



K31 Pesticide Poisoning Deaths in Istanbul and Nearby Cities in Turkey

*Erdoğan Özdemir**, The Council of Forensic Medicine, Ministry of Justice. Çobançesme Mah., Kimiz Sok.no:1 Bahçelievler, Istanbul, TURKEY; *Yigit Sezer*, Bahçelievler Mah Yildizli Sok 5/10, Istanbul, TURKEY; *Yusuf Özer*, Council of Forensic Medicine of Istanbul, Ministry of Justice, Istanbul, TURKEY; *Safa Celik*, Adli Tip Kurumu Baskanligi, Istanbul, TURKEY; and *Sermet Koc*, Adli Tip Kurumu Morg Dairesi Baskanligi, Bahcelievler, Istanbul 34196, TURKEY

After attending this presentation, attendees will better understand pesticide poisoning, its impact, prevention, and the concerns about safety parameters.

This presentation will impact the forensic science community by providing results from a seven-year retrospective study in the vicinity of Istanbul, Turkey. This presentation will add to research being conducted by forensic medicine, forensic toxicology, and public health organizations by contributing to the understanding of the proper usage of pesticides in agriculture and the different methods of consumption for other purposes, either accidental or suicidal.

Although some kinds of agricultural pesticides are strictly banned in developed countries, they are easily found in local markets and pharmacies in most of the developing countries. Despite the high amount of consumption ratios of the developed countries, pesticide poisoning rates are higher in developing and underdeveloped countries. Despite the regional studies, extensive and comprehensive data about the manners of pesticide poisoning in Turkey are still lacking.

Pesticides are chemicals that are used to reduce the deleterious effects of various species such as insects, rodents, weeds, and fungi which cause the qualitative and quantitative loss of agricultural products during the production, storage, and consumption processes. Pesticides are categorized as fungicide, herbicide, rodenticide, repellent, or insecticide. Mechanism of action varies according to the type of the pesticide. Effects of irresponsible and uncontrolled consumption of pesticides to human health and the environment are also important issues and should not be ignored. Poisoning is generally encountered accidentally during agricultural usage or as a result of suicidal and homicidal exposure.

In the present study, 29,438 forensic autopsy cases performed in the mortuary department of the Council of Forensic Medicine, Turkey, from 2007 to 2013 were evaluated retrospectively for pesticide poisoning cases. Thirty-four pesticide poisoning cases were determined and studied for a detailed epidemiological and medicolegal analysis. Of these cases, 73.5% were male and 26.5% were female. The mean age of the cases was 42.5 years. Most of the cases (59%) were reported from Istanbul. The most common pesticide encountered was dichlorvos (DDVP) (29.4%), followed by endosulphan (8.8%).

Pesticide poisoning-related deaths are still an important public health issue in society. All safety regulation measures must be taken by all related authorities integratively in the prevention of the deleterious effects of irresponsible consumption of pesticides in agriculture and deliberate poisonings. Further study is needed to arrive at more detailed and comprehensive results of pesticide poisoning data from all regions of Turkey to understand pesticide poisoning in its entirety.

Pesticide, Poisoning, Epidemiology