Fatal Dermal Absorption of Organophosphate Insecticide

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Introduction:

- OP compounds are one of the leading causes of death due to poisoning worldwide due to their easy accessibility as insecticides and pesticides.
- 95% of pesticide poisonings occur in developing countries, especially in the Asia–Pacific region.
- 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.

Case Details:

- An Adult male was brought to the casualty due to sudden unconsciousness and followed by unresponsiveness
- History: Travelling in a bus
  With a can of unknown chemical
  kept in the shelf above the head
  Which was leaking slowly
  Fell on his pant which he neglected
  continued his travel
  Became unconsciousness before he reached his destination

Discussion & Conclusion:

- Suicidal poisoning will usually be by ingestion, whereas accidental poisoning will be either inhalational or dermal.
- Acute poisoning is common after oral, respiratory, or dermal exposure to low-volatility or high-volatility pesticides.
- People may become unknowingly victims of these chemicals.
- The dermal absorption of these compounds is common, but it rarely results in fatality.
- The dermal route is thought to be the major route of occupational exposure for most OPs.
- Although systemic absorption varies after dermal exposure, it can be heightened by various factors such as broken skin, dermatitis, and elevated environmental temperatures.
- Emergency physicians should bear in mind about percutaneously absorbed organophosphate poisoning when they come across patients with consciousness

References:

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