

Biochemical changes in acute organophosphorus pesticide poisoning in Bijapur, Karnataka.

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- **Abstract:** Organophosphorus poisoning is a major global health problem with more than 200,000 deaths every year. Organophosphorus compounds are widely used worldwide in agriculture as well as in most household gardens. Unfortunately because of their easy availability and potent toxicity, there is a gradual increase in accidental poisoning and is commonly abused for suicidal purpose. Toxicities of organophosphorus compounds cause oxidative damage of cell membranes and also result in disturbed biochemical and physiological functions. Hence we planned to study the biochemical changes in acute organophosphorus poisoning. Blood samples were collected from the clinically diagnosed organophosphorus poisoning subjects admitted during the year 2007-2009, in Shri B.M. Patil Medical College Hospital and Research Centre, Bijapur. The samples were analyzed using standard methods for different biochemical parameters. Progressive fall in plasma cholinesterase and increased serum malondialdehyde levels in correlation with the severity of organophosphorus poisoning were observed. There was significant decrease in serum total cholesterol and potassium levels without much change in serum sodium level. C-reactive protein levels were increased. Serum magnesium levels were decreased in organophosphorus poisoning cases as compared to control group. Inhibition of cholinesterase leads to increased acetylcholine level which induces oxidative damage resulting in various biochemical changes during acute organophosphorus poisoning.
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