Background

- Non-discriminatory eating habits
- 70% wires, 30% steel
- Occur due to compression of rumen & reticulum → late gestation, parturition, mounting during estrus
- Prevalence
Significance

• Severe loss in production
• High mortality rate

• Of those clinically affected
  ➢ 25% incurable complications
  ➢ Remainder recover with intervention or spontaneously
History

- Second lactation Holstein
- Off-feed 3 weeks prior to calving
- Uneventful calving
- Off-feed & poor doing at 28 DIM
  - Pneumonia diagnosed
  - Treatment: TMS IM for 5 days
- Follow-up visit 1 week later with no improvement
Physical Examination

- T: 39.8ºC
- P: ?
- R: 44
- Bilateral fluid noise over heart
- Submandibular & brisket edema
- BCS 2/5
- ↓ rumen rolls & sounds
- CRT > 2 secs
- Mucus membranes: pale & moist
- Positive withers pinch
Differential Diagnoses

- Traumatic reticuloperitonitis
- Lymphosarcoma
- Heart disease
- Chronic lung disease/pleuritis
- Abomasal ulcers
- Kidney disease
- Liver disease
- Protein losing enteropathy
Diagnostics

- CBC & Biochemistry Panel
- Total plasma protein (>10g/dl)
- Abdominocentesis
- Radiographs
- Metal detector
- Ultrasound
Treatment

- Magnet
- Confinement
- Broad spectrum parenteral antibiotics
- Rumenotomy
Necropsy

• Diffuse peritonitis with increased turbid peritoneal fluid
• Adhesions between reticulum & diaphragm
• Adhesions between pericardial sac & diaphragm
• Diffuse pleuritis & pleural effusion
• Pericarditis
Necropsy

- Pericarditis with large amount of foul smelling pericardial fluid
- 9.5 cm wire found penetrating from reticulum through diaphragm and into pericardial sac
- Magnet found attached to wire in reticulum
Necropsy

PERITONEAL CAVITY
Necropsy
Necropsy
Necropsy
Conclusion

• Traumatic reticulopertionitis and pericarditis
• Subsequent congestive heart failure
Prevention

- Routine magnet placement in heifers
- Magnets on harvesting & feeding machinery
- Avoid areas with lots of metal debris
References


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THANK YOU!