A randomised controlled trial of intramuscular droperidol for rapid sedation of aggressive and agitated psychostimulant-associated delirium

Chief Investigator Name: A/Prof Geoff Isbister
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Other Investigators: Ms Leonie Calver
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Priority area: Psychostimulants (evaluation, withdrawal, mental health)
Grant Type: Research Grant

Lay description
Aggressive behaviour related to psychostimulant abuse or poisoning, such as amphetamines, is an increasing problem in emergency departments. It can lead to patient harm, injury to staff and damage to hospital property if the situation is not rapidly controlled. Intravenous sedation can be difficult, particularly in smaller urban and regional hospitals because it requires sufficient staff numbers to restrain the patient to obtain intravenous access and can lead to needle-stick injuries. Intramuscular sedation with benzodiazepines, such as midazolam, is unpredictable and can lead to over-sedating the patient or not sedating them enough, and may be associated with problems in this group already using benzodiazepines. Droperidol is a highly sedative antipsychotic medication that is rarely associated with complications. The study aimed to compare the effectiveness of intramuscular droperidol and intramuscular midazolam for sedation of aggressive patients with psychostimulant associated agitation in a randomised controlled trial. The study was designed to assess both the speed of onset and duration of sedation.

Research achievements
1. Intramuscular sedation was far more effective for sedating aggressive patients in the emergency department compared to intravenous sedation.
2. Patients receiving intramuscular droperidol (10mg) only required additional sedation half as often as patients receiving intramuscular midazolam (10mg)
3. 8 of 29 patients (28%) given intramuscular midazolam had major adverse effects (respiratory depression or low blood pressure) compared to only 6% and 7% for patients receiving intramuscular droperidol alone.

Expected future outcomes
Establishing of a clinical pathway for sedating agitated hospital patients, including drug type, dose, monitoring and re-dosing strategy

Publications & Key Presentations

Name of contact: Geoff Isbister
Email of contact: geoff.isbister@gmail.com