Case 16-900-4: Ear Tag 2

Allison Watson, DVM
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Signalment and History:
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- 1 year old ewe
Signalment and History:

- 1 year old ewe
- Research flock of 23 ewes – nutritional study
Signalment and History:

- 1 year old ewe
- Research flock of 23 ewes – nutritional study
- 2 week history of waxing and waning diarrhea
Signalment and History:

- 1 year old ewe
- Research flock of 23 ewes – nutritional study
- 2 week history of waxing and waning diarrhea
- No response to treatment
Signalment and History:

- 1 year old ewe
- Research flock of 23 ewes – nutritional study
- 2 week history of waxing and waning diarrhea
- No response to treatment
- Euthanized
Abomasum
Microscopic Diagnosis:
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Severe, chronic abomasitis with mucosal hyperplasia, parietal cell atrophy and numerous intralesional protozoal schizonts
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Severe, chronic abomasitis with mucosal hyperplasia, parietal cell atrophy and numerous intralesional protozoal schizonts

Final Diagnosis:
Microscopic Diagnosis:
Severe, chronic abomasitis with mucosal hyperplasia, parietal cell atrophy and numerous intralesional protozoal schizonts

Final Diagnosis:
Abomasal coccidiosis, consistent with *Eimeria gilruthi*
Sheep Coccidiosis:

Chartier and Paraud, 2012

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Sheep Coccidiosis:

- Protozoan parasite

[Chartier and Paraud, 2012]
Sheep Coccidiosis:

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- Host specific - *Eimeria* sp.

Chartier and Paraud, 2012
Sheep Coccidiosis:

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Sheep Coccidiosis:

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- Diarrhea, anorexia, poor weight gain

Chartier and Paraud, 2012
Sheep Coccidiosis:

- Protozoan parasite
- Host specific - *Eimeria* sp.
- Small and large intestine
- Diarrhea, anorexia, poor weight gain
- Severe infections in young and immunocompromised animals
Eimeria gilruthi

- Usually an incidental finding
Eimeria gilruthi

• Usually an incidental finding
• Few reports of clinical disease: diarrhea and weight loss
**Eimeria gilruthi**

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- Few reports of clinical disease: diarrhea and weight loss
  - Abomasum and rarely duodenum
Eimeria gilruthi

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  • Abomasum and rarely duodenum
  • Mucosal hyperplasia and parietal cell atrophy
Eimeria gilruthi

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- Few reports of clinical disease: diarrhea and weight loss
  - Abomasum and rarely duodenum
  - Mucosal hyperplasia and parietal cell atrophy
  - Giant globoid schizonts
    - Previously named Globidium sp.
Eimeria gilruthi

• Usually an incidental finding
• Few reports of clinical disease: diarrhea and weight loss
  • Abomasal and rare duodenal infections
  • Mucosal hyperplasia, parietal cell atrophy, giant globoid schizonts
  • Gross: “globoid cysts”
Eimeria gilruthi

- Poorly characterized and taxonomy is unknown

http://www.esgpi.org/Image/HandBook/Ch9/image079.gif
Eimeria gilruthi

- Poorly characterized and taxonomy is unknown
  - Transmission, life cycle, and pathogenesis unknown
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  - Only schizonts have been described

http://www.esgipip.org/HandBook/Ch9/image079.gif
Eimeria gilruthi

- Poorly characterized and taxonomy is unknown
  - Transmission, life cycle, and pathogenesis unknown
  - Only schizonts have been described
  - Sheep may be aberrant hosts – no progression to the sexual stage
Follow Up:

- Remaining sheep euthanized at end of nutritional study
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- 9/23 ewes infected with *E. gilruthi*
Follow Up:

• Remaining sheep euthanized at end of nutritional study
• 9/23 ewes infected with *E. gilruthi*
  • Similar gross appearance of abomasum
  • Globoid schizonts

[https://mininmongolia.files.wordpress.com/2014/08/sheep.jpg](https://mininmongolia.files.wordpress.com/2014/08/sheep.jpg)
Follow Up:

• Remaining sheep euthanized at end of nutritional study
• 9/23 ewes infected with *E. gilruthi*
  • Similar gross appearance of abomasum
  • Globoid schizonts
• PCR of abomasum from 4 ewes:

[Image of a sheep]
Follow Up:

- Remaining sheep euthanized at end of nutritional study
- 9/23 ewes infected with *E. gilruthi*
  - Similar gross appearance of abomasum
  - Globoid schizonts
- PCR of abomasum from 4 ewes:
  - Positive for *Eimeria* sp.
  - Not able to differentiate species
Thank You: Linden Craig, DVM, PhD, DACVP
UT Agricultural Science Department
UT Parasitology Department
UT Histology Lab
References:


