

Cost-outcome description of management of patients with acute paracetamol poisoning

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Introduction: Sri Lanka has a restricted health budget like most other developing countries. The antidotes for acute paracetamol poisoning are costly. We therefore did a cost-outcome description of the acute paracetamol poisoning management. **Methods:** Ethical approval was obtained. The medical records of all patients admitted to the National Hospital of Sri Lanka for management of acute paracetamol poisoning in 2004 were retrospectively studied. The public health system payers' perspective was adopted to identify costs involved in the management. Only the main direct costs were considered for the analysis. **Results:** 199 patients were admitted with a median age of 21±7 years and male to female ratio of 1:3. The mean body weight and the ingested dose of paracetamol was 48±9kg and 313±181mg/kg respectively. The median time between presentation to hospital and ingestion of paracetamol overdose was 7 hours and 30 minutes. The total cost of management was LKR1,861,869; 79%, 10%, 3.3%, 3.2 %, 2%, and 1% was respectively, spent on antidotes, transfers, investigations, activated charcoal, hospital bed-days, person hours and other medications. Average cost per patient was LKR 9356 ± 3755. Paracetamol levels were available only for one patient. 172 patients had ingested a dose >150mg/kg. 168 were given n-acetylcysteine (mean cost=LKR8710±1660) six were given methionine (cost LKR2291) and one was given both. Antidotes contributed to the largest cost of the management, LKR1470766. 72% of the patients were transfers which contributed to one tenth of the total expenditure. If antidotes could be made available in peripheral hospitals, the possible cost saving would be LKR1, 93,565. Investigations contributed to the third highest cost and zero to nine different investigations per patient has been used. Activated charcoal which contributed to the fourth highest cost was given to 129 patients despite most patients were admitted after 2 hours of the acute ingestion. The fifth highest cost generator was the cost of hospital stay, the mean hospital stay was 2 days and the cost of an average hospital bed day was LKR87. One patient died which was not related to paracetamol poisoning. Ten patients had minor hepatotoxicity and extended hospital stay (4 -7 days). All recovered without any long term sequelae. **Conclusion:** A reliable risk assessment tool should be developed to indicate use of NAC. Minimizing unnecessary transfers, investigations and activated charcoal and considering the use of methionine will reduce the cost.