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My Favorite Practice-Changing Pharmacology Article(s)

In this brief session, the goal is to highlight two recent articles related to medication use in the ED and determine how they should shape our practice.

Article 1: Reintegrating Droperidol into Emergency Medicine Practice

Droperidol has a well-known black box warning for dysrhythmias (namely QT prolongation and torsade de pointes) (Habib 2008, Ludwin 2008, Rappaport 2008). It also was MIA for many EDs in the past decade due to a prolonged shortage. However, it's back as of 2019! Droperidol is effective for nausea and vomiting, benign headache and migraine, and for the control of acute agitation in the ED.

The history of droperidol is well-described and summarized succinctly in two open-access blog posts:

1. The Return of Droperidol from Taming the SRU
2. Droperidol Use in the ED from emDOCs.net

The question now is should we be adding this back to our hospital formularies despite its cousin, haloperidol, having similar efficacy for some of these indications. What is our liability if a patient has a bad outcome when using a drug with a black box warning?

Droperidol should be added back to the ED armamentarium. The QT/torsades risk is overblown and based on old, largely unsubstantiated reports (Jackson 2007, Habib 2003). The QT prolongation is generally not clinically significant (Calver 2015, Taylor 2017, Lee 2019, Klein 2019, Gaw 2020, Cole 2020, Martel 2020). ECG monitoring should be commensurate with the clinical situation.

A 2015 American Academy of Emergency Medicine (AAEM) Position statement: *"Droperidol is an **effective and safe medication** in the treatment of nausea, headache, and agitation. The literature search **did not support mandating an electrocardiogram or telemetry monitoring for doses < 2.5 mg given either IM or IV**. IM doses of up to 10 mg of droperidol seem to be as safe and as effective as other medications used for sedation of agitated patients."* (Perkins 2015)

Article 2: Weight-Based Versus Non-Weight-Based Diltiazem Dosing in the Setting of Atrial Fibrillation with Rapid Ventricular Response

A few previous articles investigated this question (PharmERToxGuy 2019). This new study also found no difference in therapeutic response, though those receiving weight-based dosing did reach an HR < 100 bpm more often. The authors propose that ideal body weight be used when using weight-based dosing.