Diagnostic Exercise
From The Davis-Thompson Foundation*

Case #: 127 Month: August Year: 2019

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Clinical History: Five deceased 12-week-old heritage breed white turkeys were submitted for necropsy and subsequent histopathology. They were healthy when they arrived at day one to the farm. There was sudden onset bloody diarrhea followed by death. The total number of deaths over a five-day period was 20 birds from a flock of 150, with the highest single day mortality of nine birds. Penicillin was given on day four and only two more turkeys died. There were no deaths following administration of antibiotics. Samples for bacterial and viral cultures were also submitted.

Microscopic findings:

Figure 1. Spleen. 400X, H&E.
**Necropsy Findings:** The legs are very pale white/pink. The wing and tail feathers are abraded and dirty; there is bright red, black and brown material pasted on the feathers around the vent and on the left hock. The subcutaneous tissues are markedly tacky (dehydration). There is no subcutaneous fat and very scant visceral fat. Viscera are more pale than normal (anemia, blood loss). Approximately 3 ml of clear colorless fluid is present in the pericardial sac. The spleen is enlarged and hemorrhagic. The gall bladder contains clear bright green bile. The crop, proventriculus and ventriculus (gizzard) are grossly normal. The duodenum is discolored dark green/purple and distended by red fluid. The proximal third of the jejunum is similarly distended and discolored, and there are scattered bright red serosal foci. This segment of jejunum contains turbid dark red fluid and the mucosa is red/red orange. The remainder of the jejunum is not distended, the serosa is more near the normal tan/pink, and the mucosa is pink/orange with too numerous to count pinpoint red foci. This segment of jejunum contains scant tan/pink mucoid material. The ileum has tan serosa and mucosa; the lumen is empty. The ceca are distended with very viscous black feces; the wall is dark black/green/red. The colon has tan serosa and mucosa, and contains black/red tarry feces. The brain, lungs, air sacs, heart, liver, kidneys, pancreas, adrenal glands, and thyroid glands are all grossly normal.

![Figure 2. Spleen (formalin fixed).](image)

**Follow-up Questions:** Morphologic diagnosis; Condition; Etiologic agent.
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