Hemochromatosis

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Case Presentation

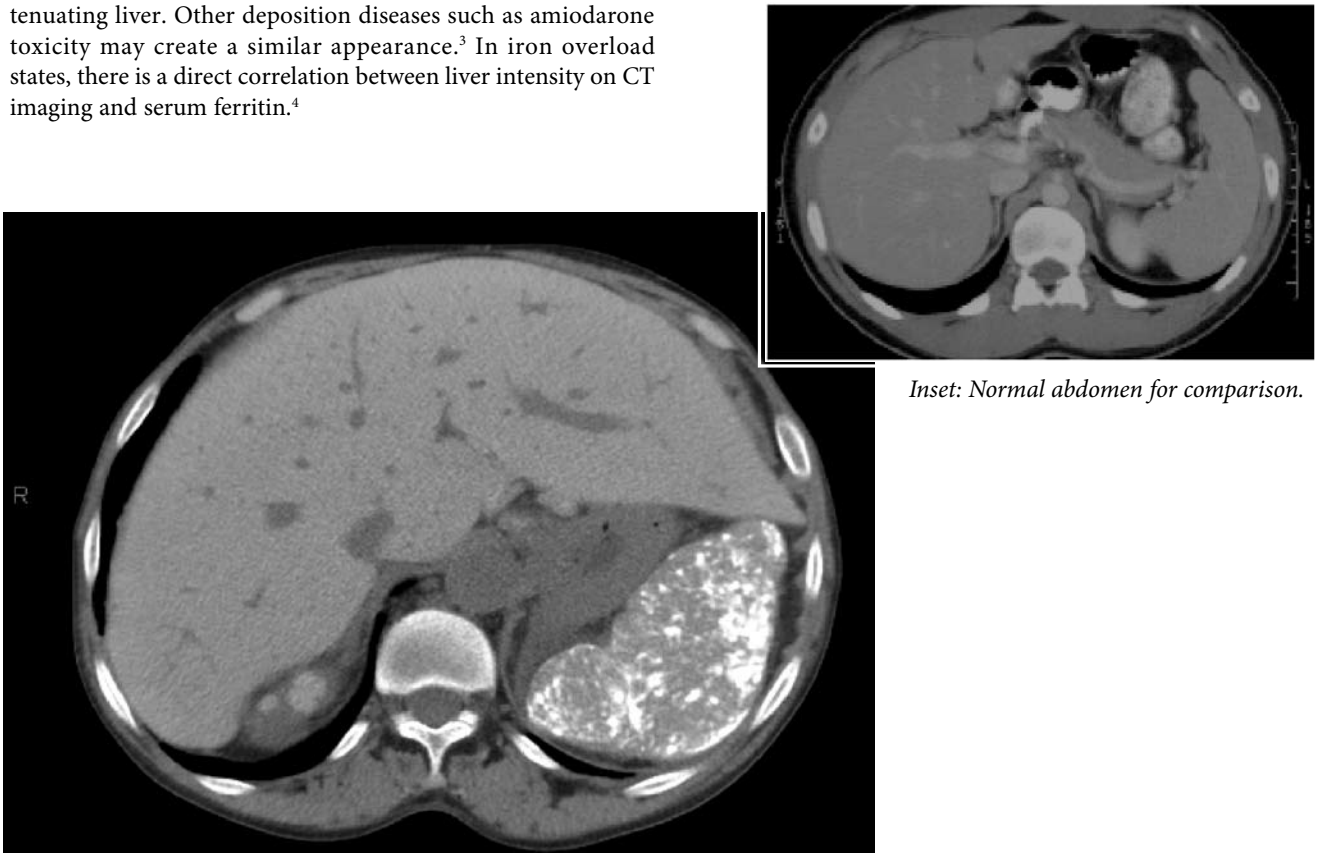
This 50 year-old adult male suffered from iron overload due to repetitive blood transfusions for HbSS sickle cell anemia. Computed tomography (CT) scan of the abdomen revealed high attenuation and massive enlargement of the liver consistent with hemochromatosis. A normal liver and spleen is included for comparison (inset). Splenic calcification is also noted, a rare finding in sickle cell anemia.[1,2]

Discussion

Secondary hemochromatosis causes reticuloendothelial cell iron deposition. The disease has homogeneously increased liver attenuation on CT and decreased signal intensity with magnetic resonance imaging. Portal vein branches stand out as low-attenuation structures against the background of the hyperattenuating liver. Other deposition diseases such as amiodarone toxicity may create a similar appearance.[3] In iron overload states, there is a direct correlation between liver intensity on CT imaging and serum ferritin.[4]

References

1. Mohanty J, Bhagat S, Panda BB, *et al.* Rare splenic manifestations of sickle cell disease. Indian Journal of Radiology and Imaging 2002; 12:219-220.
2. Volk, M., Strotzer, M. Diagnostic imaging of splenic disease. Radiologe, 2006; 46:229-44
3. Kawamoto S, Soyer PA, Fishman EK *et al.* Nonneoplastic liver disease: evaluation with CT and MR imaging. RadioGraphics, 1998; 18: 827 - 848.
4. Harada M, Hirai K, Sakisaka S, *et al.* Comparative study of magnetic resonance imaging, computed tomography and histology in the assessment of liver iron overload. Intern Med. 1992; 31:180-4.



Inset: Normal abdomen for comparison.