Mastitis in a Horse

IKH-000

Ian Hawkins
History

• 14 year old, Thoroughbred Mare
• 4 month history of a swollen mammary gland
• Treated with a vast array of antibiotics/remedies
• Scant improvement

http://cullenbloodstock.com
• The right mammary gland was swollen and painful
• The left mammary gland was unremarkable
• U/S of affected gland
  – Pockets of echogenic material in gland
  – Abscesses suspected

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Mare was 9 months pregnant with an apparently healthy foal.
- Right mammary gland removed.
- 7 days post surgery the mare developed and purulent vaginal discharge and subsequently aborted.
- Presumptive ascending placentitis.
- Following the abortion, the mare recovered with no other complications.
Gross Exam of Tissues

- The entire right mammary gland was received.
- The interior of the gland was disrupted by multiple cavitations filled with a tan friable material.
- Also received:
  - Sections of placenta and mammary lymph node.

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Courtesy of Alana King
Histopathology

Mammary Gland
Mammary Tissue
Mammary Tissue
Mammary Tissue
Acid-Fast Stain
Placenta – Not in the slide set
Morphologic Diagnoses

- Pyogranulomatous mastitis and dermatitis, locally extensive, severe with intralesional, acid-fast rods, right mammary gland and skin
- Acute necrotizing placentitis, moderate with intralesional Gram negative, rod-shaped bacteria, placenta
- Moderate lymphoid hyperplasia, mammary lymph node
Additional Diagnostics – Mammary Gland

• Culture
  – Swab from mammary gland submitted to University of Florida’s Clinical Microbiology laboratory
  – *Mycobacterium* sp. isolated

• Molecular Diagnostics – PCR
  – PCR products amplified from 16srRNA, hsp65 and rpoB genes
  – 100% similarity to *Mycobacterium fortuitum*
Mycobacterium fortuitum

- Runyon Group IV Mycobacteria
  - AKA: Rapidly Growing Mycobacteria
- Disease among domestic animals
  - Cat: ulcerative dermatitis and cellulitis
  - Dog: similar lesions with increased prevalence of systemic disease
  - Horses: rare lymphadenitis and mastitis
  - Cattle: rare lymphadenitis and mastitis
- Humans: increased prevalence, especially in immunosuppressed populations
- Transmission
  - most often due to traumatic implantation
Acknowledgements

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References

- Field, SK & Cowie, RL. "Lung Disease Due to the More Common Nontuberculous Mycobacteria." Chest 2006;129;1653-1672.

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