PROGNOSIS OF ACUTE ORGANOPHOSPHATE POISONING

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Introduction: Organophosphate poisoning is a worldwide public health problem and is particularly common in the developing countries. The primary target of organophosphate (OP) insecticides is the enzyme acetylcholinesterase (AChE), which hydrolyses the neurotransmitter acetylcholine in both the peripheral and the central nervous system. Inhibition of AChE causes accumulation of acetylcholine at cholinergic synapses, leading to over-stimulation of muscarinic and nicotinic receptors and a wide range of clinical manifestations. Poisoning may be enough sever for need to intensive care support and even may lead to death. We aimed to provide a comprehensive review analysis on prognosis of poisoning by these compounds.

Method: A review article related to mortality of organophosphate pesticide poisoning was performed by searching articles in PUBMED and Google Scholar database. Data were analysed with SPSS software.

Results: Among the total number of 11308 cases OP poisoning, 6559 (58%) were male. The mean (SD, Min-Max) percentage of patients who had ingested organophosphate was 76 (17, 43-93)% followed by inhalation or cutaneous or exposure. Suicide rate was 67 (22, 21 -97)%. The percentage of patients needed ventilation and ICU care was 45 (31, 11-100). Mortality rate in ICU was reported to be 39 (15, 28 -50)%. The percentage of patients who had suffered from complications was 32 (27, 9-74)%. The mean percentage of total mortality of organophosphate poisoning was 17.7 (15.4, 0-75)%.

Conclusion: OP poisoning is a major health risk. Globally mortality rate is still very high. ICU infrastructure should be expanded. Organophosphate poisoning is a serious risk to human life and needs to rapid intervention and continuing special care to prevent life threatening complications