Oral Abstracts

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EFFECTS OF LIPID EMULSION ON HEMODYNAMICS IN ORGANOPHOSPHATE COMPOUND POISONING

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Objectives: Lipid emulsion has been used to revert toxicities of lipophilic drugs and toxins (especially lignocaine) and in critically ill patients. Though the safety has been established, the effect on hemodynamics in organophosphate poisoned patients has never been studied.To study the effect of a single bolus dose of intravenous lipid emulsion on hemodynamic parameters effects in patients with organophosphate poisoning.

Methodology: The study is a prospective open label pilot study, undertaken at a tertiary care hospital in North Western India. Patients with history and clinical features of organophosphate poisoning were included in the study. All patients were treated according to institutional protocols of Atropine only without 2 PAM. Along with the standard treatment a single dose of 20% lipid emulsion was administered at admission after obtaining consent. Hemodynamic parameters like pulse, systolic and distolic blood pressure, respiratory rate and oxygen saturation were recorded every 15 minutes for first 2 hours, every half an hour for 6 hours and hourly for next 48 hours. Patients were followed up till discharge or death.

Results: Eighteen patients with organo-phosphate compound poisoning have been enrolled in the study group. Ten patients (56%) were male and the mean age was 35.7 years. 'Chlorpyrifos was commonest ingest ant (33 %) followed by Dichlorvas (11%), and Triazophos, Parathion, Phorate and Malathion (6% each). A significant change in heart rate was noted at 1 hour, 2 hours and 12 hours following administration of lipid emulsion in the entire study population (p value <0.05). the similar changes were noted in patient presenting with shock. Significant increase in systolic pressure, diastolic pressure and mean arterial pressure were noted in the study group from baseline (p value <0.05) Mortality was 16.67% in the study group

Conclusion: Administration of lipid emulsion in organophosphate compound poisoned individuals is associated with significant changes in heart rate, systolic pressure, diastolic pressure and mean arterial pressure in patients with and without shock. However it is difficult to attribute these changes to lipid emusion alone as there are multiple confounding factors like atropine and inotropic agents.