A17-22862: STRIPED PYJAMA SQUID CUTTLEFISH

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BACKGROUND ON CEPHALOPODS

- Importance to humans
  - Food resource, aquarium display animals, research models
- Limited osmoregulatory ability
- One inflammatory cell type – granulated hemocyte
  - Recognition and elimination of non-self material
- Shell and wound repair
- Nutrient transport
- Digestion
CASE HISTORY

• Signalment: Two juvenile, male, striped pyjama squid cuttlefish (*Sepioloidea lineolata*)
• Found upside down and isolated overnight with no improvement.
• System recently experienced a large die off of common cuttlefish
• Aerobic, anaerobic, and mycobacterial cultures were obtained prior to fixation
GROSS EXAMINATION
HISTOPATHOLOGY – DIGESTIVE GLAND (NORMAL)
MORPHOLOGIC DIAGNOSIS

• Kidney: Nephritis, diffuse, severe with tubular degeneration, necrosis, and Gram-negative rods
• Digestive Gland: Necrosis, diffuse, severe with Gram-negative rods

CULTURE RESULTS

► Aerobic Culture: *Vibrio* spp. and *Vibrio alginolyticus* (Heavy Growth)
► Anaerobic Culture: Negative
► Mycobacteria Culture: Negative
VIBRIO ALGINOLYTICUS

- One of the most common isolated bacterial pathogens of cephalopods
- Typically associated with:
  - Senescence
  - Poor water quality
  - Trauma to the skin and mantle
  - Capture
  - Inter-animal contact
VIBRIO ALGINOLYTICUS

• Clinical signs and lesions are nonspecific, acute to chronic, and dependent on organ systems affected
  • Lethargy
  • Anorexia
  • Cutaneous ulcers
  • Inability to orient properly in the water column
  • Sudden death without premonitory signs

• Microscopic lesions
  • Ulcerative dermatitis
  • Bacterial thrombi (bacteremia)
  • Necrosis and inflammation often in multiple organs
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REFERENCES


• Smolowitz, R. 2016. Cephalopods. [Powerpoint Slides] AQUAVET II.

• Images
  • https://www.flickr.com/photos/brianmayes/5819742056
  • http://meglyman.deviantart.com/art/Striped-Pajama-Squid-ACEO-81860234
  • http://www.montereybayaquarium.org/animals-and-experiences/exhibits/tentacles

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