Case Report

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Intracranial Bleeding in Methanol Intoxication Case

Irem FIDAN YOLAY[1], Yesim ISLER[1], Halil KAYA[1], Melih YUKSEL[1], Mehmet Oguzhan AY[1], Umut OCAK1

[1]Department of Emergency Medicine, University of Health Sciences Turkey, Bursa Yuksek Ihtisas Training and Research Hospital, Bursa, Turkiye

Abstract

Methyl alcohol, which is mostly used in the industrial sector, is also widely used in our country to obtain cheap drinks. It is a colorless, volatile liquid with a distinctive odor. Even 8-10 ml of methanol taken into the body from outside is toxic. Approximately 25-30 ml of methanol can cause poisoning that can lead to permanent blindness. The best method for the definitive diagnosis of methyl alcohol poisoning is to measure the methanol level in the blood. Patients may develop headache, central nervous system depression, coma and seizure. Imaging is recommended in patients with altered consciousness. Putaminal necrosis and intracranial hemorrhage (SAH, putaminal intraparenchymal hemorrhage) may develop in these patients. Our case is a 50-year-old male patient with a history of constant homemade alcohol consumption. The patient was brought with complaints of visual impairment and confusion after drinking alcohol. Basal ganglia hemorrhage was detected on the patient's cranial tomography. The patient, who was admitted to intensive care, deteriorated and died on the 4th day of his treatment. Morbidity and mortality rates can be very high in patients presenting with suspected methanol intoxication. Therefore, we wanted to emphasize the importance of early diagnosis and treatment.

Keywords: Emergency medicine, methanol, intoxication

Introduction

Methyl alcohol, which is most frequently used in the industrial sector, is also widely used in our country to obtain cheap beverages. It is a colorless, volatile liquid with a distinctive odor. It is highly and rapidly absorbed from the gastrointestinal tract (within 60-90 minutes). After absorption, most of the methanol (90-95%) is eliminated by the liver, 2-5% by the kidneys, and a very small amount by the lungs. The cause of toxicity is the conversion of methanol into formaldehyde and formic acid by the alcohol dehydrogenase enzyme in the liver. Formic acid accumulation is associated with clinical symptoms and formic acid is responsible for toxicity and has fatal toxicity. It causes a very fatal toxicity due to metabolic acidosis with a high anion gap. Formaldehyde formation in the retina causes optic papillitis and retinal edema, which causes blindness, especially defined as blind drunkenness. End organ damage begins when methanol levels exceed 6 mmol/L[1-4].

Case Report

A 50-year-old male patient has a history of constantly drinking homemade alcohol. He doesn't have any illnesses in his history. There was a history of drinking homemade alcohol before presenting to the emergency department. He fell asleep after drinking alcohol and his vision deteriorated after waking up. The patient, who lost consciousness, was brought to the hospital by 112 Emergency Ambulance Service. The patient's arrival vital values; temperature: 36.5 C, blood pressure: 132/79 mmHg, heart rate: 92/min, SpO2: 96%, blood sugar: 217 mg/dl, Arterial blood gas values; pH: 6.94, pCO2: 27, pO2: 131, HCO3: 7.2, lactate: 8. Sinus rhythm was noticed in electrocardiogram. When the patient was taken to the emergency room, his GCS was 3, his breathing was shallow, and his pupils were mydriatic. The patient was electively intubated after the initial evaluation. The right femoral dialysis catheter was opened.

Corresponding Author: Yesim ISLER **e-mail:** yesimisler@gmail.com

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The patient's vitals were taken every hour. After consulting the nephrologist, he was placed on hemodialysis for 4 hours. After 4 hours of hemodialysis in the emergency department, the pH in the blood gas was determined as 7.13. The patient, whose vitals were stable, was taken to the radiology unit for brain tomography. Brain tomography revealed bilateral hemorrhage in the basal ganglia (Figure 1). Surgery was not recommended by the neurosurgeon. The patient was given 10% Ethanol 800 mg iv with 30 minute infusion, Ca folinate 50 mg iv (4x1), 5% Dextrose 500 cc iv (250cc/hour) infusion, Mannitol 6x75 ml iv infusion, 10% Ethanol 500 cc iv infusion (80 cc/hour), 10% Ethanol 500 cc iv infusion (125cc/hour) (during hemodialysis), 10% Dextrose 500cc + 18 iu HR insulin iv (500cc/hour) Since the patient became hypotensive in the 3rd hour of hemodialysis, inotrope support was started. Steradin 2 amp + 0.9% SF 100cc (20cc/hour) iv, Dopamine 2 amp + 0.9% SF 100cc (10cc/hour) iv were administered. The patient was admitted to the general intensive care unit on the second day of emergency department follow-up. The methanol value measured upon admission to the intensive care unit was 194 mmol/L. It was learned that the patient died on the 4th day of methanol intoxication after being admitted to the intensive care unit.

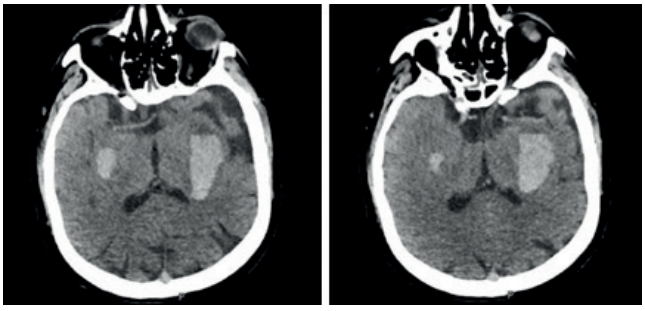

Figure 1: Brain tomography revealed bilateral hemorrhage in the basal ganglia.

Conclusion

When a case is encountered, rapid evaluation should be made, early treatment should be started and dialysis should be initiated if necessary. Despite treatment, in patients presenting with suspicion of methanol intoxication Unfortunately, morbidity and mortality rates can be quite high.

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