ACUTE HYPERAMMONEMIC ENCEPHALOPATHY, DECOMPENSATED CHRONIC LIVER DISEASE AND MRI FINDING: CONCERN IN CASE WITH CONCOMITANT MALIGNANCY DISEASE

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The use of MRI in investigation of encephalopathy is an important medical imaging approach at present. An important concern is on the accuracy in MRI finding result interpretation. The recent report on MRI finding in acute hyperammonemic encephalopathy due to decompensated chronic liver disease is very interesting ¹. Sureka et al. conclude for a pattern of MRI finding and mentioned that this might be useful for early diagnosis of this condition. I agree with the authors’ report. However, I would like to share experience on this issue. The proposed pattern might be sometimes useful. However, it might be useless in other situations. The case with underlying malignant liver disease is an example. In the case with liver malignancy, the previous liver parenchymal lesion can be variable and this can overwhelm the mentioned MRI finding by Sureka et al ¹. Some MR brain findings can complicate the MRI features of hyperammonemic encephalopathy in patients with decompensated liver disease complicated by concomitant malignant disease and will make the final diagnosis of hyperammonemic encephalopathy difficult. If there are prior brain metastatic lesions at cingulate gyrus and insular cortex, the underlying abnormal brain change will cause difficulty in detection of classical appearance in hyperammonemic encephalopathy MRI ². The pathognomonic perfusional change due to hyperammonemia might be blinded by the hemorrhagic brain occupying mass lesions that is common in brain metastases. Hence, some cases of hyperammonemic encephalopathy in end stage liver disease might not show the simple liver MRI pattern and the diagnosis is usually due to clinical presentation and laboratory testing on blood ammonia. Nevertheless, brain metastases from hepatocellular carcinoma are extremely rare. One might think that there will not be a diagnostic problem in patient of chronic liver disease even with hepatocellular carcinoma. In fact, it can be a diagnostic dilemma if underlying etiology of chronic liver disease is alcoholic liver disease or other metabolic causes like Wilson's disease. Even in these conditions, comparison with previous imaging and characteristic sites of involvement can differentiate.

References
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