

## **Pattern of Pesticide Storage before Pesticide Self-Poisoning in Rural Sri Lanka: A Prospective Survey**

Fahim M (1), Konradsen F (2), Azher S (3), Manuweera G (4), Eddleston M (1, 5), Dawson A (1). 1. South Asian Clinical Toxicology Research Collaboration; 2. Department of International Health, Immunology and Microbiology, University of Copenhagen, Denmark; 3. General Hospital, Polonnaruwa; 4. The Pesticide Registrar, Government Department of Agriculture, Peradeniya, Sri Lanka; 5. Scottish Poisons Information Bureau, Royal Infirmary of Edinburgh, and Clinical Pharmacology Unit, University of Edinburgh, UK

**Objective :** Self-poisoning with pesticides is the most important means of suicide in rural Asia making it a serious public health concern. Pesticide self-poisoning is often impulsive and easy access to highly toxic pesticides in the domestic environment or at community level may present major problem. This study aimed to assess from where poisoning cases obtained the pesticides used for self-harm immediately prior to the episode. Such information is needed to inform policies and strategies aimed at reducing access to toxic compounds at community level. **Methods :** The study was conducted predominantly in agricultural area and all the patients presenting after poisoning to the medical wards of study hospital were interviewed by doctors after initial resuscitation. The study doctors were trained to interview the patient with the help of structured questionnaire. For all pesticide self-poisoning patients questions systematically identified the site of storage of pesticides immediately prior to the episode. **Results :** Among 669 patients who were analysed, 425 (63.5%) were male and median age in this group was 26 (IQR 20-36). Of the 669 patients, the most common pesticide ingested was herbicides (35%), organophosphorus compounds (30%), and carbamates (10%). In 503 (75%) of the 669 cases, pesticides were either stored inside home (36%) or immediately outside home (39%). Patients obtained pesticide from these locations just before the self-harm. Only 1% of the pesticides were locked securely. 91 patients obtained pesticides freshly from sales outlet. Reason for choosing the particular pesticide for self-harm include easy accessibility (n=311) and popular suicidal agent in their village (n= 290). **Conclusion :** Our study found that 75% of the study population took pesticides for self-harm already stored in or close to the homes and were easily accessible. Therefore it is likely that, acute self poisoning with pesticides can be reduced if safe storage practices can be achieved among the farming community possibly by using appropriate pesticide storage devices that have high compliance among the farmers. Also, the study highlights the importance of regulating the sale of pesticides among private dealers in rural Asia so that only farmers with proper record can gain access to the products.