



Service Priorities and Programmes
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An admission audit of acute poisoning cases in an A&E with toxicology services: can it be protocol driven?

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Introduction

A&E observation unit protocols have been developed for many medical conditions in reducing hospital admission. Protocols for chest pain, congestive heart failure and asthmatic attack are commonly designed for this purpose. The majority of poisoning patients have mild or minimally toxic ingestion, which would be an ideal patient population for A&E observation unit. There are efforts in developing management protocol for poisoning patients presented to A&E.

Objectives

(1) Identify differences in patient characteristics between poisoning patients admitted to the ward and those observed in A&E with toxicology service. (2) Assess the feasible in developing a protocol in differentiating poisoning patients that should be managed as in-patient or in A&E.

Methodology

A retrospective review of acute toxicology cases presenting to United Christian Hospital A&E from 1.1.2011 to 31.12.2011 was performed. Poisoning patients were divided into two groups: (1) patients who are managed as in-patient, including those who managed in ward or ICU; (2) patients who are managed in A&E Patient characteristics including age, sex, initial conscious state, pulse rate, mean arterial pressure, type of poison and reason of ingestion was analyzed. Duration of stay in the emergency department was analyzed.

Result

743 patients were included in the study. 100 cases were managed as in-patient. 643 cases were managed in A&E. Multivariate analysis showed that patients were managed as in-patient are significantly older (median age: 51 versus 35 year), and more commonly presented with coma (GCS 8/15 or below: 24% versus 2%). Patients presented with bite or stings were more likely managed in A&E (2% versus 15.6%). There are no significant differences in other vital signs, the type or reason of poison ingestion. Initial conscious state played an important role in the decision for admission. Comatose patients have an odd ratio of 8.64 (95% CI, 4.092-18.250) for being managed as in-patient. Duration of hospital stay is significantly shorter for patient

managed in A&E than those admitted (median 7 versus 71.5 hours). Conclusion: Poisoning patients managed as in-patient and in A&E are significantly different in initial conscious state and age. Most bites and stings cases are managed in A&E. However our analysis failed in identifying other differentiating factors that are required in developing an admission protocol. In practice, the decision for in-patient or A&E management is largely made by experienced doctors with toxicology training.