


Abstract

Fatal Dermal Absorption of Organophosphate Insecticide †

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Abstract: Organophosphate compounds are one of the leading causes of death due to poisoning worldwide due to their easy accessibility as insecticides and pesticides. Ninety-five percent of pesticide poisonings occur in developing countries, especially in the Asia–Pacific region. Moreover, in countries like India, pesticides are one of the most commonly used suicidal poisons because of their easy accessibility. Agriculture being the country's main source of occupation, pesticides are easily accessible throughout India. Organophosphorus toxicity can commonly occur due to household pesticide use or due to occupational exposure. Though rare, accidental poisoning can occur in people working in the pesticide industry, farmers, and sometimes in the general population. Organophosphorus compounds are absorbed by all routes and cause fatality unless treated with the appropriate antidote. Suicidal poisoning will usually be by ingestion, whereas accidental poisoning will be either inhalational or dermal. Homicidal poisoning cases with the use of organophosphorus compounds have also been reported in the literature. People may become unknowing victims of these chemicals. The dermal absorption of these compounds is common, but it rarely results in fatality. Acute poisoning is common after oral, respiratory, or dermal exposure to low-volatility or high-volatility pesticides. We present an accidental fatal case of organophosphorus poisoning wherein the mode of entry was through dermal absorption.

Keywords: organophosphate compounds; pesticide poisoning; dermal absorption



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