Urobilinogen

Interpretive Summary

**Description:** Urobilinogen can be an indicator of increased serum bilirubin. However, there is a poor correlation between increased levels of urobilinogen and either hepatobiliary disease or hemolysis in dogs and cats.

**Decreased Urobilinogen**

**Common Causes**

- Normal
- Artifact
  - Exposure to UV light or room air
  - Delayed analysis
  - Formalin

**Increased Urobilinogen**

**Common Causes**

- RBC destruction (hemolysis)
  - Immune-mediated hemolytic anemia
  - Zinc or onion toxicity
  - RBC parasites
- Liver disease/failure

**Uncommon Causes**

- Bile duct obstruction
- Artifact
  - Aminosalicylic acid
  - Sulfonamides
  - Aminobenzoic acid

**Related Findings**

- RBC destruction
  - Decreased hematocrit, RBC, hemoglobin
  - Increased reticulocytes, increased MCV and decreased MCHC, polychromasia
  - Increased serum bilirubin
  - Spherocytosis (in dogs), autoagglutination
  - Hemoglobinuria, bilirubinuria
  - Positive Coombs or saline agglutination test may or may not be present with IMHA
- Liver disease/failure
  - Increased ALT, ALP, GGT, AST, bilirubin
  - Decreased albumin, cholesterol, BUN, and glucose in severe cases
  - Increased serum bile acids
  - Small or abnormal liver or biliary tract on abdominal radiographs/ultrasound
Additional Information

Physiology

- Intestinal bacteria convert conjugated bilirubin to urobilinogen (a colorless compound)
- Most is excreted in the feces. The remainder is delivered back to the liver via portal blood, recycled, and excreted in the bile.
- A small amount of urobilinogen passes through the glomerular filtrate into urine.
- Diagnostic utility is limited

References


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