

Diagnostic Exercise

From The Davis-Thompson Foundation*

Case: **174**; Month: **October**; Year: **2021**
Answer Sheet

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Clinical History: A 25-year-old female emu (*Dromaius novaehollandiae*) presented with a 1-week history of lethargy, hyporexia, and recumbency. The bird had lived its entire life at the Winnie Carter Wildlife Center in Texas and had an unremarkable medical history, apart from bilateral congenital blindness.

Necropsy Findings: Within the coelomic cavity, the serosal surface of the intestines was coated with a moderate amount of tan to green, mucoid, opaque, foul-smelling fluid (fibrinoheterophilic coelomitis) (Fig. 1).



Figure 1: The colon is markedly distended and covered with multifocal strands of fibrin

The large intestine was diffusely dilated and filled with dark red fluid and strands of yellow, friable material (fibrin). The mucosa of the small intestine, and most severely the colon, was diffusely roughened, thickened, dull, and covered by a thick yellow to green, opaque, friable diphtheritic membrane (Fig. 2). The distal colon was diffusely, markedly distended and focally contained a 50x7x5 cm, semi-firm accumulation of feces coated by a 4-5 mm diameter layer of tan, friable material (fibrin) located 21 cm from the opening of the cloaca. Gross evaluation of the eyes revealed bilateral aphakia.

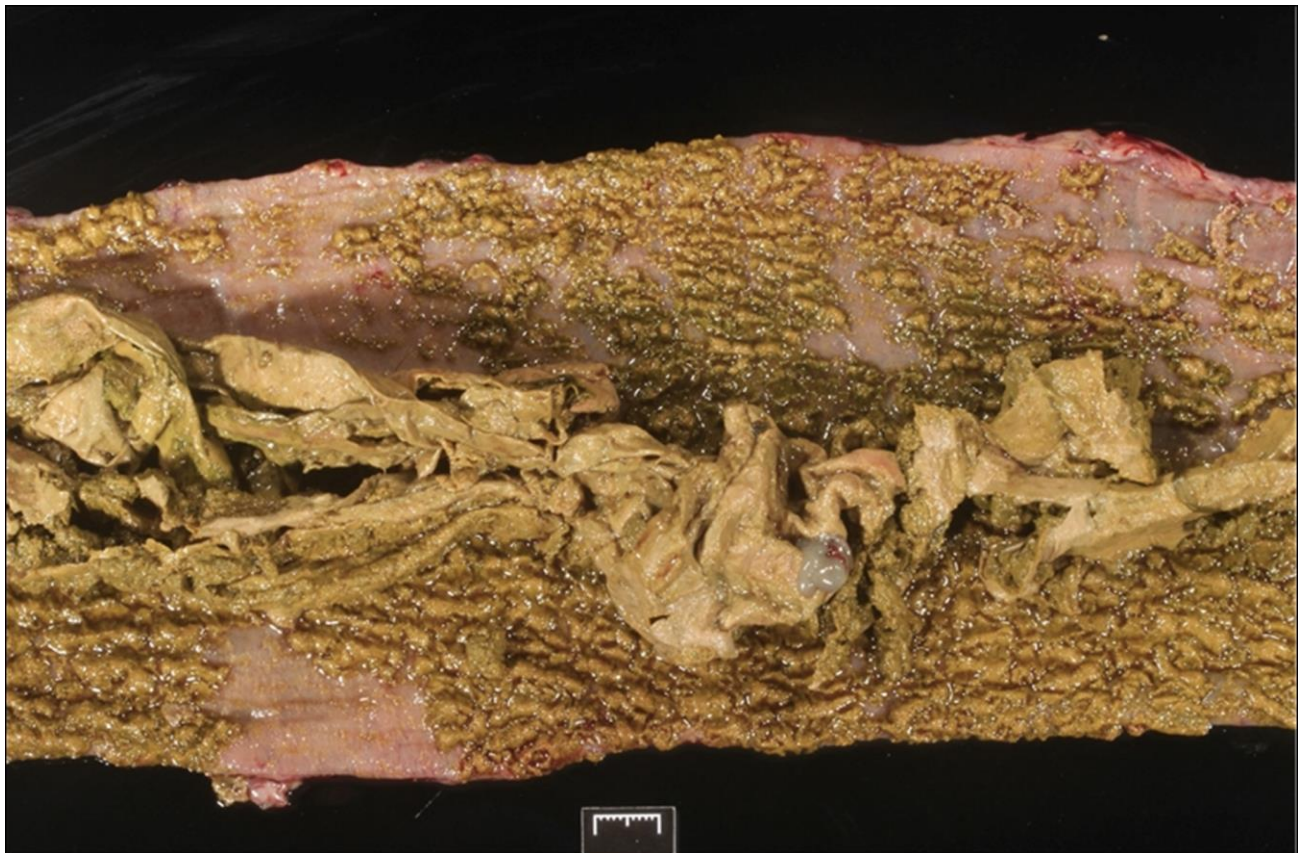


Figure 2: A thick diphtheritic membrane composed of fibrin and necrotic debris coats the small intestinal mucosa.

Microscopic Images:

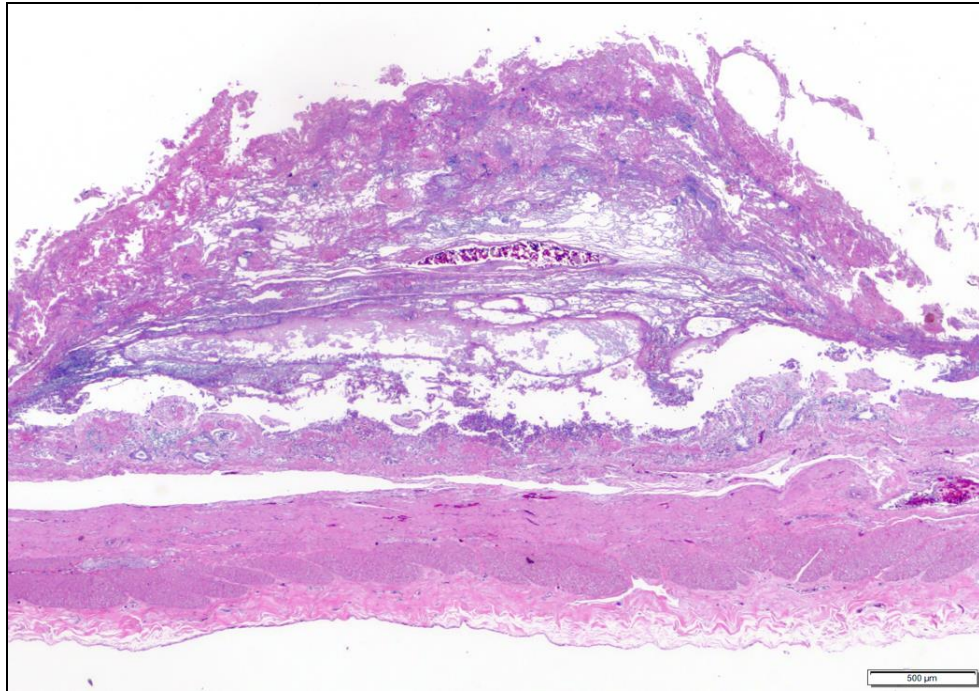


Figure 3: H&E stain.

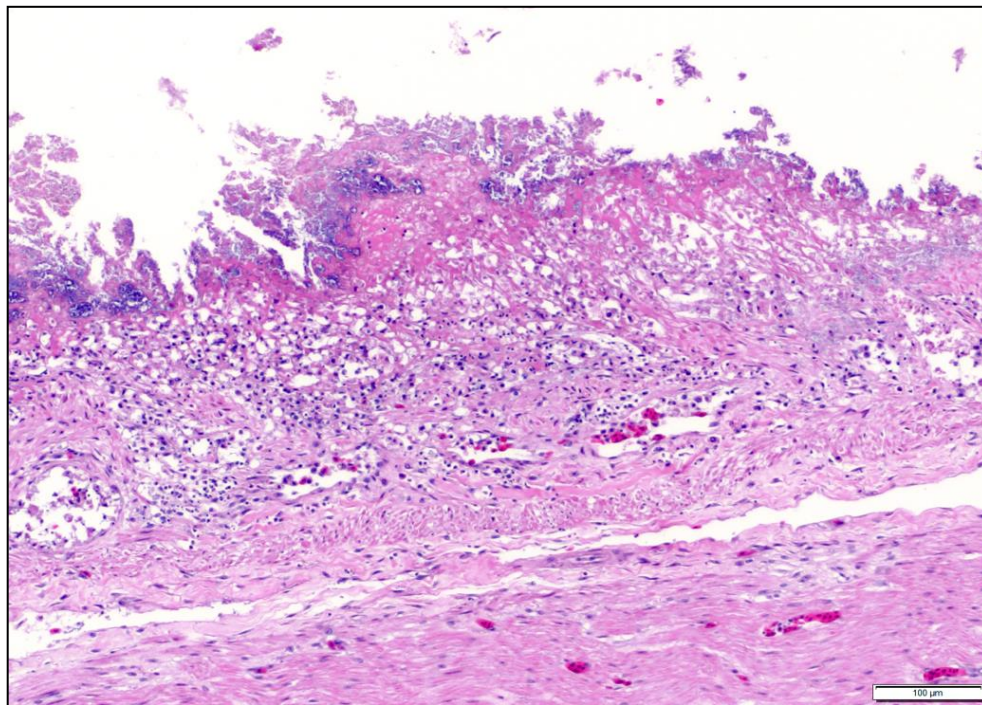


Figure 4: H&E stain.

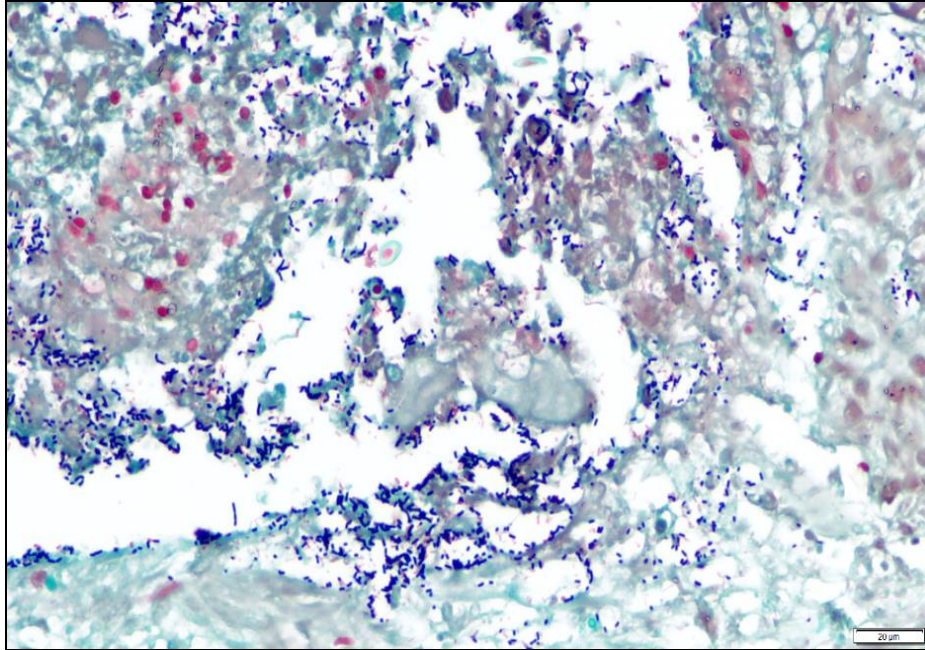


Figure 5: Gram stain.

Follow up questions:

Morphologic diagnosis

Ancillary tests to determine the etiology