[ID-P#058] Early onset of Intermediate syndrome without cholinergic crisis following organophosphate poisoning: An unusual presentation of common poisoning in Northern Sri Lanka

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Background: Organophosphate is a commonly used insecticide in developing countries. Deliberate self- ingestion by organophosphate had risen dramatically due to easy availability and accessibility especially in farming community. Organophosphate irreversibly inhibits enzyme acetylcholinesterase causing accumulation of acetylcholine and uncontrolled stimulation of muscarinic and nicotinic receptors causing the symptoms. These toxic symptoms would be categorized into three phases; acute cholinergic syndrome, intermediate syndrome and delayed neuropathy. Intermediate syndrome is known to occur within 24-to-96-hours post-exposure to organophosphate compounds. Usually, once the patient recovers from acute cholinergic crisis.

Case presentation: A 51-year-old male who was admitted following Ethephon (an organophosphate) poisoning, under the influence of ethanol in a suicidal attempt. Intermediate syndrome was developed within the first 24 hours of exposure in the absence of acute cholinergic syndrome. On admission his vitals were stable and did not show signs of ethanol intoxication or symptoms of cholinergic crisis. The haematological and biochemical investigations were unremarkable, however the nerve conduction study revealed acute pure motor axonal polyneuropathy suggestive of organophosphates poisoning. The patient exhibited neck muscle weakness with difficulty in sitting upright, indicative of intermediate syndrome by the following morning. Prompt administration pralidoxime coupled with close observation, led to gradual improvement in muscle strength without the need for mechanical ventilation. By day seven, the patient achieved full recovery of neck muscle strength and was discharged without complications.

Conclusion: This case emphasises that organophosphate poisoning can develop intermediate syndrome without developing initial cholinergic crisis. Physicians should anticipate atypical presentations which warrants prompt treatment with appropriate antidotes and strict monitoring to avoid complication such as respiratory failure. Moreover, this case highlights the unpredictable nature of organophosphate poisoning when they are co-ingested with other potentially harmful toxins such as Ethanol, giving rise to rare presentations.