

Hepatic Focal Nodular hyperplasia

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History

Teenager with possible inflammatory bowel disease.

Diagnosis

Focal Nodular Hyperplasia

Discussion

Focal nodular hyperplasia (FNH) is the second most common benign liver tumor after hemangioma. Distinction between FNH and other hypervascular liver lesions such as hepatocellular adenoma, hepatocellular carcinoma, and hypervascular metastases is critical to ensure proper treatment. An asymptomatic patient with FNH does not require biopsy or surgery. Magnetic resonance (MR) imaging has higher sensitivity and specificity for FNH than does ultrasonography or computed tomography. Typically, FNH is iso- or hypointense on T1-weighted images, is slightly hyper- or isointense on T2-weighted images, and has a hyperintense central scar on T2-weighted images. FNH demonstrates intense homogeneous enhancement during the arterial phase of gadolinium-enhanced imaging and enhancement of the central scar during later phases.

The pathogenesis of this lesion is not well understood. Vascular malformation and vascular injury have been suggested as the underlying mechanism. Steroid induction is unlikely. FNH has a reported prevalence of 0.9%. The male-to-female ratio is 1:8, and the tumors occur in relatively young patients. Approximately 20% of the patients have multiple FNH lesions. The combination of multiple FNH lesions and hemangiomas is referred to as multiple FNH syndrome.

FNH is divided into two types: classic and nonclassic. The nonclassic type contains three subtypes: telangiectatic FNH, FNH with cytologic atypia, and mixed hyperplastic and adenomatous FNH. Classic FNH is characterized by the presence of abnormal nodular architecture, malformed vessels, and cholangiolar proliferation. Nonclassic FNH lesions lack one of the following classic features—nodular abnormal architecture or malformed vessels—but always show bile ductular proliferation. Classic type comprises 80% of FNH lesions with the remainder nonclassic type.

Findings

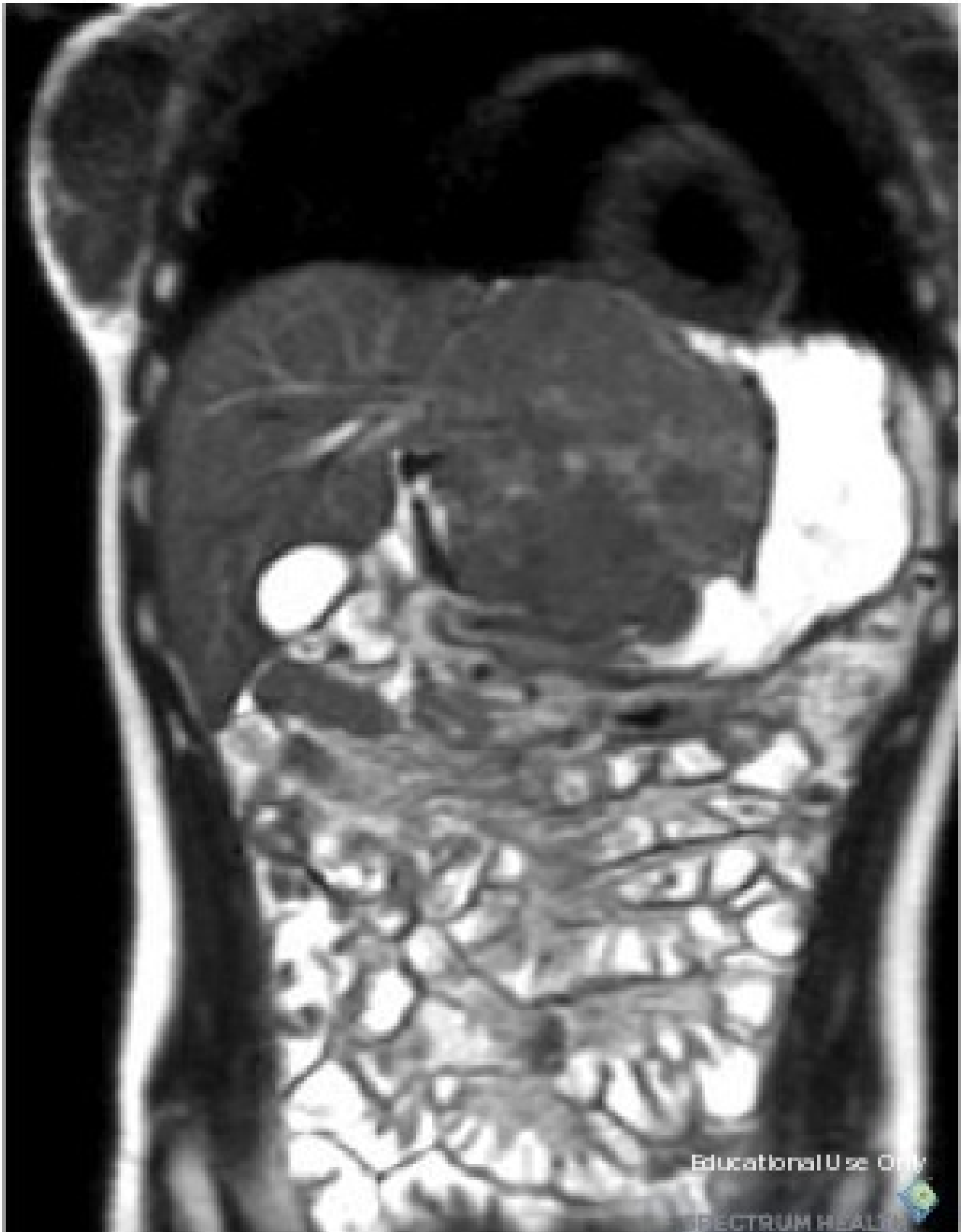
MR-Coronal images demonstrate a large macrolobulated mass in the left lobe with a central scar.

Reference

Hussain SM, Terkivatan T, Zondervan PE, Lanjouw E, et al. Focal Nodular Hyperplasia: Findings at State-of-the-Art MR Imaging, US, CT, and Pathologic Analysis. *Radiographics* (2004); 24:3-17.

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