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What are the common pesticides presenting as acute poisoning in Bangladesh?

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Objective: To observe the groups of pesticide responsible for acute poisoning as deliberate self-harm in Bangladesh. In Bangladesh, acute pesticide poisoning from deliberate self-harm, and less commonly from accidental and occupational exposure, is accountable for deaths and poses immense strain on hospital services. A large number of poisoning cases are being treated inappropriately due to inadequate information regarding the substances taken by the patient and lack of awareness at the community level.

Methodology: A cross-sectional hospital-based observational study was carried out in all adult medicine units of Dhaka Medical College Hospital inpatients (>16 years) who are admitted in this hospital with features of pesticide poisoning from 1.06.2017 to 31.03.2018. Patient and patient's attendants were asked to provide the sample of ingested pesticide either in the form of container or picture using various means (eg. Viber, email, imo, Facebook, Messenger). Only patients who were able to supply the sample were enrolled. Details of clinical presentation and social background were recorded in the printed case record form by specially trained medically qualified research associates. The specimens produced were observed for labeling, manufactured agency, brand name and trade name. The labelled bottle or specimen were rechecked through a list of registered agricultural and public health pesticides in Bangladesh prepared by Plant protection wing of Department of Agricultural Extension, Khamarbari, Dhaka-1215 and courtesy by Bangladesh Crop Protection Association (15th Nov, 2008) and were recorded accordingly. The results were plotted and analysis performed using SPSS version 17 (Chicago, Illinois)

Results: Among 224 enrolled patients, the common age group was found between 16-30 years (70% cases) and fatality was more often observed in this group. OP and Non-OP compounds were almost equal (52% vs 48%). There were 30 deaths reported in this series with highest from OP group (20 cases). Ninety three percent were suicidal and the rest were accidental or homicidal. A GCS<9 and pupillary constriction at admission were found to correlated with poor outcome in this study. The vital signs (pulse, blood pressure) were not found to correlate with poor outcome. OP compound was highest (52.2%), miticide was 21.1%, carbamate was 3.9%, herbicide was 9.2%, stored grain pest 7% while rodenticide was 2.6%.

Conclusion: Producing the sample is a practical activity that is justified in order to initiate prompt management and to improve outcomes.