

Typical Clinical and Neuroimaging Features in Methanol Intoxication

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Received date: July 25, 2018; Accepted date: August 14, 2018; Published date: August 17, 2018

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Clinical Image

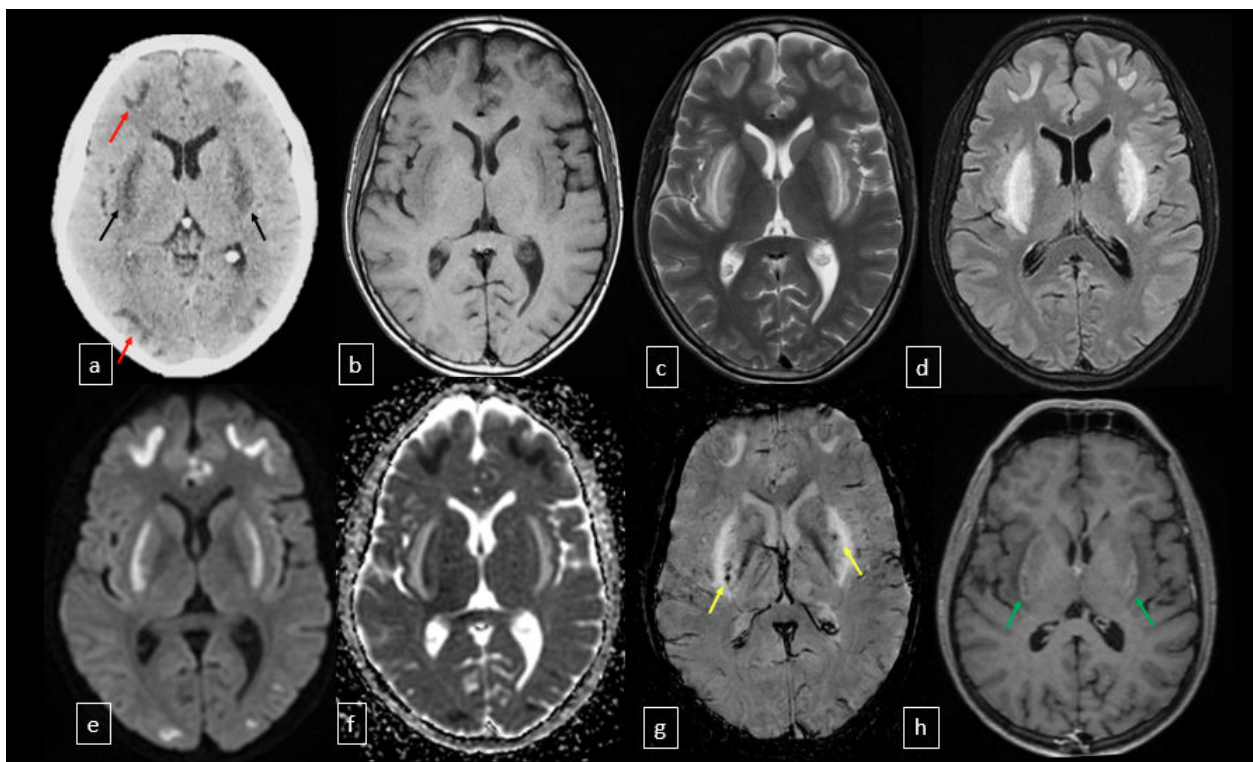


Figure 1: A 40-year-old male with chronic alcohol dependence presented to us with acute bilateral visual diminution, epigastric discomfort, and altered sensorium after a binge involving illicit liquor. Examination revealed a dehydrated male in encephalopathy without meningeal irritation, focal deficits or extrapyramidal involvement. Fundus showed bilateral papilledema. Non-contrast CT scan (Figure 1a) showed hypodensities involving putamen (black arrows) and subcortical white matter (red arrows), which were hypointense on T1-weighted (T1W) MRI (Figure 1b), hyperintense on T2 weighted image (Figure 1c) and FLAIR (Figure 1d). Diffusion restriction and microhemorrhages were seen on diffusion-weighted imaging (DWI) (Figures 1f, g) and susceptibility weighted imaging (SWI) (Figure 1g (yellow arrows)). T1W post-gadolinium images showed peripheral putaminal enhancement (Figure 1h, (green arrows)). Ethanol supplementation led to gradual resolution of encephalopathy but not visual loss, over a period of two weeks. Accumulation of methanol metabolite formate leads to specific endorgan damage [1]. Fomepizole and ethanol are useful antidotes [2].

References

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2. McM Martin K, Jacobsen D, Hovda KE (2016) Antidotes for poisoning by alcohols that form toxic metabolites. Br J Clin Pharmacol 81: 505-515.