

Methanol-Induced Optical Nerve Injury

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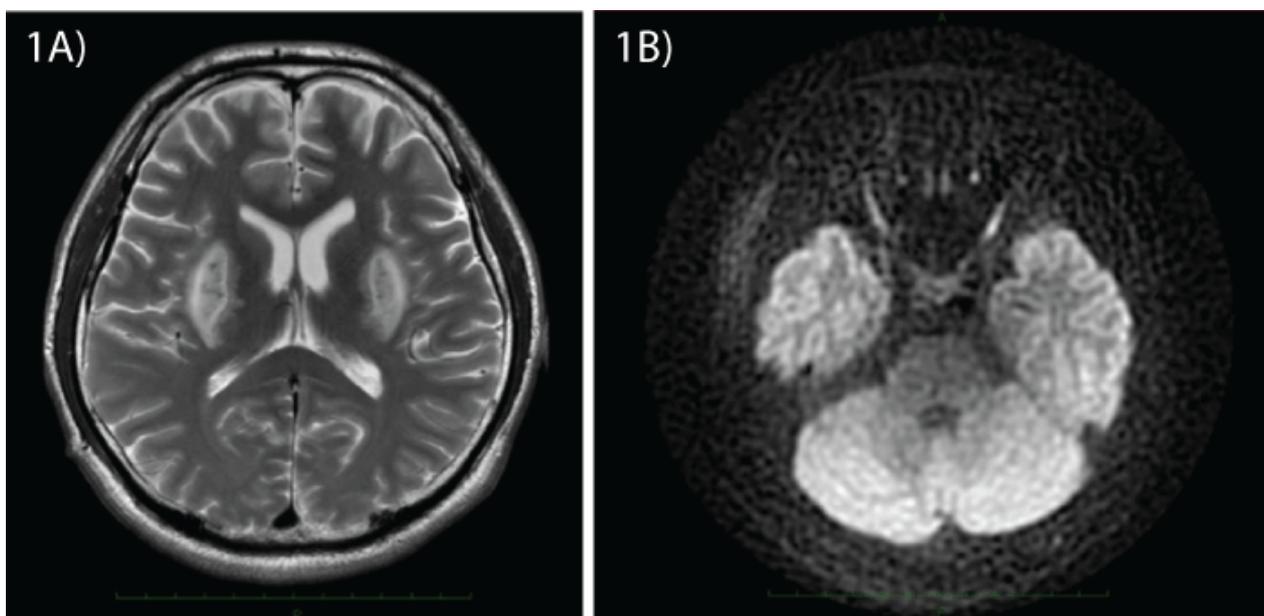
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Clinical Image



Figures 1A and 1B: A 34-year-old man with a five-year history of schizophrenia lost consciousness and was transported to our emergency room by ambulance. His vital signs upon admission were as follows: Glasgow coma scale, E1V1M1; heart rate, 90 bpm; blood pressure, 105/45 mmHg; respiratory rate, 12/min; and arterial oxygen saturation, 100% under oxygen 5 L/min via a face mask with a reservoir. Both pupils were dilated and non-reactive to light. Arterial blood gas revealed extreme metabolic acidosis (pH 6.92) with an increased anion gap of 27 mEq/L and lactate of 11.9 mmol/L. Total serum ketone bodies and urinary methanol were 322.35 mg/dL and 1174 mg/L, respectively. Because methanol intoxication was suspected, he was tracheally intubated and placed on hemodialysis. He was extubated upon regaining consciousness (E4V4M4) on hospital day 2. However, his vision was impaired and an ophthalmologist diagnosed disordered light perception with bilateral optic nerve atrophy. Magnetic resonance imaging (MRI) on hospital day 5 showed bilateral and symmetrical intense signals on the putamen (Figure 1A) and hyperintensity in the optic nerves on diffusion-weighted PROPELLER images (Figure 1B). The PROPELLER MRI method is well suited for imaging moving objects or with artifact by applying specific data correction and reconstruction algorithm. It is suitable for intraocular imaging and successfully depicts optic nerve injury in this case.