

VISUALIZATION OF THE SPLENIC BLOOD POOL WITH ^{131}I -ROSE BENGAL

The basis for the use of ^{131}I -rose bengal in the differential diagnosis of jaundice is the demonstration of its passage into the small bowel by serial scintigraphy. Normally, this is obvious by the end of 1 hr. The obstruction of the extrahepatic biliary tract or impaired hepatocellular function leads to delay or absence of imaging of the bowel or the gallbladder or both.

Freeman (1) has warned of the possibility of confusion caused by the visualization of the renal images in cases of delayed excretion of ^{131}I -rose bengal which may simulate the material in the gut.

In patients with chronic hepatic disease in whom ^{131}I -rose bengal has been employed for the purpose



FIG. 1. Scintiphoto of upper abdomen 30 min after injection of ^{131}I -rose bengal shows visualization of splenic and cardiac blood pools.

of ruling out concomitant biliary tract obstruction, we have observed concentration of the label in the left upper abdomen which could possibly be misinterpreted as indicating excretion into the small bowel

THE AUTHOR'S REPLY

Dr. Rivera's comments on rose bengal visualization of the splenic blood pool are well taken. We have made the same observation in many patients with advanced cirrhosis. I do not recall any instances of such spleen visualization in patients with normal

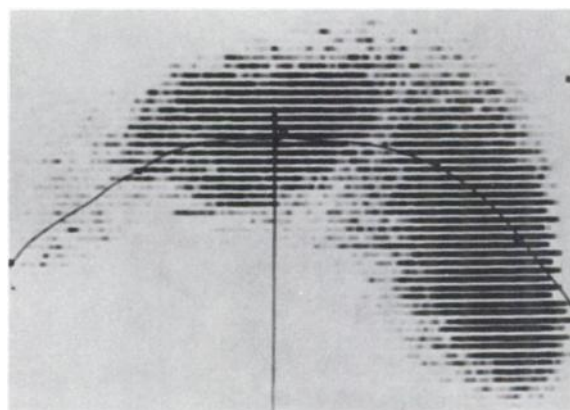


FIG. 2. Colloid scan ($^{99\text{m}}\text{Tc}$ -sulfur colloid) of same patient.

(Fig. 1). The fact that this image disappears coincident with that of the heart blood pool differentiates it from the left kidney with which it may also be confused. Review of ten cases in which this finding was recorded has revealed that in all these subjects, marked splenomegaly was present and demonstrable by colloid scan (Fig. 2). In all of them blood clearance of the label was markedly delayed (20 min clearance ratio = $>90\%$).

It thus appears that persistently high concentration of ^{131}I -rose bengal in the splenic blood pool may result in visualization of this organ when it is enlarged. Awareness of this circumstance will avoid misinterpretation of excretion studies.

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REFERENCE

1. FREEMAN LM, KAY CJ, DERMAN A: Renal excretion of radioiodinated rose bengal—A pitfall in the interpretation of rose bengal abdominal scans. *J Nucl Med* 9: 227-232, 1968

liver function. Its simultaneous disappearance with cardiac activity is good evidence for its localization in the vascular pool of the spleen. Its lateral location makes confusion with intestinal activity more likely than confusion with renal activity. As pointed