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EVALUATION OF EMERGENCY HEPATOBILIARY SCINTIGRAPHY IN 12 PATIENTS WITH ACUTE ABDOMEN. Y. Iwasaki, Y. Imanishi, M. Onoue, M. Saeki, Y. Yakushiiji and T. Ishikawa. St. Marianna University School of Medicine, Kawasaki.

Hepatobiliary scintigraphy has been reported as an efficient modality for diagnosis of acute cholecystitis.

12 emergency hepatobiliary scintigraphies were performed in patients with acute right upper abdominal pain in our hospital. Serial scintiphotographies (from 5 min. to 60 or 180 min.) were taken using Tc-99m iminodiacetic acid.

Using non-visualisation of gallbladder as a criteria, all the acute cholecystitis were correctly diagnosed, however, 2 out of 3 cases of pancreatitis, gallbladder was not visualised.

As a result, hepatobiliary scintigraphy is a sensitive, but not a specific modality for diagnosis of acute cholecystitis.

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KINETIC STUDIES OF DYSKINESIA OF THE BILIARY TRACT WITH Tc-99m PMT. H. Itoh, K. Murase, H. Ohtani, S. Tamai, M. Yamada, A. Iio, and K. Hamamoto. Ehime Univ. School of Med., Shigenobu Onsen-gun Ehime.

Kinetic studies of the biliary tract were performed with Tc-99m-N-Pyridoxyl-5-Methyltryptophan (Tc-99m PMT), a new hepatobiliary scanning agent, on fifty-ninth patients with dyskinesia of the biliary tract. Tc-99m PMT was injected intravenously under the gamma camera, and ROIs were settled on heart, liver, hepatic duct, gall bladder, common bile duct and intestine. Then time-activity curves were calculated in each of them. We presented these parameters as below; flow rate (%/min), hepatic bile flow rate into the gallbladder, ejection rate (%/min), ejection fraction of the gallbladder after the certain (10ug) injection intramuscularly, and CD time, the time interval from the appearance of the hepatic duct image to the intestine.

These parameters were thought to be very useful for the quantitative analysis of kinetics and tonus of the gallbladder, and tonus of the sphincter Oddi.

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SCINTIGRAPHIC STUDIES ON THE EXTRAHEPATIC BILE FLOW MECHANISM IN OVERNIGHT-FASTING MAN. K. Takahashi, T. Mori, M. Sasaki, K. Ono and K. Nishizawa. Hirosaki University School of Medicine, Hirosaki.

Materials: To clarify extrahepatic bile flow mechanism, pinhole collimator (PC)-equipped hepatobiliary scan was performed in 25 healthy adults. And in 7 cases, scan was performed twice to examine reproducibility.

Methods: 1) Prior to the study, the best position and angle of PC was selected using minimum dose of Tc-99m-EHIDA (EHIDA). 2) Hepatobiliary scan was performed by 3mCi of EHIDA, and dynamic data was recorded simultaneously to the computer for 60 minutes. 3) Dynamic curves of the common hepatic duct, common bile duct, gallbladder (GB) and duodenum (Du) were obtained and examined.

Results: The extrahepatic bile flow pattern was grossly classified into 4 types, which were a) no RI flow-out into Du, b) early flow-out into Du, c) flow-out to Du by GB contraction, d) flow-out into Du just following the end of rapid filling of GB.

Repeated study demonstrated that bile flow pattern varied within above 4 types in 5 out of 7 cases, and not varied in 2 cases.

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RELATION OF PREOPERATIVE HEPATOBILIARY SCINTIGRAM AND POSTOPERATIVE BILE FLOW IN BILIARY ATRESIA ANALYZED BY COMPUTERIZED SCINTIGRAPHY. T. Ogawa, T. Miyano, K. Nagase, Y. Arakawa, M. Tanaka, K. Miura, K. Kimura and S. Arimura. Dept. of Pediatr. Surg. and Radiol. Juntendo Univ. Hongo, Tokyo.

Computerized scintigraphy was applied to analyse hepato-biliary scintigram using Tc-99m-PMT. Scinticamera was set over abdomen of a patient. Bolus i.v. injection of 3mCi Tc-PMT was started and radioactive count was collected in a on-line computer for 60 minutes. Time activity curve of a ROI containing the whole liver was drawn. The curve showed three phases, initial increasing period, accumulation period and excretion period. The examination was performed on 20 cases of pediatric hepatobiliary diseases including 14 cases of pre- and post operative biliary atresia. Cases with slower increasing rate of initial increasing period tend to show delayed recovery of bile excretion after operative treatment, suggesting severely disturbed preoperative liver condition that affected postoperative recovery. Postoperatively, cases with good bile flow showed more quick decreasing rate of excretory period. The recovery of initial increasing period tended to be late than the recovery of excretory period after operation although sufficient bile flow was started.