Section: Drug Reference
Subject: METHYLENE BLUE
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# Methylene Blue

1. CLASSIFICATION
    a. Reducing Agent

2. ACTIONS / DESCRIPTIONS
    a. Methemoglobin is produced when nitrates alter hemoglobin in order to attract cyanide that has been taken into the body.
    b. Methemoglobin cannot carry oxygen.
    c. If a large percentage of hemoglobin is converted to methemoglobin, the body may become hypoxic due to the reduced amount of hemoglobin available to carry oxygen.
    d. Methylene blue chemically changes methemoglobin back to hemoglobin, resulting in more hemoglobin to carry oxygen.

3. INDICATIONS
    a. Poisoning where nitrates are used to the point where there is greater than 30% of the hemoglobin converted to methemoglobin.
    b. Methemoglobinemia with signs and symptoms of hypoxia.

4. CONTRAINDICATIONS
    a. Known allergy to medication

5. PRECAUTIONS
    a. Patients with kidney disease may require smaller doses.

6. ADVERSE REACTIONS
    a. Large intravenous doses produce:
        i. Abnormal and precordial pain
        ii. Dizziness
        iii. Profuse sweating
        iv. Mental confusion

7. DOSAGE
    a. 1 – 2 mg/kg of a 1% solution given IV slowly over 5 minutes.

8. INFORMATIONAL/DISCUSSION POINTS
    a. Must be injected slowly
    b. Tissue infiltration may cause necrotic abscesses
    c. May stain the skin