

A prospective observation study of midazolam and droperidol for pre-hospital acute behavioural disturbance

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Introduction

Acute behavioural disturbance (ABD) and the potential for associated violence is a common occurrence in the pre-hospital environment with ambulance and emergency medical services.¹ Based on the successful use of droperidol in the ED setting,² the Queensland Ambulance Service (QAS) as part of their review into occupational violence recommended that droperidol replace midazolam for the drug management of ABD in the pre-hospital environment.¹

Methods

A prospective observational study was undertaken to assess the safety and effectiveness of midazolam and droperidol for the prehospital management of ABD, following implementation of updated guidelines by the QAS. Paramedics completed a purpose designed audit form in addition to the ambulance report form for all ABD patients ≥ 16 years of age who required sedation within the Brisbane metropolitan area. Data collected included adverse events, time to sedation, requirement for additional sedation, pre-hospital time and staff/patients injuries.

Results

Data from 290 patients (midazolam 141; droperidol 149) was analysed. Baseline demographics were similar. There were 33 (23.4%) adverse events (airway intervention, oxygen saturation $< 90\%$, respiratory rate < 12 , blood pressure < 90 mmHg and GCS 3,) with midazolam and 11/149 (7.4%) for droperidol, $p=0.0001$. Median time to sedation was 30 minutes in the midazolam group and 22 minutes in the droperidol group, $p<0.0001$. Additional sedation was required in 72 (51.0%) midazolam patients compared to 16 (10.7%) droperidol patients, $p<0.0001$. There was no difference in patients and staff injuries or pre-hospital time.

Conclusions

The use of droperidol for ABD in the pre-hospital setting is associated with less adverse events and a shorter time to sedation.