

Poster Abstracts

PO-75

EFFICACY AND SAFETY IN MANAGEMENT OF PARACETAMOL POISONING TREATED WITH N-ACETYL CYSTEINE IN AN EMERGENCY DEPARTMENT 23-HOURS OBSERVATION UNIT: A COMPARISON TO STANDARD INPATIENT CARE

Kuan Kaibin Kelvin, HH Tan, HC Lim, G Arciaga, PL Goh, RP Mong

Accident and Emergency Department, Changi General Hospital, Singapore

Objectives: Our Emergency department started protocols for poisoning in 2012 in the 23-hours Short Stay Unit (SSU). Patients with Paracetamol poisoning could since be admitted and treated with NAC as indicated. The objective of the study is to evaluate the impact of the established SSU protocol in managing patients with Paracetamol poisoning requiring NAC treatment in our hospital. We hypothesize that such patients can be managed safely in SSU without significant adverse outcome and that a 25% reduction in length of stay can be achieved.

Methods: Patients admitted to the hospital and SSU with ICD code 965 for year 2011 and 2014 were traced. We included those with Paracetamol poisoning who were treated with NAC for >20hrs. Patients excluded from the analysis were those who did not need NAC treatment or were started on NAC but did not complete or require the standard 20-21 hour treatment. Patients with liver injury (PSS>1) at presentation or had clinical or social reasons that were deemed not suitable for SSU admission were also excluded.

Inappropriate NAC use is defined as treatment with NAC when there is no biochemical or clinical indications for treatment.

Data was collected for a descriptive comparative study between patients admitted to the Ward and SSU. Patient outcome, length of stay and NAC overuse was also reviewed and analyzed. Statistical analyses were performed using data analytic software on graphpad.com.

Results: There were a total of 81 patients included in the study, 58 admitted to the ward and 23 to SSU. The basic epidemiological data were similar in both groups, including adverse reaction.

		Admissions (n=58)	SSU (n=23)	P value
Age		28.2 (±3.15)	26.8 (±4.58)	0.633
Gender	Female	45(77.6%)	17(73.9%)	0.832
Liver PSS	0	54(93.1%)	22(95.7%)	0.568
	1	4(6.9%)	1(4.35%)	
NAC duration	20-21h	56(96.6%)	22(95.7%)	1
	>21h	2(3.45%)	1(4.35%)	
NAC initiation post ingestion	<8hours	36(62.1%)	17(73.9%)	0.095
	>8hours	22(37.9%)	6(26.1%)	
Anaphylactoid reactions		5(8.62%)	2(8.70%)	1
Survival to discharge		58(100%)	23(100%)	NA
Inappropriate NAC use		20(35.08%)	2(8.70%)	<0.0001
Length of Stay (h)		48.4 (±4.55)	25.6 (±2.56)	<0.0001

Poster Abstracts

There was no significant difference with regards to patient outcome, but with regards to average length of stay, there was a significantly shorter duration for SSU (25.6 hours) compared to the ward (48.4 hours) ($P < 0.0001$) (47% reduction). Inappropriate NAC use was also reduced in the SSU group by 75% ($P < 0.0001$).

Conclusion: Base on this study, our findings show that managing patients with Paracetamol poisoning requiring standard NAC treatment can be managed safely in SSU without significant adverse outcome, while reducing length of stay and inappropriate NAC use.

Further research may quantify actual cost savings in the use of SSU for paracetamol poisoning.