

Cost Effectiveness of Introducing a New Method for Paracetamol Assay

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Introduction : Despite paracetamol poisoning being common paracetamol assays are not available in Sri Lankan hospitals. In this situation patients are treated on the history of ingested dose, this result in unnecessary treatment of up to 75% of patients. In Sri Lanka this has led to paracetamol being the most expensive poison for the health system to treat. The objective is to provide a new paracetamol assay method and minimize the cost for antidote. **Method** : A prospective survey was performed of all patients with paracetamol overdose attending to the Peradeniya General Hospital, Sri Lanka over a seven month period of time. A validated paracetamol assay service was introduced during daylight hours. The samples were taken after 4 hours of ingestion and if the patient admitted after 4 hours of ingestion the sample was taken at the paracetamol time of admission. Doctors were asked to use the paracetamol level, the time interval since ingestion and standard nomogram to guide treatment. When the assay was not available or presentations were greater than 8 hours since ingestion an ingested dose >200mgs/kg was the treatment threshold. **Results** : A total of 65 paracetamol overdose patients were identified, of which 45 had paracetamol concentration measured (Fig 1). Measurement of paracetamol assays prevented 4 unnecessary treatments out of 19 patients who presented during operational hours. Of the 30 patients presenting after hours a further 6 patients were identified who did not require an antidote. **Discussion** : We calculated that the preventing 2 unnecessary treatments a month would pay for a full analytical service. It is likely that some of the patients who were not assayed did not require antidote, this would represent a saving to the hospital. **Conclusion** : In countries in which paracetamol poisoning is prevalent and the cost of antidote is a high component of total cost introduction of a paracetamol assay service appears cost effective and may reduce total expenditure.

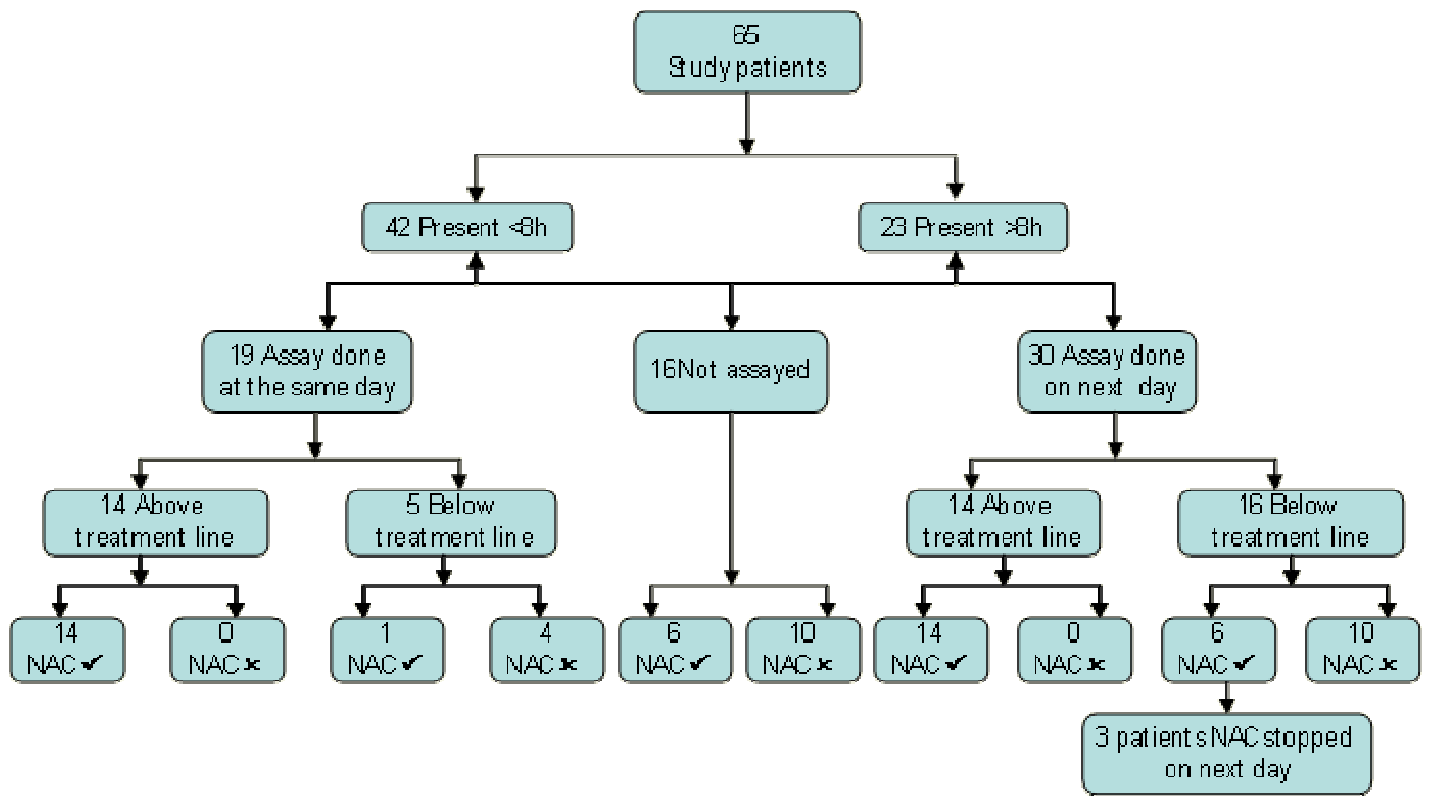


Figure 1 Study patient's results