

A study on the variety of pesticides poisoning in Hamadan (West Iran)

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Objective: Pesticides are compounds used to eradicate insects and undesirable pests harmful for agriculture. These agents consist of: insecticides, herbicides, rodenticides and fungicides (1). The most common types used in agriculture are Organophosphates, Organochlorines, Paraquat, carbamates & Zinc phosphide. Each year, many people refer to emergency departments due to poisoning with pesticides. Pesticides poisoning is an important cause of worldwide mortality, especially in developing countries (2). Due to the fact that , Hamadan province (West of Iran) is an agricultural area, people commonly contact pesticides and every year some of them are poisoned by these products. **Methods:** This study was prospective & cross-sectional, based on a questionnaire (consisting of age, sex, job, intention of consumption, type_of the product & final outcome). The information was obtained from patients themselves and their relatives who had referred them to Farshchian Hospital (referral center of the province for poisoning). Finally the obtained data were analyzed by SPSS 13. **Results:**This study showed that out of 1692 patients who referred to poisoning ward in one year, 234(13.8%) have consumed pesticides.55.8% were male and 44.2% were female. Suicidal attempt with pesticides was noted in 86.3% which proved to be the most common cause of consumption. The most common pesticides used are showed in Table 1.The majority of the patients (40.2%) were in the age group 10-20 years, with the peak of 20 years.

In the male patients the final outcome was as follows: 3.4% death , 47.4% full recovery , 4.7% complications leading to incomplete recovery, and in the female patients we obtained the following results: 3.4% death , 35.8% full recovery and 5.12% complications leading to incomplete recovery. The greatest number of mortalities occurred with the use of Organophosphate: 10 patients (4.2%).

Conclusion: Final results showed that pesticides (especially Organophosphates) are one of the agents most frequently used for attempting suicide (especially in the teenage group in Hamadan). To reduce the number of poisonings with these agents, we suggest that using other preventional methods (such as biological methods) would be a good idea. **References:** 1) Schonwald S. “Medical toxicology”, 1st ed, Philadelphia, Lippincott Williams & Wilkins, 2001:708-33. 2) Moghadamnia A.A, Abdollahi M. An epidemiological study of poisoning in northern Islamic Republic of Iran. Eastern Mediterranean Health J 2002; Vol 8, No. 1.

Table1: Kind of pesticides used in 234 hospitalized patients

Kind of pesticides	Relative frequency
	N (%)

Organophosphates	140 (59.8)
Paraquat	36 (15.4)
Zinc phosphide	30 (12.8)
Organochlorines	12 (5.1)
Carbamates	12 (5.1)
Warfarin	4 (1.7)