

## **Pesticides poisoning in Nepal**

Use of pesticides in Nepal was introduced about 1952 and its use has been increasing over the years. It has been estimated that the use of pesticides in the developing countries approximately doubled every ten years between 1945 and 1995.

There are around 50 common pesticides under 150 trade names available in the market. Several available pesticides are possibly carcinogenic to humans. Before the enactment of Pesticides Act, 1991 and Pesticides Regulations, 1993 that came into enforcement from 16 July 1994, there was no law regarding pesticides in the country. Benzene Hexachloride (BHC) dust is the most frequently sold chemical pesticide followed by parathion methyl, Zinc phosphide, Aluminium phosphide, Malathion, Dithane, and Phorate.

Worldwide estimates suggest that there are about three million (1,000,000 intentional and 2,000,000 unintentional) acute pesticide poisonings and approximately 220,000 deaths each year. Most of the poisonings and 99% of deaths occur in the developing countries. Most intentional pesticide poisonings are for suicidal or homicidal purposes, whereas, the most unintentional pesticide poisonings are accidental and occupational cases. Most of the reported cases of acute pesticide poisonings result from overexposure to organophosphorous compounds.

In our country, most of the pesticide poisonings is intentional in nature. The most common insecticides used for suicidal attempt are organophosphorous compounds followed by zinc phosphide and aluminium phosphide. Familial conflict, failed love affair, failure in examination and business, financial problems are usually the common causes of suicidal poisoning. Accidental and occupational overexposure to pesticides occurs mainly among agriculture workers, farmers and their family members. A study on pesticide poisoning done by the World Health Organization in the SEARO countries revealed that among total of 258 cases of acute pesticide poisoning in Nepal, 91.5% were intentional cases followed by 6.2% occupational exposure cases and 1.16% accidental cases.

All patients with intentional poisoning must be provided psychiatric consultation during their stay in the hospital and at the time of discharge. There is also an urgent need for strict implementation of the Pesticide Act, which regulates the import, manufacture, sale, transport, distribution and use of pesticides with a view to prevent risk to human beings and animals. The existing poisoning management system should also be strengthened by creating poisoning database and information centres, regular training of physicians, providing national treatment guidelines in all hospitals and ensuring availability of all antidotes.

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