

Atypical patterns of liver lesions on MRI with paramagnetic hepato-specific contrast agent (Gd-DTPA-EOD).

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BACKGROUND: The Gd-EOB-DTPA is the hepato-specific contrast for magnetic resonance imaging (MRI), released for clinical use in Brazil since 2013. Its main indication is the possibility to characterize with high specificity focal nodular hyperplasia (FNH).

HYPOTHESIS: The purpose of this panel is to show illustratively atypical findings related to the use of this contrast that can impair the interpretation of the examiner.

METHODS: We reviewed 134 images of patients undergoing MRI with Gd-DTPA-EOD in a 1.5T scanner between November 2013 and July 2015.

RESULTS: Inconclusive lesions may represent 30-42% of MRI examinations by the absence of typical findings. The importance of diagnosing liver lesions with high accuracy is justified by the opposing therapeutic approaches that they have. The hepatobiliary contrast has become an ally in the differential diagnosis of them. Nonetheless, the extracellular and hepatocellular dynamic behavior can impair the examiner. Some FNHs can not undergo intense enhancement in hepatobiliary sequences or display only trabecular and peripheral enhancement, mimicking the behavior of adenomas. Moreover, atypical adenomas may show hyperintense foci by the presence of functioning hepatocytes and ductal proliferation, known as telangiectatic adenoma. Well-differentiated hepatocellular carcinoma may present late hyperintensity by the preserved function of some hepatocytes. The radiologist must be aware of atypical lesions when interpreting images with hepatobiliary contrast, and should utilize the entire set of images for a good diagnostic conclusion.