



Diagnostic Exercise

From The Davis-Thompson Foundation*

Case #: **2006**; Month: **February**; Year: **2023**

Question Sheet

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Clinical History:

The carcasses of seven 30-month-old female cows slaughtered in a local abattoir for meat production were totally condemned during meat inspection due to disseminated gross abnormalities.

Gross Findings:

On internal examination, several skeletal muscles (pectoralis superficialis and profundus, transversus abdominis, diaphragm, obliquus internus abdominis, and rectus abdominis) and random areas of the peritoneal cavity had multifocal to coalescing white and firm nodules (1-3 cm in diameter). The nodules were firmly adhered (fibrous adhesions) to the adjacent tissues and surface of portions of the forestomach serosa and splenic capsule (Figs. 1A, B, and C). On the cut surface of the nodules, there was a central accumulation of a friable and yellow exudate surrounded by a fibrous capsule (Fig. 1D). No external lesions were seen in any of the cows.

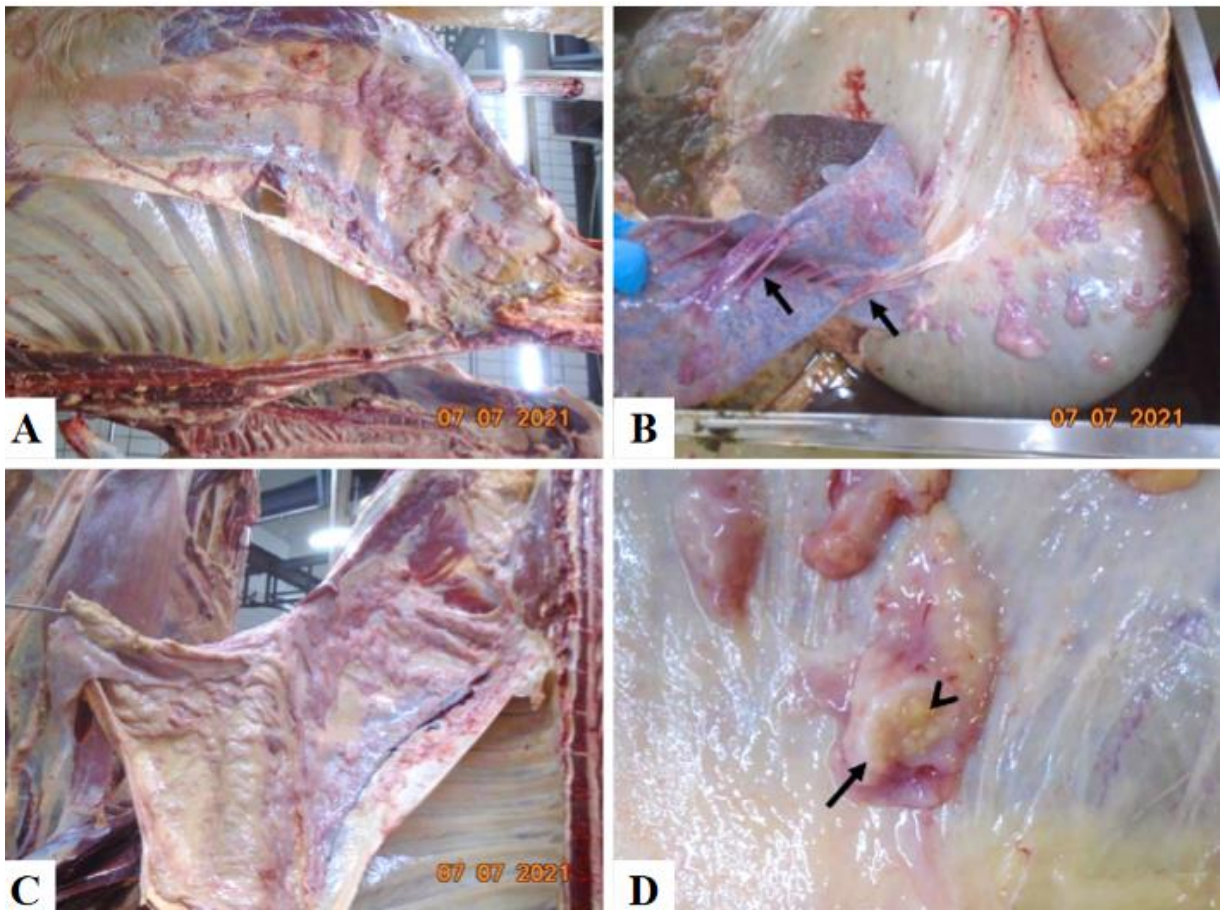


Figure 1. Gross lesions, bovine. (A) Diaphragm and transversus abdominis muscles. Multifocal to coalescing, white and firm nodules (pyogranulomas), surrounded by moderate amounts of fibrous tissue. (B) Splenic capsule and ruminal serosa. Multifocal to coalescing pyogranulomas with fibrosis and chronic adhesions (arrows). (C) Diaphragm, transversus abdominis, and obliquus internus abdominis muscles. Disseminated pyogranulomas with marked fibrosis. (D) Peritoneum. Cut surface of a pyogranuloma with caseous necrotic foci (arrowhead), surrounded by a fibrous capsule (arrow)

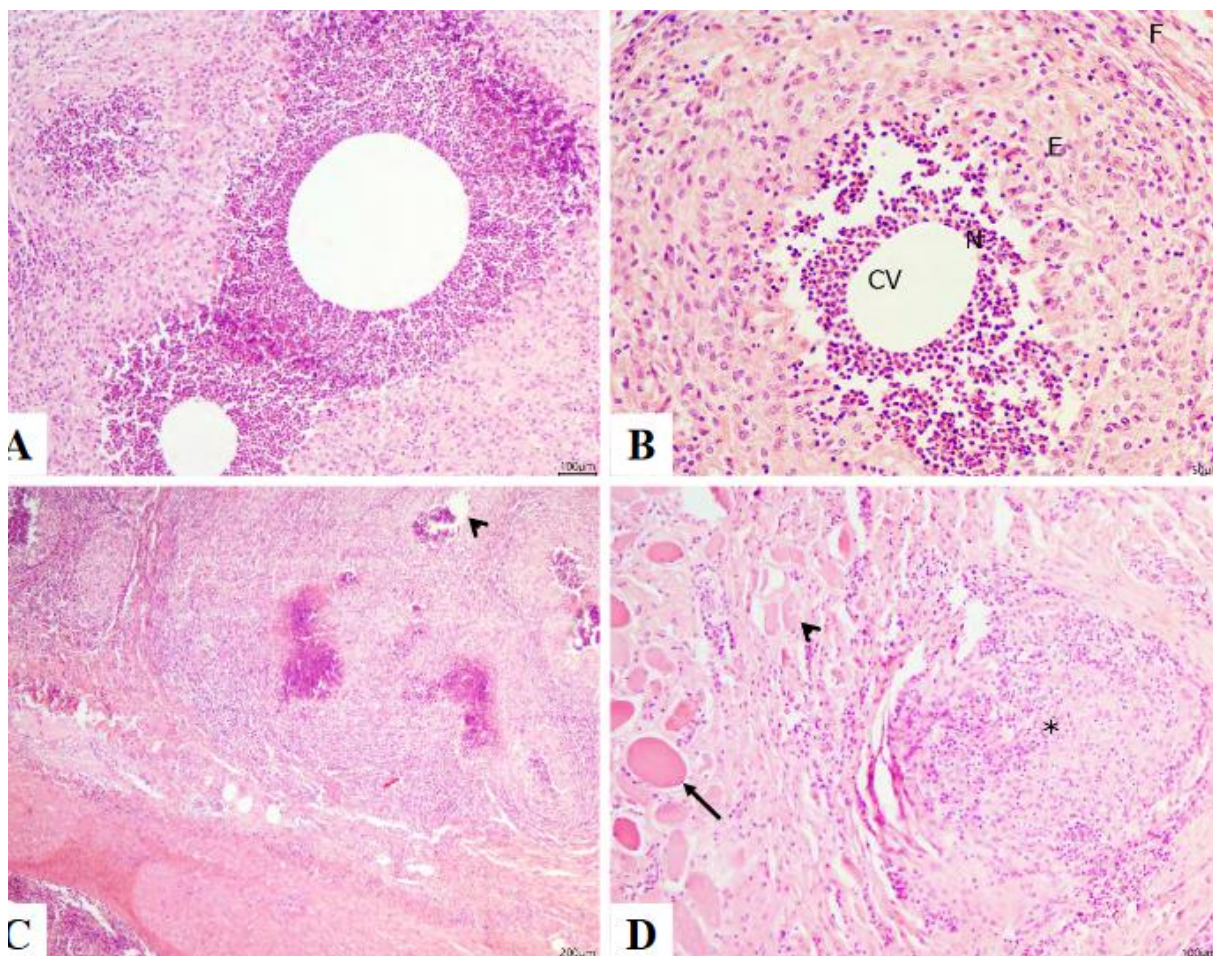


Figure 2. Microscopic lesions, bovine. A. Peritoneum, central clear spaces intimately associated with pyogranulomatous reaction, hematoxylin and eosin (H&E), 100x. B. Peritoneum, central clear vacuole (CV) surrounded by degenerate neutrophils (N), epithelioid macrophages (E) and halo of fibrosis (F), H&E, 200x. C. Spleen, extracapsular pyogranulomas with central clear vacuoles (arrowhead), H&E, 40x. D. Skeletal muscle, extensive pyogranulomatous reaction (asterisk), along with remaining disrupted (arrowhead) and hyalinized muscle fibers (arrow) interspersed by fibrous connective tissue, H&E, 100x.

Follow-up questions:

- *Microscopic description*
- *Morphologic diagnosis*
- *Probable cause*
- *Differential diagnoses*

*The Diagnostic Exercises are an initiative of the **Latin Comparative Pathology Group (LCPG)**, the Latin American subdivision of The Davis-Thompson Foundation. These exercises are contributed by members and non-members from any country of residence. Consider submitting an exercise! A final document containing this material with answers and a brief discussion will be posted on the CL Davis website (http://www.cldavis.org/diagnostic_exercises.html).

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