

CHANGING PATTERNS OF POISONING IN RURAL SRI LANKA.

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Introduction: Poisoning is a leading cause of hospital deaths and hospital costs in the agricultural districts of Sri Lanka. Cost is dependent upon the type of poison ingested. Although paracetamol has relatively low toxicity it is one of the most expensive poisons to treat. **Objective:** To describe the epidemiology of poisoning pattern in the North Central region of Sri Lanka. **Method:** The study was conducted in the two referral hospitals in the north central province of Sri Lanka. Prospectively collected data on all poisoned patients admitted between January 2004 and June 2008 by trained doctors and were analyzed. **Results:** There were 13963 cases with a history of deliberate self poisoning, out of which there were 899 deaths (overall case-fatality 6.4%). However, this was very dependent on agent ingested – ranging from pharmaceuticals (1.1%), to oleander (3.4%) and pesticides (9.6%).

Paracetamol poisoning gradually increased over five years from 2.8% to 6.4%. And there were no deaths. Median age was 20, 80% were female. Other medicine and pesticide poisonings increased from 8.6% to 10.4% and 53% to 60% respectively, while oleander admissions are decreased from 28% to 16% (95% CI 9.81 to 14.65%; P<0.001.) between 2004 and 2008. There has been a decline in the overall case-fatality from 8.2% in 2004 to 5.9% in 2008.

Table-1 Numbers and proportion of poisonings

Poisoning	2004	2005	2006	2007	2008 (6 month)
Acid	12(0.42)	4 (0.13)	6 (0.19)	8 (0.25)	2 (0.12)
Alkali	8 (0.28)	0 (0)	3 (0.09)	1 (0.03)	1 (0.06)
Hydrocarbon	103 (3.63)	107 (3.40)	108 (3.43)	95 (3.01)	40 (2.37)
Other Medicine	244 (8.58)	344 (10.95)	371 (11.79)	364(11.55)	176(10.45)
Paracetamol	79 (2.78)	116 (3.69)	160 (5.08)	185 (5.87)	108 (6.41)
Oleander	808 (28.44)	759 (24.15)	750 (23.83)	694 (22.02)	273 (16.03)
Pesticide	1493 (52.55)	1603 (51)	1593 (50.63)	1668 (52.93)	1006 (59.73)
Unknown	94 (3.30)	208 (6.62)	155 (4.93)	136 (4.31)	78 (4.63)
Total	2841	3141	3146	3151	1684

Discussion: It is not clear why paracetamol has increased over time while oleander decreased and in both cases gender had remained almost same over the study period. From a public health perspective it has much lower toxicity relative to agrochemicals but the cost of antidote treatment is very high especially when assay services are not available to assess risk. Estimated cost is 110 US\$ per patient treated. Given the increased frequency it may be cost effective to introduce recently developed low cost assay services. Primary prevention such as reduction of packet size should be considered. **Conclusion:** Paracetamol poisoning admissions are increasing in rural Sri Lanka. This has implications for antidote stocking, laboratory services and doctor education.