

## Linear Scanning with Oblique-slit Collimator in Diagnosis of Infantile Jaundice

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Linear scanning with oblique-slit collimator is very useful for differential diagnosis of jaundice in infant. Four biliary duct atresia, 1 intrahepatic biliary duct hypoplasia, choledocal cyst, 8 hepatitis and 1 control patients were studied in 20 trials. The slit type collimator (slit width: 1 cm) was attached to the 3" crystal of the scintiscanner paralleled to the lower border of liver of the patient. Sequential linear scanning were carried out along the body axis at 0, 1, 3, 6, 24 and 48 hours after intravenous injection of  $5 \mu\text{Ci}$  of  $^{131}\text{I}$ -Rose Bengal or  $^{131}\text{I}$ -BSP. This procedure was useful to separate the small peak of intestinal activity from the large peak of liver. Complete urine-free feces were collected into a glass container and urine specimens were collected with the Foley catheter every 8 hours throughout this procedure. Excretion ratio into feces of this series were similar to the results of Dr. H. L. Sharp. Urinary

excretion ratio were usually less than 1-2% of injected dosis for 8 hours and 10% for 48 hours. In the normal case, a large peak of liver appeared in linear scanning soon after injection. During the following few hours two peaks of liver and intestinal activities were observed, and then the liver peak gradually disappeared. Usually hepatitis also showed two peaks pattern. On the contrary only one peak of the liver was observed in atresia and hypoplasia of bile duct. A case of very severe hepatitis also showed no peak of intestine, but his fecal excretion was not so little. A case of suspected choledocal cyst showed two peaks which were demonstrated for few days with very little fecal excretion. Measurement of fecal excretion can be avoided except when the separation of these peaks is doubtful. This method is very simple and requires very small dosis of RI and no anesthetic procedure.

### $^{131}\text{I}$ -BSP Studies on Acute Hepatitis

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In order to evaluate the value of  $^{131}\text{I}$ -BSP retention test in acute hepatitis following study was performed.

Patients were 25 cases with acute hepatitis from Kofu Manicipal Hospital. Four Hundred  $\mu\text{Ci}$  of  $^{131}\text{I}$ -BSP was injected followed by sequential scanning at 10 min, 1 hr, 2 hrs,

4 hrs & 8-24 hrs. Blood clearance of  $^{131}\text{I}$ -BSP and 30 min % retention were examined in these cases. Fifty four examinations were performed at acute stage of hepatitis and at recumbent stage. These values were compared with laborator ytests (GPT, GOT, jaundice index, bilirubin level and others).