Drug Testing In the Neonate

Objectives

- Identify criteria for substance testing and consent
- Discuss legal implications for positive drug testing results
- Review the types of specimens and possible preanalytical variability factors
- Describe the drugs of abuse and how they are detected
- Summarize clinical presentation of the newborn affected by drug abuse and subsequent complications
- Explain the importance of biomarkers and how they are used
- Compare and contrast biomarkers for detection of alcohol, cocaine, amphetamines, marijuana, opioids and mercury exposure

Content Outline

1. Substance Abuse in Pregnancy
   1.1 Criteria for testing and consent
   1.2 Legal implications

2. Sample Collection
   2.1 Type of specimens
      2.1.1 Maternal
      2.1.2 Newborn
      2.1.3 Agreement between maternal/neonatal specimens
   2.2 Preanalytical variability

3. Specific Drug Abuse
   3.1 Cocaine
   3.2 Cannabinoids
   3.3 Opiates
   3.4 Amphetamines
   3.5 Ethanol

4. Use of Biomarkers to Detect Fetal Exposure
   4.1 Specimens used
   4.2 Type of Substances Detected
      4.2.1 Alcohol
      4.2.2 Cocaine
      4.2.3 Opiods
      4.2.4 Amphetamines
      4.2.5 Cannabinoids
      4.2.6 Mercury

Reading Material Resources

This self assessment module is based on the resources listed below.

Drug Testing in the Neonate, Cotten, Steven W., Clinical Laboratory Medicine 32 (2012), pp 449-466