Diagnostic Exercise
From The Davis-Thompson Foundation*

Case #: Case #: 126 Month: August Year: 2019

Answer Sheet

**Title:** Generalized discoid lupus erythematosus (immune-mediated dermatitis) in a Labrador retriever

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**Microscopic findings:** Six good quality punch biopsy specimens of mucosa, footpad, and haired skin are bisected and examined. Each contains overall similar histologic changes. There is moderate epidermal hyperplasia with compact ortho- and parakeratotic hyperkeratosis, intracorneal pustules, and thick diffuse neutrophilic crusts. There are multifocal areas of pigment loss within the epidermis. Within the superficial dermis, and extending down the epithelium of hair follicles, there is a prominent and predominantly plasmacytic interface inflammatory infiltrate, with multifocal basal keratinocyte necrosis and increased mitotic figures in the basal layer. There are aggregates of melanomacrophages (pigmentary incontinence). Hair follicles are dilated and plugged with keratin.

**Morphologic Diagnosis:** Haired skin: Moderate to severe lichenoid/interface plasmacytic depigmenting dermatitis with basal cell degeneration and necrosis, multicentric, consistent with generalized discoid lupus erythematosus and secondary pyoderma.

**Typical Gross Findings:**

- Annual discoid to polycyclic plaques with dyspigmentation (hyper and hypo), adherent scaling, follicular plugging and alopecia
- Affects face/muzzle, trunk, mucocutaneous junctions (lips, ears, periocular regions, footpads, perirectal), ventrum (diffuse distribution)
- Duration > 3 months

**Typical Microscopic Findings:**

- Lymphoplasmacytic interface dermatitis and folliculitis with basal cell degeneration and apoptosis, depigmentation, pigmentary incontinence
- +/- Secondary pyoderma

**Differential Diagnoses (based on gross appearance):** Cutaneous lymphoma, autoimmune skin diseases (cutaneous lupus, pemphigus foliaceous), infectious dermatitis (dermatophytosis, *Demodex*).

**Discussion:** Generalized discoid lupus erythematosus (GDLE) is a newly recognized canine variant of chronic cutaneous lupus erythematosus (CLE). Generalized DLE presents with similar histologic changes as facially confined DLE, but more diffusely distributed across the patient's body. The most commonly affected breeds are Chinese crested dogs and Labrador retrievers, though any other breed may be affected sporadically. Interestingly, German shepherds appear not to be affected, though it is very common for them to have the facially confined form.
References:


*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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