

Risk of hemorrhage in methanol toxicity

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Introduction: Intoxications with methanol, a contaminant of bootlegged alcohol, are still frequent in large parts of the developing world, especially among the economically depressed. The effects of methanol is due to its metabolites, formaldehyde and formic acid, which can cause metabolic acidosis and ocular and neurological dysfunction. Hemodialysis should be done in severe toxicity to eliminate toxic metabolites. **Case Report:** The patient was a man 37-year-old chronic alcohol abuser that has been consumed ethanol for approximately ten years, three times a week and each time about 250 to 500 ml. According to the patient's history, he ingested 500 ml alcohol about 40 hours before entrances. The initial manifestations included: headache, abdominal pain and vomiting that started 12 hours after consumption. He got photophobia and blurred vision 4 hours later. The patient with diagnosis of methanol poisoning transferred to intensive care unit. To treat the poisoning, he was given ethanol, intravenous sodium bicarbonate and folic acid. About forty one hours after consumption, hemodialysis with 5000 unit Heparin was performed for 3 hours. About one hour after dialysis, hematuria and upper GI bleeding were appeared. The upper GI endoscopic findings showed only low grade esophageal ulcer. Fortunately, we did not detect any neurological symptoms, and noting was abnormal in his head CT. **Discussion and Conclusion:** Methanol is one of the potentially fatal substances. Methanol metabolism produces formaldehyde and formic acid, which are remarkably toxic. There is a latent period of 12-36 h, from the time of ingestion to the occurrence of signs and symptoms. This period of time is needed for producing the toxic metabolites. The toxic metabolites can caused sever metabolic acidosis, serious neurological and gastrointestinal damage. Kalkan S et al in Turkey found metabolic acidosis in 23.0%, central nervous system symptoms in 45.1%, and gastrointestinal symptoms in 10% of methanol poisoned patients. Also in the present case we detected metabolic acidosis, visual disturbance, and GI symptoms after methanol consumption. Because of the dangerous outcomes, we must start treatment as soon as possible. Therapeutic procedures in methanol toxicity include gastric lavage, ethanol administration, and correction of acidosis with sodium bicarbonate, folic acid, and secondary detoxication with hemodialysis, which have been donning for our patient. It is notable that hematuria and upper GI bleeding occurred after hemodialysis with heparin. In our patient esophagogasterodudenoscopy showed low grade esophageal ulcer. Fortunately, we did not detect any neurological symptoms, and noting was abnormal in his head CT. Sebe A et al in 2006 reported a temporal lobe and bilateral occipital hemorrhage in head CT of a patient with methanol toxicity that

occurred after hemodialysis. Likewise, Giudicissi et al and Phaget al indicated that systemic anticoagulant during hemodialysis induces hemorrhage. In contrast another study in treatment of methanol toxicity showed no hemorrhagic changes in patients who underwent hemodialysis. Taking collectively, there are some recommendations in literature to perform hemodialysis for methanol poisoning without heparinization. We suggest further studies to elucidate relation of using heparin in hemodialysis of methanol poisoned patient and occurring hemorrhage.