Droperidol for Agitation in the ED: Safety and Efficacy

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Background

- Droperidol has been demonstrated to be an effective treatment for acute agitation in the emergency department (ED), with some data suggesting it to be superior to haloperidol (Thomas, 1992).
- QT prolongation concerns resulted in a FDA black-box warning in 2001, and its use by emergency physicians diminished.
- In 2019, a generic manufacturer began to produce droperidol for injection, now making it easier to obtain, but lack of current data is likely contributing to hesitancy in again adopting droperidol into the arsenal for acute agitation management (Mattson, 2020).
- We sought to provide ED experience data that supports droperidol's safety and efficacy in acute agitation management.

Methods

- A retrospective electronic medical record (EMR) report was conducted on patients that present to Lahey Hospital and Medical Center's ED from January 5, 2021 to September 5, 2021.
- Inclusion criteria: ≥18 years of age and receiving droperidol for agitation. Patients who received droperidol for N/V were excluded.
- All visits were treated as a separate entry.
- Data collected included droperidol dose, route of administration, QTc (if applicable - collected if taken before or after administration), if the patient required repeat doses of droperidol, length of stay (LOS) and other medications given to the patient within 12 hours of droperidol administration.

Aims

- To demonstrate safety of routine droperidol administration in the ED
- To demonstrate efficacy of routine droperidol administration in the ED

Table 1: Demographics

N	**29 patients**
Excluded patients	8 patients (ordered but not given)
Average age	40 years
Sex	66% males, 34% females
Average weight	80.2 kg

Figure 1: Indications

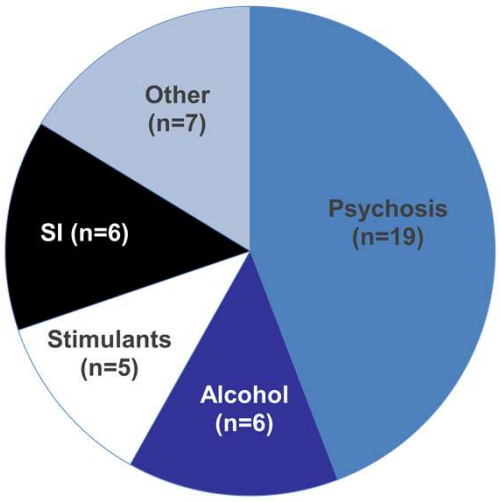

Figure 2: Pre- and Post- ECG

Table 2: Disposition

Disposition	N (LOS avg in hrs)
Inpatient psych	17 (138)
Home	9 (50)
Medically admitted	2
Acute Rehab	1

Results

- EMR report identified 29 patients who met inclusion criteria (**Table 1**)
- Indications shown in **Figure 1**, with some patients having multiple indications
- 31% received IV formulation (all others were IM)
- The vast majority (86%) received 5 mg of droperidol (14% at 2.5mg)
- Pre-treatment ECGs obtained on 55% of patients (Avg QTc=448ms, range 401-486ms)
- Post-treatment ECGs obtained on 38% of patients (Avg QTc=444ms, range 413-479ms)
- Only three patients received a before/after ECG, shown in **Figure 2**.
- No cardiac events reported
- No patients experienced SBP < 90 mmHg or SpO2 <90%
- 59% of patients received other psychiatric medication prior to droperidol
- A minority (24%) of patients received other psychiatric medications within 2 hours following droperidol administration

Discussion

- There were no adverse cardiac events, supporting the ongoing use of droperidol for agitation
- A significant minority of patients were able to be dispositioned to a lower level of care (home or rehab), notably with significantly shorter LOS than psychiatric admission, supporting efficacy for disposition purposes

Conclusions and Next Steps

The safety and efficacy data thus far supports reincorporating droperidol into the agitation arsenal of the practicing emergency psychiatrist to facilitate rapid improvement of agitation and aid in quick patient disposition. Current data analysis is ongoing to evaluate our institution's experience with droperidol versus other acute agitation medications (eg. haloperidol).

References

- Thomas H Jr et al. Droperidol versus haloperidol for chemical restraint of agitated and combative patients. Ann Emerg Med, 1992. 21(4):407-413.
- Mattson A et al. Reintegrating droperidol into emergency medicine practice. Am J Health-Syst Pharm, 2020. 77(22):1838–1845.

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