases could not be established.