Visceral *Laminosioptes cysticola* in a Palawan Peacock Pheasant

Sarah B. Chaney, B.A.

Contributors: Lisa Farina, DVM, Diplomate ACVP; Ellis Greiner, PhD
SIGNALMENT

• Adult male Palawan peacock pheasant (*Polyplectron napoleonis*)
History and Physical Exam

• Presentation:
  • One week history of sitting on the ground in front of a heater

• Physical Exam:
  • Weakness, depression, cachexia

• Blood Collection:
  • Isoflurane anesthesia > decrease in blood pressure
  • Cardiac and pulmonary arrest
  • Cardiopulmonary resuscitation was unsuccessfully attempted
Gross Lesions

- **General Body Condition:**
  - Minimal visceral adipose stores

- **Lungs:**
  - Diffusely mottled pink to red to dark red
  - Floated low in formalin

- **Left caudal thoracic air sac:**
  - 3x4x1 mm yellow plaque
Histology
Mites, 4x

Permission granted only for viewing on SEVPAC website
Mite in granuloma, 20x
Granuloma with Chitin, 60x
Lipid Depletion, 60x
Morphologic Diagnoses

- Moderate to severe, multifocal, chronic granulomas with intralesional mites, esophagus and peri-tracheal and peri-esophageal connective tissue.
- Mild to moderate, multifocal lipid depletion, adipose tissue.
Additional Diagnoses
(Not in the slide set)

- Moderate, multifocal, subacute hemorrhage with hemosiderosis and epithelial hyperplasia, lung.
- Moderate, locally-extensive, chronic, heterophilic and granulomatous airsacculitis with intralesional fungal hyphae.
- Moderate bilateral conjunctival nematode infestation [Etiology: Oxyspirura sp.].
Laminosioptes cysticola

- Fowl cyst mite
- Cosmopolitan parasite
- Reported host range:
  - chickens, turkeys, pheasants, geese and pigeons
- Low morbidity
- Aesthetically unpleasing at slaughter
**Laminosioptes cysticola**

- Most common pathologic presentation:
  - Subcutaneous connective tissue infestation
  - Yellow to white nodules that can mineralize upon mite death
  - Histology: Minimal to no inflammatory reaction to intact mites
    - Granulomatous reaction with mite degeneration
Subcutaneous Nodules:  
*Laminosiopotes cysticola*

Cassidy, DR, WE Ketter. The subcutaneous mite of chickens: An Incidence Report.  
Avian Diseases 9(1): 78-81, 1965

Permission granted only for viewing on SEVPAC website
**Laminosioptes cysticola**

- Infestations of thoracic and abdominal viscera reported
- One case report of infestation in an emaciated wild turkey with severe neurological signs
  - Abundant mites in brachial plexus and sciatic nerves
Discussion

• Debilitation and loss of body condition may have been due to visceral mite infestation
  • Identified in the meninges, epicardium, connective tissue around vessels, lung, liver, crop, pectoral and femoral skeletal muscle, periocular connective tissue, tracheal connective tissue, esophagus, and skin.

• Debilitation and poor body condition may have made this animal unable to withstand anesthesia.
Special thanks to Dr. Lisa Farina and Dr. Ellis Greiner

Acknowledgements:
Dr. William Castleman
Dr. Michael Dark

Questions???