



Notes/Educational Pearls

Key Considerations

1. **Pediatric Considerations**
 - a. Pediatric patient may develop hypoglycemia from beta blocker overdose therefore it is important to perform glucose evaluation
 - b. A single pill can kill a toddler. It is very important that a careful assessment of medications the toddler could have access to is done by EMS and all suspect medications should be brought into the ED
2. Glucagon has a side effect of increased vomiting at these doses and ondansetron prophylaxis may be considered
3. Atropine may have little or no effect (likely to be more helpful in mild overdoses) — the hypotension and bradycardia may be mutually exclusive, and the blood pressure may not respond to correction of bradycardia
4. Propranolol crosses the blood brain barrier and can cause altered mental status, seizure, and widened QRS similar to TCA toxicity

Pertinent Assessment Findings

1. Certain beta-blockers, such as acebutolol and propranolol, may increase QRS duration
2. Certain beta-blockers, such as acebutolol and pindolol, may produce tachycardia and hypertension
3. Sotalol can produce increase in QTc interval and ventricular dysrhythmias
4. Frequent reassessment is essential as patient deterioration can be rapid and catastrophic

Quality Improvement

Associated NEMSIS Protocol(s) (eProtocol.01) (for additional information, go to www.nemsis.org)

- 9914215—Medical - Beta Blocker Poisoning/Overdose

Key Documentation Elements

- Repeat evaluation and documentation of signs and symptoms and vital signs as patient clinical conditions may deteriorate rapidly
- Identification of possible etiology of poisoning
- Time of symptoms onset and time of initiation of exposure-specific treatment
- Therapy and response to therapy

Performance Measures

- Early airway management in the rapidly deteriorating patient
- Accurate exposure history
 - Time of ingestion/exposure
 - Route of exposure
 - Quantity of medication or toxin taken (safely collect all possible medications or agents)
 - Alcohol or other intoxicant taken
- Appropriate protocol selection and management
- Multiple frequent documented re-assessments
- Blood glucose checks (serial if long transport, especially in children)
- Good evaluation of the EKG and the segment intervals