A Survey on Pesticide Related Health Hazards among Agricultural Workers in Ganderbal District of Kashmir

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ABSTRACT

A study was conducted to identify the pesticide hazards among agricultural workers/farmers. A total of 42 male workers, age group 20-46 years who worked for 3-22 years in agricultural fields of three villages in Kashmir, were interviewed. The most commonly reported symptoms were headache (50%), followed by breathing difficulties and stomach pain (40.48%), muscle pain (35.71%), red eye (33.33%), dizziness (30.95%), hand numbness (26.19%), skin itching (21.43%), visual problems (16.67%) and nail infection/decay (14.29%). It was observed that development of symptoms directly related to the duration of the exposure to pesticides. Farmers were advised to use proper personal protective equipment during handling and spraying of pesticides.

Keywords: Agricultural workers, health hazards, pesticides.

There are overwhelming evidences that pesticides pose potential risk to humans and other life forms and unwanted side effects to the environments (Forget, 1993; Igbedioh, 1991). Due to inadequate occupational safety measures, illiteracy and insufficient knowledge of pesticide hazards, pesticide poisoning and even death occurs among pesticide applicators and farm workers. In India, the first reported case of pesticide poisoning was from Kerala in 1958, where 100 people died after consuming wheat flour contaminated with parathion (Karunakaran, 1958). Throughout the world nearly 1 million deaths and chronic illness occurred due to pesticides poisoning (Jeyaratnam, 1985; WHO, 1990).

The high risk groups of pesticide exposed people includes pesticide producers, sprayer, mixer and agricultural farm workers. The families of farmers are also unduly exposed to pesticides through unsafe storage and disposal of these chemical products (Keam and Lang, 2002). Exposures mainly take place through inhalation, contact with skin and eyes and by ingestion (Tardiff, 1992).

As most of the farmers/agricultural workers are quite unaware about the health hazards of pesticides the study was undertaken to investigate the health status of farmers, vis-a-vis pesticide usage.

A survey was conducted in three villages of Ganderbal district of Kashmir to investigate the pesticide usage in fields and health status of agricultural workers/farmers. A total of 42 male workers of three villages were interviewed at field by asking some pre-planned questionnaire. Farmers were also observed during spray session to identify the routes of pesticides exposure and personal protective equipment they used during spray operations.
All workers were in the age group of 20-46 years having worked for 3-22 years in agricultural fields. Farmers were interviewed about pesticides they used, health problems related to pesticides, use of protective equipments, methods of spray, etc. Various symptoms of disease like vomiting, headache, breathing difficulties, stomach pain, skin problems and visual problems, etc. were taken into consideration.

The study revealed that most common pesticides, which included insecticides, fungicides and herbicides, used in agricultural fields were endosulfan, dichlorovos, lindane, phosphomidan, carbendazine, mencozeb, copper-oxychloride and di-ethylane in this area.

The most commonly reported symptoms were headache (50%), followed by breathing difficulties and stomach pain (40.48%), muscle pain (35.71%), red eye (33.33%), dizziness (30.95%), hand numbness (26.19%), skin itching (21.43%), visual problems (16.67%) and nail infection/decay (14.29%). Other symptoms included cough (14.29%), vomiting (9.52%), hearing problem (7.14%) and urinary tract infection (7.14%).

Out of 42 individuals, 33 (78.57%) reported one or more symptoms. Nine persons had no symptoms of any disease condition. The symptoms were maximum among persons having exposure of 14-22 years. Those who were engaged recently in farming work, i.e. 3-5 years had very few symptoms. Most of the persons having exposure of 14-22 years reported headache, breathing difficulties and stomach pain, skin problems, while person having exposure of 2-3 years reported only minor nail infections, breathing difficulties and headache.

Highly toxic pesticides pose a serious threat to the small land holding farmers, because they cannot use full personal protective equipment due to their inability to purchase all personal protective equipment as well as lack of their knowledge about pesticide hazards.

About half of the workers/farmers (42.86%) had no knowledge about pesticide hazards and only 2 persons (4.76%) had knowledge about washing of hands after handling pesticides. Only 3 (7.14%) persons used special dress during handling and spraying pesticides, while 14.29 % farmers used mask or respirators and only 2.3% used gloves and goggles for their protection. In a previous study, Das and Dey (2000) reported that only 5% of the agricultural workers used special dress and 2% used gloves and mask while handling pesticides in Howrah district of West Bengal.

To prevent the pesticide hazards, proper awareness and educational programmes to the farmers and other agricultural workers regarding handling, storage, spraying and knowledge of possible health effects should be given. Farmers should be advised to use proper personal protective equipment during handling and spraying of pesticides.

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**References**


