



Letter to editor

How should the ophthalmologists treat the methanol-induced toxic optic neuropathy?

Sanaei-Zadeh H, MD
Department of Forensic Medicine and Toxicology
Tehran University of Medical Sciences
Hazrat Rasoul Akram Hospital
Tehran- IRAN

Dear Editor

I enjoyed reading the manuscript titled “Hooch blindness: a community study report on a few indoor patients of toxic optic neuropathy following consumption of adulterated alcohol in West Bengal” that has been published in your journal (Samanta et al, 2012). The authors reported ten cases of blindness due to methanol intoxication in West Bengal, India. After presentation of their patients’ histories, ophthalmologic examinations, fundus photographs, and assessment of the functional condition of the optic nerve, they have described the treatment performed for their patients. Their treatment included intramuscular injection of hydroxycobalamin (a bolus of 1000 mg repeated after one week), administration of anti-oxidant tablet once daily with local neuro-protective agents for 3 weeks. Since they believed that this treatment resulted in partial recovery of visual disturbances (VD) in all but one of their patients, they recommended the physicians to treat all such patients using this protocol irrespective of their severity of visual disturbances and/or the time elapsed between methanol ingestion and hospital presentation. However, there are some major points worth mentioning about the general management of these methanol-intoxicated patients and the management performed for their VD, in particular. It is not clear why the physicians of the local hospital (District Hospital) have not properly managed the patients in acute stage of methanol intoxication. They have only administered intravenous (IV) infusion of sodium bicarbonate and absolute alcohol. As you know, in methanol intoxication, hemodialysis is absolutely indicated in any patient with VD of any degree accompanied by metabolic acidosis or a detectable methanol level in addition to the antidotal therapy (ethanol or fomepizole), administration of folic or folinic acid, and sodium bicarbonate if indicated (Hovda et al, 2004; Hovda et al, 2008; Sanaei-Zadeh et al, 2011; Shah et al, 2012). Also, interestingly, the authors have not mentioned anything about the type and dose of the administered anti-oxidant tablet and local neuro-protective agents that have suggested. To my knowledge, to date, no other published study has reported managing methanol-induced optic neuropathy in such a way. Instead, in addition to the successful management of a case of methanol-induced VD with prednisone and vitamin B1 (Rotenstreich et al, 1997), IV prednisolone for methanol-induced VD has been used in 6 other studies (36 cases), so far. This treatment has resulted in complete or incomplete recovery of VD in all but three of the patients (Fujihara et al, 2006; Abrishami et al, 2011; Bang et al, 2007; Sodhi et al, 2001; Shukla et al, 2006; Sharma et al, 2011).). Moreover, it has been recently suggested that retrobulbar injection of triamcinolone may improve visual outcome in methanol-induced toxic optic neuropathy (Shah et al, 2012). In contrast, it has been

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Email: h-sanaiezadeh@tums.ac.ir

shown that after proper treatment of methanol intoxication without administration of high-dose IV prednisolone, blindness is sometimes permanent (Naraqi et al, 1979; Onder et al, 1998-1999; Paasma et al, 2009; Sanaei-Zadeh et al, 2011) and sometimes partially recovers (Shukla et al, 2006, Scrimgeour et al, 1982). In a number of patients, blindness begins to improve but these patients eventually experience reduced vision after some time (Shukla et al, 2006; Stelmach et al, 1992). This is while in only one previously reported case, the patient's blindness has completely recovered after methanol-induced optic neuropathy (Sivilotti et al, 2001). Therefore, the patients of the present study (Samanta et al, 2012) might go through this course even without the initiation of their management (i.e. hydroxycobalamine, anti-oxidant tablet, and local neuro-protective agents). It seems that a case-control study is warranted to evaluate the effect of their management in methanol-induced VD. However, with respect to the abovementioned studies, I agree that corticosteroid pulses and vitamin therapy should be administered or retrobulbar injection of triamcinolone has to be performed even without a real evidence as an ultimate chance for the patient for eventual recovery.

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