

# Diagnostic Exercise

From The Davis-Thompson Foundation\*

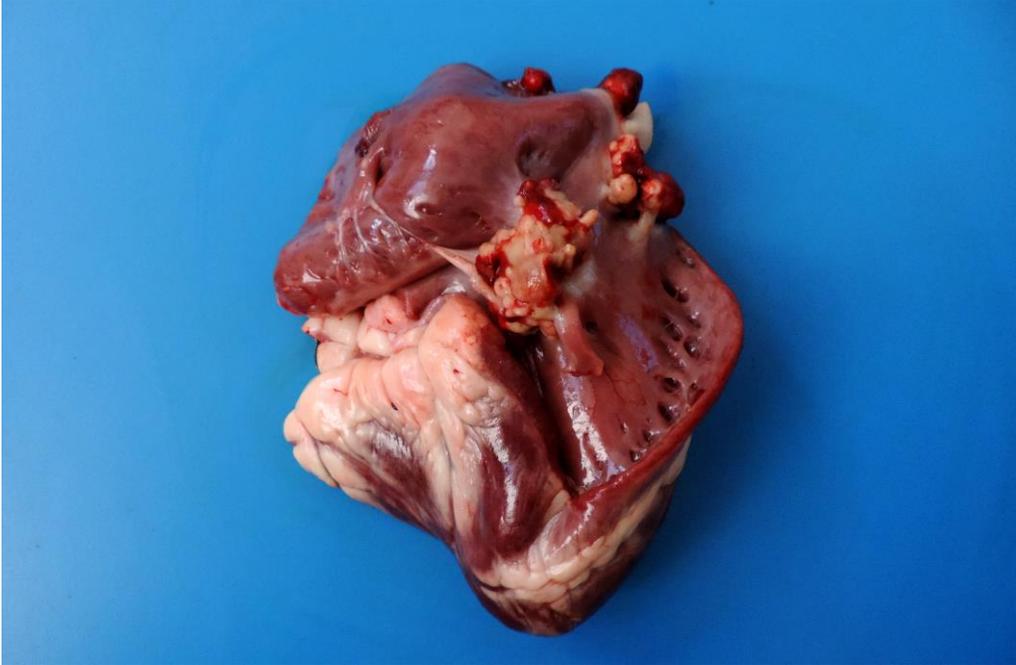
Case #: 137 Month: January Year: 2020

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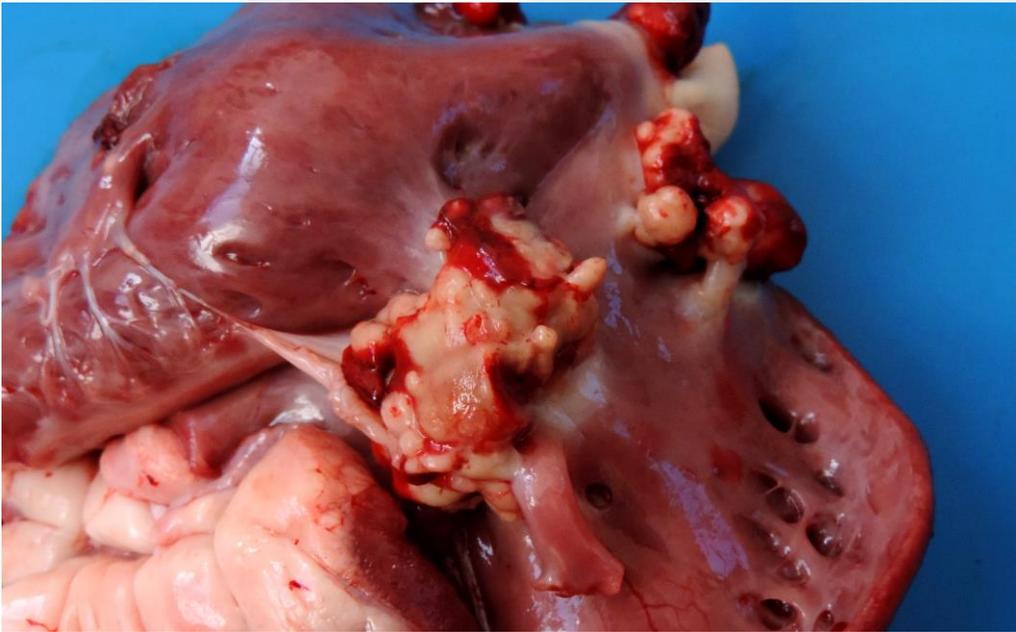
**Clinical History:** A 21-month-old Corriedale ram from Rio Pardo, RS, Brazil had a one-month-history of lameness of the right hindlimb and prolonged decubitus. The owner believed that the animal could have been injured by an injection, since the right limb was the preferred site for this procedure at the farm. At clinical presentation, the animal was in good body condition (score 3), with lameness of the right limb and no alteration upon auscultation. Heart rate (120 beats/minute), respiratory rate (68 breaths/minute), and temperature (40°C) were measured. The animal was kept at the clinic for 28 days while being treated with antibiotics and anti-inflammatory drugs. During this time, the ram had a continuously decreased appetite and recurrent episodes of fever (40.1 to 41.3°C). During the time at the clinic, the ram developed bilateral swelling of the forelimbs (carpus region), with a clinical suspicion of arthritis. Due to its poor condition and the lack of response to treatment, the ram was submitted to euthanasia on day 28 and necropsy was performed.



Figure 1



**Figure 2**



**Figure 3**



**Figure 4**

**Laboratory Findings:** On day one at the clinic, complete blood count findings showed elevated fibrinogen (600 mg/dL, reference interval [RI]: 200 - 500 mg/dL), mild neutrophilic leukocytosis (leukocytes: 13,700/ $\mu$ l, reference interval [RI]: 4,000 - 12,000/ $\mu$ l; neutrophils: 11,234/ $\mu$ l, reference interval [RI]: 700 - 6,000/ $\mu$ l) and presence of hypersegmented neutrophils. Ten days later, fibrinogen (800 mg/dL) was still elevated and the neutrophilia was milder but still present (7,728/ $\mu$ l). Toxic neutrophils and cytoplasmic granulation were observed. Hepatic and renal enzymes were within normal limits.

**Necropsy Findings:** At necropsy, the ram was in good body condition. The right carpus joint was swollen, with ulceration of the overlying skin and joint capsular thickening by white, firm (fibrous) tissue. The second carpus bone had a 2 cm eroded area. Within the adjacent muscles of the right hindlimb, close to the gastrocnemius muscle, there were two abscesses of approximately 6.0 x 3.0 cm (Figure 1). The right stifle joint was filled with suppurative yellow and sticky exudate. The sheep also had severe pulmonary edema, with multiple abscesses throughout the parenchyma. The heart was unremarkable externally but some changes were seen in the valves after opening the right side (Figures 2-4).

**Gross Images:** See above.

**Follow-up Questions:** How would you describe the lesions observed within the heart? What is your morphologic diagnosis? Name three possible causes. Describe the pathogenesis.

\*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](http://www.cldavis.org/diagnostic_exercises.html)).

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