2. 0.1 mg/kg IV (maximum 10 mg)
    a. May repeat x 1 in 20–30 minutes if no relief

d. Prochlorperazine
    i. **Adult**: 5 mg IV/IM
    ii. **Pediatric** (over 2 years old only and greater than 12 kg):
        1. 0.1 mg/kg slow IV
           OR
        2. 0.1 mg/kg deep IM (maximum 10 mg)

e. Droperidol
    i. **Adult**: 1.25 mg IV/IM (contraindicated for suspected or known diagnosis of prolonged QT syndrome)

f. Diphenhydramine
    i. **Adult**: 12.5–25 mg IV/IM/PO
    ii. **Pediatric** (over 2 years old only and greater than 12 kg): 0.1 mg/kg IV (maximum 25 mg)

Patient Safety Considerations

1. Ondansetron should not be administered to patients who have a prolonged QT interval as it can cause torsades.
2. For very young pediatric patients, ondansetron can be sedating
3. Dystonic and extrapyramidal symptoms are possible side effects of antiemetics – If encountered, consider diphenhydramine:
    a. **Adult**: 25–50 mg IV/IM/PO
    b. **Pediatric**: 1 mg/kg IV/IM/PO (maximum dose 50 mg)
4. Medications that prolong the QT interval may alter treatment options.

Notes/Educational Pearls

Key Considerations

1. Ondansetron is preferred in children for the treatment of nausea and vomiting
2. Metoclopramide has fewer adverse effects than prochlorperazine in children
3. Prochlorperazine and metoclopramide (phenothiazines) have an increased risk of dystonic reactions
    a. Some phenothiazines also have an increased risk of respiratory depression when used with other medications that cause respiratory depression, and some phenothiazines can cause neuroleptic malignant syndrome
    b. Prochlorperazine carries a black box warning for use in elderly patients with dementia-related psychosis.
4. IV form of ondansetron may be given PO in same dose
5. Nausea and vomiting are symptoms of illness – in addition to treating the patient's nausea and vomiting a thorough history and physical are key to identifying what may be a disease in need of emergent treatment (e.g., bowel obstruction, myocardial infarction, pregnancy)
6. While ondansetron has not been adequately studied in pregnancy to determine safety, women should be counseled regarding the available data. In the first trimester of pregnancy, the administration of metoclopramide 5–10 mg IV with diphenhydramine 25 mg IV is recommended over the administration of ondansetron