A radiologic “alcohol breathalyzer” test

Figure Magnetic resonance spectroscopy showing the ethanol triplet resonance of 1.16 ppm (highlighted in white box)¹

We did not find changes of hepatic encephalopathy, which are a reduction in the myoinositol and choline resonances and an increase in the glutamate/glutamine composite resonance.

A 52-year-old man with 3 years of progressive unsteadiness admitted to previous alcohol excess but denied ongoing consumption. Magnetic resonance spectroscopy (MRS) (figure) was performed looking for changes of subclinical hepatic encephalopathy, which was not found. Instead, it showed the characteristic triplet resonance peak for ethanol—a confirmation of alcohol consumption that day, which was admitted by the patient. This image is a helpful reminder that MRS (in the appropriate clinical context along with EEG and hyperammonemia) can help diagnose hepatic encephalopathy¹ (clinically excluded in our patient), and in an interesting twist, may also be a radiologic alcohol breathalyzer test.

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