



Latin Comparative Pathology Group

The Latin Subdivision of the CL Davis Foundation

Diagnostic Exercise

Case #: 33 Month: June Year: 2013

Answer Sheet

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Diagnosis:

Gross Morphologic Diagnosis: Dermatitis, multifocal necroulcerative, *Locarid fish*

Diferential Diagnoses:

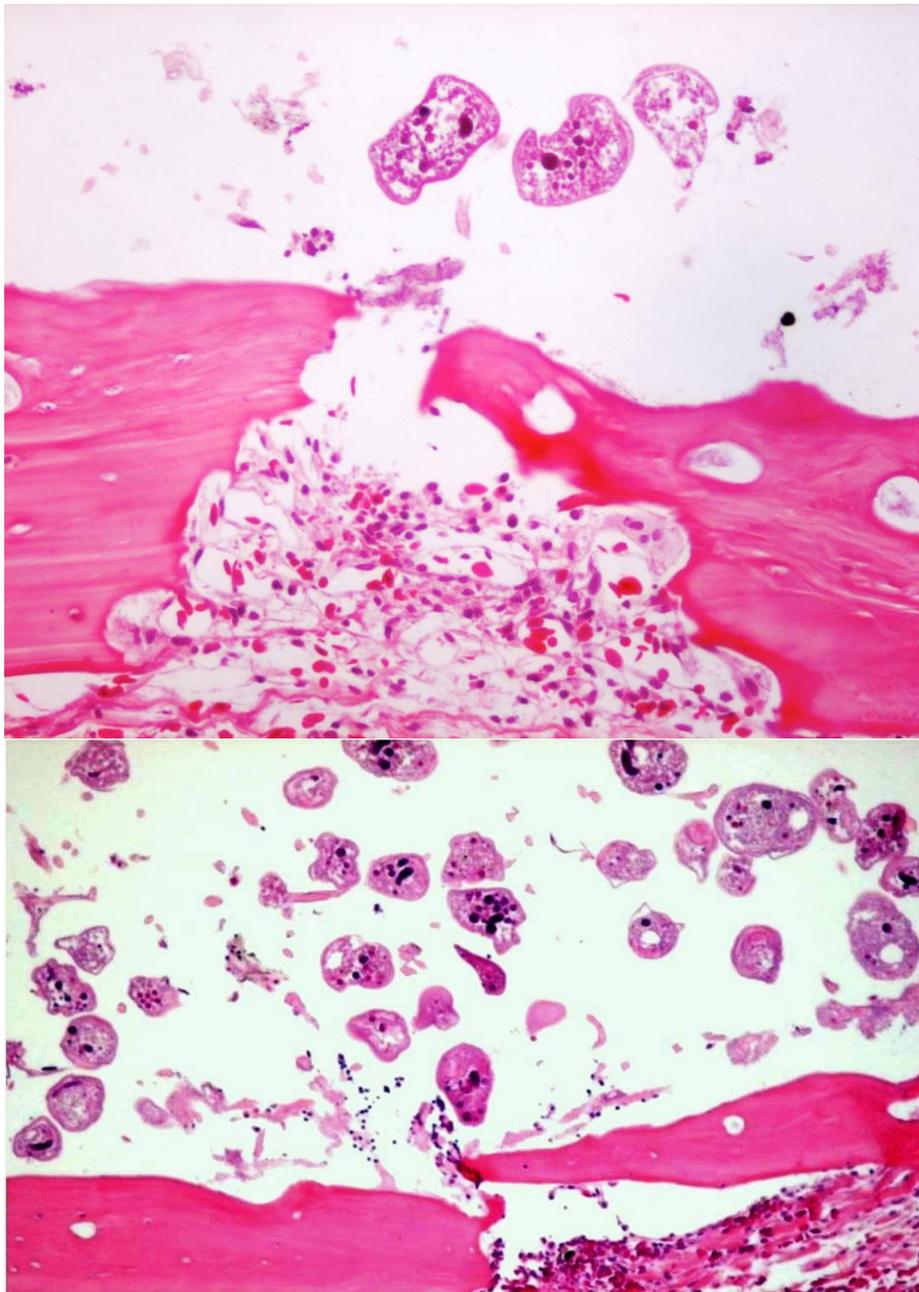
- Mixed cutaneous infection with *Ichthyophthirius multifiliis* and *A. hydrophila*,
- Mycosis (*Saprolegnia* sp)
- Infection with *Piscinoodinium* sp.

Etiology: *Aeromonas hydrophila* e *Ichthyophthirius multifiliis*

Typical Gross findings: Multifocal erosive dermatitis throughout the skin with dermal necrosis and accumulation of detritus over the necrotic lesions.



Typical microscopic findings: Ulcerative and necrotizing dermatitis affecting the epidermis, dermis and deeper into the subjacent bone structures with apparent osseous fractures. Presence of *Ichthyophthirius multifiliis* and secondary coccobacilli contaminants, presence of activated osteoclasts in osseous Howship lacunae with remodeling of the bone.



Locarid fish, skin and bone. 20x, H&E

Discussion:

Sucker fish (common name, among others, for the Locarids) are particularly prone to infestations by *Icthyophthirius multifiliis* and infections with *Aeromonas hydrophila*. In this case, some of the factors that may have contributed to these infections were: crowding in the tank (400 fish of approximately 15g each in 150 liters of water for a biomass of 40g/liter) which would predispose to aeromonas infection, and the low temperature given the depth of the water (20cm) of the holding tank, which would predispose to infections with Ich.

References and Recommended literature:

Barato P, Penagos G, Iregui CA, Figueroa J. (2012) Mapa epidemiológico de las enfermedades de los peces ornamentales en Colombia. Bogotá, Editorial Universidad Nacional de Colombia. ISBN 978-958-761-241-7

Durborow RM, Mitchell AJ, Crosby MD. (1998) Ich (White spot disease). SRAC Publication.

Ferguson H. (2006) Systemic Pathology of Fish: a text and atlas of normal tissues in teleosts and their responses in diseases. Londres: Scotian Press.

Ventura MR, Paperna I. (1985) Histopathology of *Icthyophthirius multifiliis* infection in fishes. J Fish Biol, 27(2):185-203

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A final document containing this material with answers and a brief discussion will be posted on the C. L. Davis website by the end of the current month (http://www.cldavis.org/lcpg_english.html).