

Effect of Continuous Pralidoxime Infusion in Severe Methylparathion Poisoning- A Case Series

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Objective : The aim of the present study was to assess whether continuous infusion of pralidoxime can improve the outcome of patients with severe methylparathion poisoning.

Case Series : Six patients admitted to the emergency centre of tertiary care hospital of south India, with severe methyl parathion poisoning due to intentional self harm. All the patients were directly admitted to the emergency centre within an average prehospitalization period of 50 ± 10.6 minutes. The average age of patients was 28 ± 6.4 years and all of them belonged to agricultural group. At initial presentation, all the patients had altered sensorium, along with diaphoresis and salivation. Two of them had skeletal muscle fasciculation and two developed generalized seizures. The baseline severity of poisoning was assessed using clinical severity indices like Glasgow coma scale (GCS); Poison Severity Scale (PSS) and cholinesterase levels. The mean initial GCS and PSS scores were 7.2 ± 3.5 and 2.7 ± 0.6 respectively while plasma cholinesterase level was 191.3 ± 276.5 IU/L. All of them had respiratory depression and hence required mechanical ventilation within 24 hours of admission. After decontamination by gastric lavage, they were administered a bolus dose of 5mg atropine intravenously initially and then at 1mg/ hour by continuous infusion till clinical symptoms of poisoning subsided. Dosage was adjusted based on atropinization symptoms like pulse rate or dryness of tongue. Pralidoxime was administered as a continuous intravenous infusion at a rate of 500mg/hour after an initial bolus dose of 2 g (over 30minutes) initially for 2-3 days and tapered to 250 mg/hour for 2 more days and 125mg/hour for two more days, with a total duration of one week. The average dose of atropine required was 820.8 ± 1528.9 mg while the average dose of PAM administered was 42 ± 10 gm for a mean duration of 6.5 ± 0.5 days. The average serum level of pralidoxime was 21.33 ± 5.26 mcg/dl and was not associated with adverse effects. The average ventilation period was 48.2 ± 12.6 hours. All six patients successfully recovered with a mean hospitalization period of 10.2 ± 2.5 days.

Discussion : The use of oximes in OP poisoning is still controversial and varies in opinion between physicians with regards to dose, regimen and duration of treatment. Limited studies are available to prove the clinical benefits of oximes in OP poisoning(1). The observations of the present study supports that WHO regimen of 30mg/kg and 8mg/kg/hour infusion is clinically effective and not associated with adverse effects(2).

Conclusion : Continuous infusion of pralidoxime after initial decontamination improved hospitalization period, clinical outcome and decreased atropine requirement in severe methyl parathion poisoning.

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