

Veterinary Bioscience: Digestive System



Lecture 30 – Clinical pathology of the gastrointestinal tract

Lecturer: Dr Astrid Oscos Snowball

Astrid is a graduate of the University of Guadalajara, Mexico (2007) and serves as a Lecturer in Clinical Pathology here at the University of Melbourne. After veterinary school, she completed a Master's in Veterinary Clinical Pathology in 2011, followed by a Doctor of Veterinary Science degree (research + residency) in Clinical Pathology at the Ontario Veterinary College, University of Guelph, Canada in 2017. She joined the faculty at Melbourne in October of 2018 and is currently pursuing Board Certification in Clinical Pathology.



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Intended Learning Outcomes

At the end of this lecture you should be able to:

- Explain how clinical pathology can help in defining and diagnosing gastrointestinal disease.
- Describe in basic terms how blood values may change in response to some common GI diseases
- Explain the diagnostic tests for exocrine pancreatic insufficiency
- Describe what disease mechanisms may result in changes to the peritoneal fluid.

Keywords

Clinical pathology; vomiting; diarrhoea; exocrine pancreatic insufficiency; abdominocentesis; peritoneal fluid; faecal samples

Lecture overview

The following topics will be covered in this session:

- Introduction to clinical pathology –The basic principles of blood biochemistry and haematology.
- The concept of normal reference ranges and what they mean.
- Changes in plasma electrolytes with vomiting, diarrhoea and enteropathy; effects of dehydration on blood biochemistry and haematology
- Abdominocentesis and peritoneal fluid analysis – how this may be helpful as a diagnostic aid.
- Diagnosis of exocrine pancreatic insufficiency.
- Tests for malabsorption and maldigestion.
- Analysis of faecal samples.

Recommended reading:

Latimer KS. Duncan & Prasse's Veterinary Laboratory Medicine Clinical Pathology, 5th ed. Wiley-Blackwell, 2011

- Ch. 5 Water, Electrolytes, and Acid-Base pgs. 156-167
- Ch. 8 Digestive System pgs. 231-246