

and metastases will cause comparable defects in a colloid scan. However, liver scan results combined with other diagnostic procedures may be used effectively to obtain a correct diagnosis, as in the differentiation of focal nodular hyperplasia from hemangioma (3).

In fatty infiltration the density values of TCT fall, which results in a smaller contrast difference between the liver parenchyma and metastases. Circumscribed solid tumors may thus appear iso- or even hyperdense when compared with normal liver tissue. In these patients SPECT appears to be the diagnostic modality of choice, even being superior to TCT.

We do agree with Buell that the combination of ultrasound and SPECT should be assessed to determine whether a major information gain can be obtained when results of the two procedures are combined.

In summary, we feel that SPECT should be used in the following situations: 1. In patients with fatty infiltration of the liver; 2. when the results of TCT or ultrasound are equivocal and when the suspected lesion has a diameter above 1.5 cm; 3. for follow-up of known hepatic metastases, where SPECT has the advantage over ultrasound in obtaining reproducible, standard cross sections; and 4. in combination with ultrasound, especially when TCT is not available.

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Re: Uptake of Tc-99m MAA by the Liver During a Lung Scan

In patients with iliac vein or inferior vena cava occlusion the uptake of lung imaging agents by the liver following injection in the lower extremities has been documented previously (1,2). In contrast to the recent report by Marcus and colleagues (3) where there appeared to be uniform distribution in the liver, the earlier cases show preferential uptake in the left lobe, suggesting shunting through the umbilical vein.

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Reply

We appreciate Dr. Wraight's bringing these omissions to our attention. Although an extensive Medline search was performed, the two references were not found. Had we known of the work, we would, of course, have cited these papers.

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Re: Tc-99m IDA Cholescintigraphy in Acute Pancreatitis

In the October issue of the Journal, Ali et al. present a retrospective review of the results they obtained from Tc-99m IDA cholescintigraphy in acute pancreatitis (1). Declaring cholescintigraphy to be "useful for detecting acute cholecystitis in patients with acute pancreatitis" they take us to task for having observed transient nonvisualization in such patients (2).

First, let us have a look at the design of their study. In their files Ali et al. came across 21 patients with symptoms and signs suggestive of acute pancreatitis. They analyzed the "interpretations of the cholescintigrams by an experienced observer" but do not present any images. In none of the 21 patients was the examination repeated or cholecystography performed, but the findings at operation are given in nine patients who were subjected to surgery.

Now for a look at the results in the 21 patients. Visualization occurred in 16 patients. Five were operated on and "all five were found to have . . . chronic cholecystitis." Nonvisualization occurred in five patients. Four were operated on and "all were found to have acute cholecystitis." Thus, five out of the nine cases with proven gallbladder disease showed normal visualization.

Judging by these figures, the technique of Ali et al. does not appear to be very helpful in excluding gallbladder disease. Admittedly, the technique appears capable of differentiating between the acute and the chronic stage of cholecystitis but most surgeons prefer to get such information from a glance at the temperature chart.

Where did their technique go wrong? Again, since this retrospective study does not present any images, we have to look at the figures, and these clearly suggest that Ali et al. tend to overlook cases of cholecystitis. No less than five of their 16 patients with normal visualization were later cholecystectomized. Why were these patients operated on? Not because they had acute pancreatitis. Pancreatitis per se is not an indication for surgery. We must assume that the surgeons eventually chose to ignore Ali et al.'s assertions that the cholescintigram was normal. When first told that visualization was normal, the surgeons of course abstained from operation. Why ask for a scintigram if you intend to operate anyway? Thus, the operation was delayed. When they finally operated, "all five (patients) were found to have . . . chronic cholecystitis." In view of the delay it is not surprising that the disease had reached its "chronic" stage. Given time, any acute cholecystitis will subside and become "chronic" (3).

As for the 11 nonoperated patients with normal visualization, no one can be certain how many had cholecystitis and how many had not. For the sake of the argument let us assume that Ali et al. are correct when they claim that all 11 patients had normal gallbladders. It is this claim that leads them to conclude that cholescintigraphy is ". . . as useful . . . in patients with acute pancreatitis as it is in patients without . . ." They did not have one single case of nonvisualization in a sample of 11 patients with acute pancreatitis and gallbladders presumed to be normal. But, what about chance? From a table of 95% confidence limits (4) we learn that if a sample of 11 patients does not contain one single case of a