

References

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Cirrhosis with increased density of the liver: Amiodarone-induced hepatotoxicity

The normal liver attenuation on computed tomography (CT) is very similar to spleen. Homogeneous increased density of the liver may result from a variety of different causes to include drug toxicity. Hemochromatosis, hemosiderosis and cirrhosis may all result in increased density of the liver. Pharmaceuticals which have been implicated include thorotrast, thallium and amiodarone. Amiodarone is an antiarrhythmic drug used in patients with refractory supraventricular and ventricular tachycardia. The overall incidence of side effects ranges from 30 to 90% and that of serious side effects (including hepatitis, pneumonitis, exacerbation of congestive heart failure, and exacerbation of arrhythmias) from 10 to 25% (1-3). Hepatotoxicity associated with amiodarone is manifested as an asymptomatic and transient elevation of serum aminotransferase (4-6). Few clinical reports about cirrhosis with abnormal high density of the liver in patients treated with amiodarone have been published (7, 8).

We report a new case of amiodarone-induced hepatotoxicity with high density of liver in CT.

Case report

A 70-year old woman was referred for evaluation of weight loss and blurred vision. The patient had a previous history of

paroxysmal atrial fibrillation for which she was treated with amiodarone, 200 mg/day, for 15 years. There was no history of alcohol abuse, obesity or diabetes mellitus. On physical examination the patient was in good condition and had no dyspnea. Heart sounds were rhythmic. Abdominal examination showed an hepatomegaly. With slit lamp examination, there was a very marked amiodarone keratopathy consisting of corneal verticillata, large sharp-edged epithelial opacities and a generalized corneal haze. The optic nerve appeared healthy, with no visible swelling in each eye. Initial laboratory tests were as follows: aspartate amino transaminase 80 IU/L (normal: 10-40 IU/L), alanine amino transaminase 100 IU/L (normal: 10-40 IU/L), alkaline phosphatase 347 IU/L (normal 70-170 IU/L), GGT 212 IU/L (normal:10-40 IU/L); bilirubin 12 μ mol/L, prothrombin activity: 72%, elevated TSH (9,86 mU/ml; normal 0.5-5 mU/ml) with normal FT4 levels. Serologic studies were negative for chronic viral hepatitis. There was also no clinical or laboratory evidence of autoimmune hepatitis, Wilson's disease, or hemochromatosis. An ultrasound of the liver with doppler showed a nodular contour consistent with cirrhosis and splenomegaly and computed tomographic (CT) scanning of the abdomen showed a significant increase in the density of the liver without contrast medium, compared to that of the spleen and surrounding tissues (Figure 1). A percutaneous liver biopsy examination revealed micronodular cirrhosis (Figure 2) accompanied by findings of steatohepatitis (Figure 3). At about 3 months after withdrawal of amiodarone, the liver enzymes returned to normal levels.

Figure 1: Computed tomography (CT) scan of the upper abdomen: increase in liver density compared to the spleen

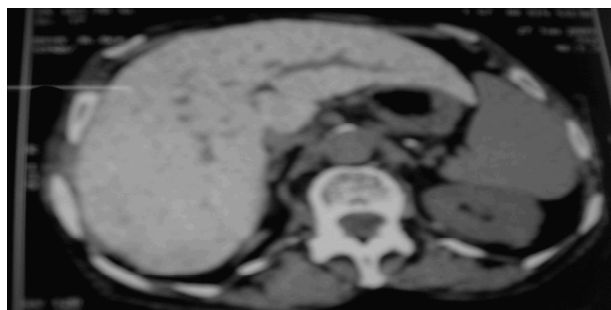


Figure 2: Micronodular cirrhosis

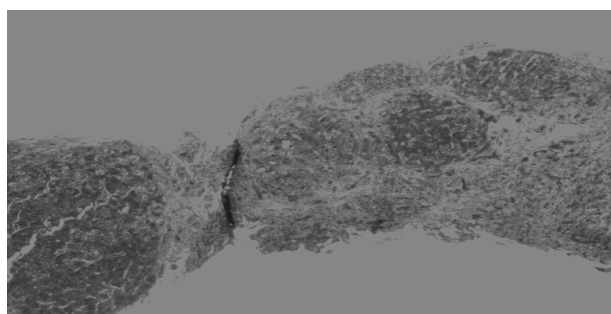
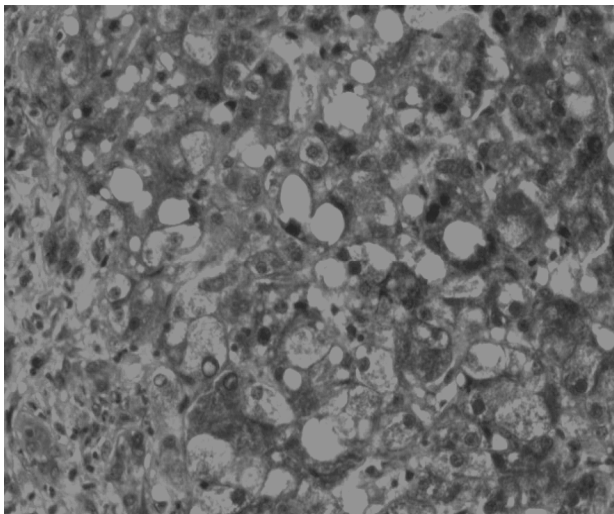


Figure 3: Medium- power view of liver biopsy with amiodarone toxicity; note patchy steatosis and neutrophilic infiltrate. H&E; original magnification x200.



Conclusion

Amiodarone is surely a safe and very effective anti-arrhythmic drug, but should be administered with a close clinical monitoring and the lowest dosage possible for arrhythmia control. There are now numerous reports in the literature describing liver cirrhosis associated with amiodarone. Although the incidence of this complication has is rare with the use of lower doses of amiodarone, it remains an important diagnostic consideration given the increased use of this drug.

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A mixed medullary-follicular thyroid carcinoma discovered by fine needle aspiration

Mixed medullary and follicular cell carcinoma (MMFCC) of the thyroid is rare, accounting for less than 5% of thyroid medullary carcinoma. Histologically, MMFCCs are tumours showing the morphological features of both, medullary carcinoma with immunoreactive calcitonin and follicular (or papillary) carcinomas with immunoreactive thyroglobuline [1]. Although the histologic and immunohistochemical findings of MMFCC are well studied, there are some uncertainties about its cytopathologic features.

We report a case of MMFCC and describe its cytological and histological aspects.

Case report

A 57-year-old female patient with thyroid enlargement was admitted to ORL department. Thyroid ultrasonography revealed a 2 cm solid nodule within the right thyroid lobe. The fine needle aspiration cytology (FNAC) was highly cellular with a biphasic nature. The first component was predominant made of several three-dimensional cohesive clusters of monomorphic follicular cells with a small oval nuclei, and scant cytoplasm in a background devoid of significant colloid. In these three-dimensional cohesive clusters occasional microfollicles were also observed. The second component was made of loosely cohesive clusters of pleomorphic polygonal and spindle shaped cells with finely granular chromatin nuclei, and an abundant granular cytoplasm. The serum calcitonin level was elevated or borderline. The aspiration biopsy was reported as malignant, the diagnosis of mixed medullary follicular carcinoma was suspected (Figures 1a, 1b).

Figure 1 (a, b) : Fine needle aspiration (FNA) demonstrating biphasic features; three-dimensional cohesive cluster of follicular cells and rare non-cohesive polygonal cells with eccentric pleomorphic nuclei, and an abundant granular cytoplasm

