

## Oral Abstracts

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#### PATTERNS AND RISK FACTORS OF ACUTE POISONING AMONG CHILDREN IN RURAL SRI LANKA

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**Objectives:** The study describes the patterns of accidental and deliberate poisoning, first aid measures, reasons for delayed management, complications and outcome following acute poisoning among children (9 months- 12 years) in rural Sri Lanka. It also describes patient, poison and environment related independent risk factors in the same age group.

**Methods:** The current multi-center study was hospital based and involved the two major hospitals (Anuradhapura and Polonnaruwa), and 34 peripheral hospitals of the North Central province of Sri Lanka (NCP). Total period covered by the study was seven years (2007 – 2014). Data were collected using interviewer administered questionnaires and a qualitative study (n=383). Age and gender matched case controlled study (n=600) assessed independent risk factors by multiple logistic regression method.

**Results:** Among 1621 children, boys (956, 59%) outnumbered girls and most were in preschool age group. Majority belonged to the farming community. Commonest poison and type of poison were kerosene oil (307, 18.9%) and household poisons (489, 30.2%) respectively. Most had unintentional poisoning and incidents mostly occurred within their own house premises (304, 79.4%). Potentially harmful first aid measures were practiced on 113 children (29.5%). Deliberate poisoning rate was 4.95% (n=19) and were mostly associated with disrupted family dynamics and emotional vulnerability. Among 23 proposed risk factors, three risk factors were significant with  $p < 0.001$  (CI= 99%) - inadequate supervision of the child, mother being employed during daytime and lack family support to look after the child. Unsafe storage, unsafe environment, incorrect parenting and delayed development in child were among other significant risk factors. Common reasons for delayed management were following delayed presentation due to lack of concern and knowledge regarding urgency (65, 16.9%) and complications (64, 16.7%). Complications were observed in 12.5% related to poison and first aid measures and commonest were chemical pneumonitis and acute liver injury. Psychological support was offered to 16% of deliberate poisoning victims.

**Conclusion:** Victims of acute poisoning in paediatric age group are predominantly preschoolers, and male children are at a higher risk. Complications though rare are potentially preventable through community education regarding risk factors, timely medical care and avoidance of harmful first aid practices. Since majority of accidental poisoning occurred in home environment, safe storage and assurance of safe environment as measures of prevention need further evaluation. Incorrect parenting and delayed development as risk factors need further studies as they were previously unreported. Psychological support to victims of deliberate poisoning should be improved in the studied population.