Notes/Educational Pearls

Key Considerations

1. Pulse oximetry accurately reflects serum levels of oxygen but does not accurately reflect tissue oxygen levels therefore should not be relied upon in possible cyanide and/or carbon monoxide toxicity
2. After hydroxocobalamin has been administered, pulse oximetry levels are no longer accurate and skin, tears, and urine will all turn red. This flushing should not be interpreted as an allergic reaction
3. If the patient ingests cyanide, it will react with the acids in the stomach generating hydrogen cyanide gas. Be sure to maximize air circulation in closed spaces (ambulance) as the patient's gastric contents may contain hydrogen cyanide gases when released with vomiting or belching
4. Amyl nitrite and sodium nitrite are no longer being used and no longer available in commercial kits

Pertinent Assessment Findings

Early and repeated assessment is essential

Quality Improvement

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

- 9914043—Exposure - Cyanide

Key Documentation Elements

- Repeat evaluation and documentation of signs and symptoms as the patient's clinical condition may deteriorate rapidly
- Identification of possible etiology of poisoning
- Time of symptom onset and time of initiation of exposure-specific treatments
- Therapy and response to therapy

Performance Measure

- 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 reassessments

References

1. Amyl Nitrite—Medical Countermeasures Database. Chemm.nlm.nih.gov. https://wwwn.cdc.gov/TSP/MMG/MMGDetails.aspx?mmgid=523&toxid=93. Accessed March 11, 2022
2. Bebarta VS, Tanen DA, Lairet J, Dixon PS, Valtier S, Bush A. Hydroxocobalamin and