

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
 - Aminosalicic 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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