

Inside Story HIGHLIGHTS

From the Pacific Radiology Referrer Newsletter



Pacific Radiology

Fatty Liver, not necessarily a benign condition

'Deranged Liver Function Tests' is a relatively common phrase seen on Pacific Radiology request forms as an indication for upper abdominal ultrasound examinations. The main reason for doing an ultrasound in this context is to differentiate structural from functional causes of hepatic dysfunction.

Not uncommonly the words 'could be due to fatty liver' will appear in the radiologist's report. Usually this is because the liver parenchyma looks brighter than it should, obscuring the normally bright margins of the portal veins and causing poor sound penetration of the liver. This is not diagnostic of fatty change (hepatic fibrosis and other processes can also produce a bright appearance to the liver), but it is certainly suggestive of hepatic steatosis. The process can be focal or generalised, and there can be areas of focal fatty sparing (typically around the gallbladder fossa and falciform ligament).

Fatty liver is relatively common, and is associated with obesity, alcohol, diabetes and the use of steroids. Its significance, however, is sometimes underestimated. In a minority of cases, it will progress to the inflammatory process steatohepatitis, will heal with areas of fibrosis in the liver parenchyma, and may even progress to cirrhosis.

Progression of fatty liver to steatohepatitis may be triggered by a second insult to the liver such as the use of a hepatotoxic drug, or supervening viral hepatitis.

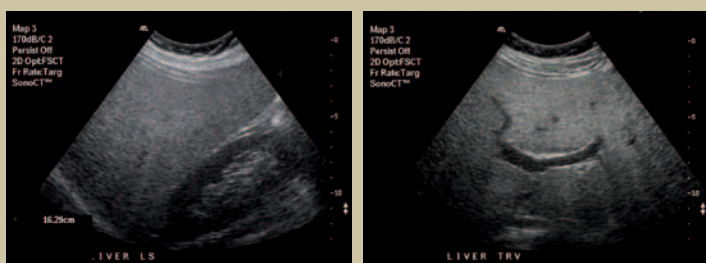
Fatty liver can be more specifically diagnosed using CT and MRI. Current research in MRI is being directed towards a reliable quantitative measure of the degree of fatty change. We will therefore be able to assess whether the disease is progressing, or whether there has been any response to treatment and/or modification of lifestyle factors. However, accurate quantification of hepatic fatty change using MR is not yet ready for routine clinical use.

In the meantime, it is important to realise that fatty change in the liver is not just an interesting aside or 'throwaway comment' in an imaging report. It has potentially serious implications for patient morbidity, and should prompt a thorough look at all of the factors such as diabetes, obesity, alcohol and other drugs which could possibly be modified to try and reverse this condition.

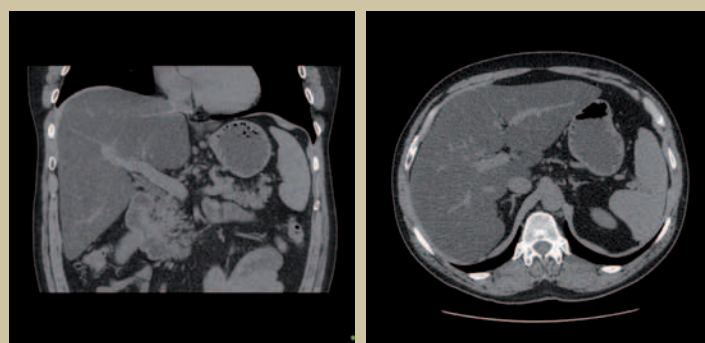
~ Mark Leadbitter



Mark Leadbitter



Bright liver with poorly defined portal vein margins on ultrasound



Non contrast CT images show decreased density generally in the liver parenchyma. The liver is consequently much darker than the spleen, and the hepatic vessels stand out.