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1 Outcomes of Patients with Acute Coronary Syndrome Treated by Antiemetic Drug

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Objectives: We conducted a retrospective investigation to ascertain the clinical significance of antiemetic drug use for patients with acute coronary syndrome (ACS) transported by a physician-staffed helicopter in Japan (DH) using Japan DH registry system (JDRS) data.

Methods: The patients with ACS were selected from the JDRS database. The following details of dispatch activity were retrieved: age, sex, presence or absence of cardiac arrest when contacted by DH staff, vital signs when contacted by the DH staff, contents of the medical intervention, duration of admission, and the final outcome. Patients with cardiac arrest who were contacted by the DH staff and lacked CPC data were excluded from the study. The subjects were divided into two groups: the Control group, which did not receive antiemetic treatment in the prehospital setting, and the Anti-emetic group.

Results: A total of 970 patients were enrolled as subjects. The Control group comprised 833 subjects, while the Anti-emetic group consisted of 140 patients. The two groups did not exhibit significant disparities with respect to sex, age, respiratory rate, systolic blood pressure, GCS, the rate of drip infusion, and duration of admission. However, a notable disparity emerged in the Anti-emetic group, where heart rate, tracheal intubation rate, CPC, and mortality rate exhibited a significant decrease compared to the Control group. The survey revealed that metoclopramide is the only antiemetic agent used in Japanese helicopters.

Conclusion: This is the first report to describe the use of anti-emetic drug as a prognostic factor in patients with ACS who were evacuated by a DH using the JDRS. To confirm this hypothesis, a prospective, randomized, double-blind study is warranted in the future.

2 The Utility of a Second Head CT Scan in Head Trauma Patients on DOAC in the Emergency Department

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Introduction: Head trauma in patients receiving direct oral anticoagulants (DOACs) presents a clinical challenge due to the potential risk of delayed intracranial hemorrhage (ICH). Current practices often involve repeat head CT scans despite initial negative findings. This study aims to evaluate the utility of repeat CT scans in such patients, focusing on the associated clinical and economic implications.

Methods: This retrospective study analyzed head trauma cases in patients on DOAC therapy at Hadassah Mount Scopus Emergency Department between 2019 and 2022. Data from 421 patients, including demographics, anticoagulant type, Glasgow Coma Scale (GCS) scores, and CT findings, were collected. Patients with an initial negative CT scan underwent repeat imaging after 24 hours, per institutional protocol. Statistical analysis was performed using RStudio to assess the incidence of delayed ICH.

Results: Among the 421 patients (mean age 80.1 years, 56% female), only 5 cases (1.2%) of delayed ICH were identified on repeat CT scans. Most patients presented with mild trauma (94.7% with GCS 15) and were prescribed Apixaban (86%). No significant differences were observed in clinical outcomes between those who underwent repeat imaging and those who did not, questioning the added value of routine repeat CT scans.

Conclusions: The incidence of delayed ICH in DOAC patients following mild head trauma is low, and routine repeat CT scans may not be clinically justified. Reducing unnecessary imaging could lower healthcare costs and resource use without compromising patient safety.

3 Establishing Toxicology Services in a New Emergency Department

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Introduction: The newly established Woodlands Health Services Emergency Department (ED), inaugurated in May 2024, lacked a formal toxicology

service. Standardized workflows and smartsets were integrated into the electronic medical record system to optimize poisoning management and reduce reliance on toxicologist consultations.

Objective: To evaluate the impact of structured toxicology workflows and smartsets on case management, toxicologist consultation rates and prescription accuracy, particularly for the new two-bag N-acetylcysteine (NAC) regimen. Challenges and outcomes are reviewed.

Methods: A retrospective review of toxicology cases over eight months included patient demographics, poisoning types, treatment adherence, toxicologist consultation rates, and patient outcomes. Poisoning severity was graded using a modified Poisoning Severity Score (PSS). Challenges related to training, intranet navigation, and resource limitations were documented.

Results: 54 poisoning cases were reviewed (median age: 36 years, IQR 24–52). Hospitalization occurred in 67%, with an average stay of 2.9 days (SD 1.2). PSS classified 88.9% as mild-moderate and 11.1% as severe. No fatalities occurred. The most common drug classes were sedative-hypnotics (33.3%), analgesics (40.7%), antidepressants (13.0%), and antipsychotics (3.7%). Clinical pathways guided 79.9% of cases; toxicologist teleconsultation was required in 16.7%. Smartsets were used in 22.2%, supporting antidote dosing without prescription errors.

Discussion: The distribution of poisoning cases aligned with prior reports from Singapore, where analgesics and sedative-hypnotics were frequently implicated, though fewer required intensive care. Structured workflows and a 54-hour multidisciplinary pre-hospital opening simulation training improved clinician confidence, potentially reducing toxicology consultations. Smartsets facilitated antidote administration, preventing prescription errors. The transition to the two-bag NAC regimen introduced a risk of prescription errors, yet none were recorded.

Conclusion: The integration of workflows and smartsets enhanced poisoning management in a resource-limited ED. Poisoning trends aligned with national data on commonly overdosed agents. Structured protocols and staff training ensured safe antidote administration and reduced reliance on toxicologists. Findings provide insights into establishing toxicology services in similar resource-constrained EDs.

4 Formaldehyde Contamination in Over the Counter Available Indian Made Spirits: A Cause of Concern

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Background: Ingestion of toxic alcohols is a major cause of mortality and morbidity worldwide. Although ethanol is the most important chemical of alcoholic drinks, other organic compounds, like methanol and formaldehyde, may also exist in them.

Objective: To look for the presence of methanol and formaldehyde in the commercially sold spirits in a single city in North India.

Methods: 100 samples of commercially sold popular brands of alcohol for general public consumption were picked up randomly from 4 different licensed liquor vends in the city. The collected samples were subjected to gas chromatography (GC, YL 6100 model) to look for ethanol, methanol and formaldehyde concentrations. Two microliters of prepared samples were directly injected to GC system with column temperature pre-incubated at 50ºC for a minute followed by 10ºC min-1 increased to 80ºC. Samples of pure ethanol and methanol in different standard concentrations were used as controls. The results obtained were expressed as ethanol % in V/V and methanol as mg/l. the samples were also tested for presence of formaldehyde by modified chromotropic acid reference method.

Results: Labeled concentration of ethanol in these spirit samples varied from 40 to 46% and 16-18% for wine. Nearly all the samples demonstrated the equal V/V ethanol distribution mentioned on the labels of spirits during analysis. None of the samples had methanol levels above the toxic limit. Eight samples demonstrated a value of more than 100 mg/l of methanol and only three had levels above 200 mg/l (Toxic range >4000mg/l). Of all the samples tested, twelve samples demonstrated presence of formaldehyde more than 2mg/l, which is the permissible limit.

Conclusions: High formaldehyde content in 12% of over the counter available Indian spirits samples is alarming as chronic consumption of formaldehyde may be associated with neuro- degenerative changes commonly attributed to ethanol consumption.

Methanol contamination was detected to be within permissible limit in all the tested samples.

5 Impact of Messaging on Parental Influenza Immunization Acceptance in the Emergency Department

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Objective: Describe the impact of provider messaging on parental acceptance of pediatric influenza immunization in the emergency department.

Background: Approximately 60% of pediatric patients presenting to the emergency department are under-immunized for influenza. There is evidence that messaging has a significant impact on improving an adult's willingness to accept influenza immunizations in the emergency department. However, this impact has not been studied in caregivers of children in the emergency department.

Methods: This is a 4-pronged nested randomized control trial. Caregivers of patients between 2 months and 18 years old presenting to the emergency department between 11/1/2024 and 2/1/2025 were eligible. Exclusions included: non-English speaking, no consenting legal guardian present, leveled trauma, critically ill, evaluation for abuse. Enrolled participants were asked about their history and beliefs on childhood immunizations then randomized to 1 of 4 immunization messages. Finally, participants were asked their willingness to have their child receive the influenza immunization at the current emergency department visit.

Results: Thirty-three (54%) of 62 enrolled participants were intent on immunizing their child for influenza at the time of enrollment. The majority of non-intent caregivers cited vaccine efficacy, vaccine safety, child's low risk of infection, and protection by herd immunity as the reasons for their lack of intent. The largest impact was realized in community-oriented messaging, with 22% changing from non-intent to intent for having their child immunized against influenza.

Conclusion: There are widespread concerns relating to immunization efficacy, safety and utility amongst caregivers of children in the United States. There is modest impact of community-oriented immunization messaging in improving caregiver immunization intent in the emergency department.