

## Oral Abstracts

### 5B-04

#### CHANGING OLEANDER (THEVETIA PERUVIANA) POISONING PATTERNS IN SRI LANKA AND NOVEL RISK FACTORS

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**Objectives:** Suicide via poisoning in low-income countries is common, and Sri Lanka had a very high rate of 47 suicides per 100,000 in 1995. Changing epidemiology of modes of self-harm appear to be occurring with a reduction in pesticide poisoning and increase in medicinal overdose. This study examines the epidemiology of oleander poisonings in this context, recorded at presentation to ten Sri Lankan hospitals.

**Methods:** Data was collected as part of an ongoing toxicology prospective cohort of all toxin self-poisonings recruited at ten hospitals across Sri Lanka. A range of demographic, treatment and outcome data was collected allowing trends from 2002-15 to be assessed over time in different parts of the country. Cases examined here were those involving a single poison ( $\pm$ alcohol). Case-fatality was calculated, and cases from different regions of the country were compared and contrasted

**Results:** Case-fatality for presenting oleander cases was 2.6% (95% CI: 2.2, 2.9). Case-fatality in the first 12 months of the study (5.8%, 95% CI: 4.4, 7.4) was significantly higher than the last 12 months case-fatality (1.0%, 95% CI: 0.4, 2.3) and regressing case-fatality against time saw a decrease in case-fatality over time since the commencement of data collection in 2002 ( $p < 0.001$ ). Over the time period 15.0% of all poisoning cases were oleander poisonings (of total of 72,601 cases), with patients' average age 24.6 years ( $\pm$ SD 10.4) and 50.7% were male. In the 10-20 year age group, only 40.9% were male (compared with 59% male in the 20-60 year group). Co-ingestion of alcohol may increase the risk of fatality after adjusting for age (OR 1.5 [95% CI: 0.99, 2.4]). The proportion of oleander cases receiving charcoal was reduced from 65% to 40% 2002-2016 at Anuradhapura and Kurunegala ( $p < 0.05$ ), but not Polonnaruwa. Use of atropine in treatment decreased over the study period but did so at different rates in different hospitals. Certain areas had proportionally higher numbers of cases, and higher case-fatality. Hospitals in dry and intermediate climatic zones reported a higher proportion of oleander cases than those in wet climatic zone. The higher case-fatality found during dry seasons could be due to increased toxicity of oleander, or increased dose, with the availability of seeds.

**Conclusion:** Improved care of patients presenting at Sri Lankan hospitals has seen a decrease in case-fatality. Young women are the group with highest rate of oleander poisoning, compared to other modes of self-harm. Yellow oleander toxicity may vary by region and season.