DELAYED ONSET BLINDNESS AFTER 5 WEEKS OF METHANOL INTOXICATION

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Introduction: Methanol is a well-known toxic cause of acute toxic optic neuropathy with uncommon delayed onset blindness. We report a patient who developed blindness at five week after methanol ingestion.

Case report: A 33-year-old male patient with good visual acuity by history presented with bilateral painless visual losses for 2 days, at five weeks after methanol ingestion. He was previously admitted in our hospital after accidental methanol ingestion with confirmed methanol level of 80.03 mg/dL at 36 hours after the ingestion. He was treated by hemodialysis, intravenous ethanol as bridging therapy, intravenous sodium-bicarbonate and folinic acid, and ventilatory support. Ophthalmologic examination demonstrated decreased visual acuity (right 6/9, left 6/24; correctable by pinhole 6/9) and yellowish hypopigmented lesion near macular region bilaterally. There was no evidence of optic disc neuritis on his first admission. Physical examination results on his second visit were normal except his visual acuity that exhibited no light perception, pupils 4 millimeter sluggish and reactive to light and found negative relative afferent pupillary defects bilaterally. Investigations for other etiologies of blindness were intensively performed and revealed normal results. Brain and orbit Magnetic Resonance Imaging (MRI) showed bilateral putaminal necrosis, bilateral optic neuritis and optic nerve atrophy. Serum methanol and ethanol levels were 6.45 and 0.54 mg/dL respectively that thought to be due to his recent occupational exposure as a carpenter and alcohol drinking. He was diagnosed as toxic optic neuropathy and was treated with intravenous 1% methyl prednisolone for 3 days and folinic acid, oral folic acid and thiamine. His vision was improved minimally to finger count both eyes and experience occasional black and white color vision at one week after the treatment. He reported history of heavy alcohol drinking for 8 years and heavy smoking for 30-pack-year.

Discussion: Our patient developed blindness at five weeks after methanol ingestion. Delayed onset blindness is rare clinical manifestation of methanol intoxication. It was previously reported in a case series of six year follow-up after epidemic Esthonian methanol toxicity referring new visual losses after hospital discharge, however the onset was not indicated.

Conclusion: Our patient developed blindness at five weeks after accidental methanol ingestion despite appropriate intervention at 36 hours. Long term follow up study is needed to elucidate the incidence of delayed onset blindness and long term ocular outcomes due to methanol intoxication as well as its effective strategies to reserve ocular function.