KEY LEARNING OBJECTIVES

- To develop an understanding of some of the challenges facing the pathologist when examining gastrointestinal (GI) biopsy specimens
- To understand the indications for and limitations of histopathology in the diagnosis of GI disease
- To reflect on what we can do to maximize the potential of GI biopsies

MULTIPLE CHOICE QUESTIONS

1. Which of the following histopathological diagnoses may require further investigation to determine the underlying aetiology?
 - (A) Alimentary lymphoma
 - (B) Gastric adenocarcinoma
 - (C) Lymphocytic plasmacytic enteritis
 - (D) Gastrointestinal stromal cell tumour
2. Which of the following is true about small intestinal endoscopy?
 - (A) If the mucosa appears grossly normal endoscopically, there is rarely any benefit to collecting biopsy specimens
 - (B) If gastric ulceration is identified, endoscopic biopsy specimens should be collected from the periphery of the lesion rather than the centre
 - (C) Collection of four to five endoscopic biopsy specimens from the duodenum is usually enough to obtain a diagnosis in diffuse small intestinal disease
 - (D) In small intestinal disease the histopathological changes in the ileum are often very similar to those in the duodenum
3. Which of the following histopathological stains would be useful in the diagnosis of intestinal mycobacteriosis?
 - (A) Ziehl-Neelsen
 - (B) Giemsa
 - (C) Toluidine blue
 - (D) Silver stain

Colorectal disease

Alix McBrearty

In this interactive lecture we will discuss the approach to and management of large intestinal diseases using a series of cases with non-infectious inflammatory diseases of the colon and rectum and some important infectious causes of large intestinal inflammation, including granulomatous colitis and *Tritrichomonas foetus* infection. We will also discuss rectal strictures which are a potential sequela of inflammatory disease.

Attempting to differentiate between signs of upper and lower intestinal inflammation is important as it may alter the investigations performed and the potential underlying causes. Chronic colitis is more common in dogs than in cats, and in cats, when colitis occurs, the small intestine is often also affected. A wide variety of infectious organisms have been reported to cause colitis in dogs and cats, however several of these are challenging to diagnose. In cases where an underlying cause is identified, this should be treated and in those in which no underlying cause is found, a combination of dietary modification and anti-inflammatory and immunosuppressive drugs is used.

The rectal mucosa is histologically similar to that of the colon and proctitis may occur alongside colitis in

some cases. In other patients, proctitis may occur in conjunction with anal or perianal inflammation or in isolation. Investigation and treatment of proctitis will depend on whether an underlying cause can be identified and whether other areas of the gastrointestinal tract are affected.

Rectal strictures are uncommon in both dogs and cats. They may be congenital or occur due to rectal neoplasia or following inflammatory rectal disease, rectal surgery or radiation therapy. Investigations are required to identify the extent of the lesion and the underlying cause as these will change the preferred treatment option for the individual patient.

KEY LEARNING OBJECTIVES

- To appreciate the difference in clinical presentation between cases with small and large intestinal inflammatory disease
- To develop a logical diagnostic approach to a patient with signs of chronic colonic or rectal inflammation
- To understand the treatment and management options available for the treatment of a selection of colorectal diseases and understand when each might be indicated

GI from top to bottom

MULTIPLE CHOICE QUESTIONS

1. Which of the following clinical signs is not typically seen in dogs with large intestinal inflammatory disease?
(A) Haematochezia
(B) Weight loss
(C) Tenesmus
(D) Urgency
2. Which of the following infectious organisms is the least likely to result in signs of colonic inflammation?
(A) *Trichuris vulpis* (C) *Toxocara canis*
(B) *Giardia canis* (D) *Tritrichomonas foetus*

3. Which of the following is true about the treatment of *Tritrichomonas foetus* infection in cats?
(A) Spontaneous resolution of diarrhoea implies recovery from infection
(B) Ronidazole always eliminates the infection providing the treatment course is long enough
(C) Side effects of ronidazole treatment may be life threatening if treatment is not discontinued when they occur
(D) Although ronidazole is the preferred choice for treatment, metronidazole is also effective for this parasite

The lumpy gut: a review of GI neoplasia

Sarah L. Mason

This lecture will use a case-based approach to illustrate approach and management of the various gastro-intestinal neoplasia.

The GI tract runs from and includes the oral cavity to the rectum. Classification of GI tumours is relatively straightforward as the basic structure of the various organs is similar, comprising a surface epithelium and supporting connective tissue submucosa. GI tumours therefore mainly comprise those which arise from epithelium (carcinoma) and those which arise from connective tissue (sarcoma). As immune cells are ubiquitous, tumours of round cell origin also commonly occur within the GI tract.

Patients affected with GI neoplasia generally present with signs relevant to the affected organ, for example, halitosis in oral tumours, vomiting/reduced appetite if the stomach or small intestine is affected, or colitis with colonic lesions.

Inevitably general anaesthesia is required for full assessment of GI neoplasia. In the case of oral tumours, a complete oral examination should be performed and the tumour(s) measured, recorded and photographed. A good diagnostic starting point is to obtain a deep wedge biopsy specimen of the tumour and needle aspirates of the palpable lymph nodes. Once histopathology is available, a more defined diagnostic plan can be made. Thoracic radiographs can also be made at initial assessment, given that the most common oral tumours (melanoma, squamous cell carcinoma, fibrosarcoma) have metastatic potential, but bear in mind that a percentage of oral tumours are also benign, so the importance of thoracic radiography depends on the index of suspicion of malignancy.

Tumours of the stomach and intestines require imaging. Ultrasonography and endoscopy are both very useful in assessing location and organ involvement. Locoregional lymph nodes should also be assessed and aspirated when possible. Biopsy specimens of lesions may be obtained via endoscopy in some cases but often a surgical approach is indicated to ensure a representative/

full-thickness sample is obtained. Full staging should be guided by the tumour aetiology; in most cases thoracic radiography is indicated, and baseline haematology, biochemistry and urinalysis should be included in the work-up to assess general organ function and for any abnormalities which may be related to the neoplasia.

In most cases, the main treatment for GI neoplasia should be surgical, however chemotherapy and radiation have a role in many cases, either in the adjunctive setting or in the gross disease setting when complete surgical resection is not possible or is declined, or in the case of round cell neoplasia.

KEY LEARNING OBJECTIVES

- To understand the types of neoplasia affecting the gastrointestinal (GI) tract
- To develop the approach to investigation and staging of GI neoplasia
- To appreciate treatment options for GI neoplasia and their limitations

MULTIPLE CHOICE QUESTIONS

1. What is the most appropriate sample for diagnosis of an oral tumour?
(A) Fine-needle aspirate and cytology
(B) Impression smear
(C) Punch biopsy specimen
(D) Deep wedge biopsy specimen
2. What is the likely regional metastatic pattern for an oral melanoma affecting the caudal mandible?
(A) Submandibular lymph nodes
(B) Retropharyngeal lymph nodes
(C) Parotid lymph nodes
(D) Tonsils
3. What is the most appropriate treatment for a dog with a localized intestinal mass, probable carcinoma on cytology?
(A) Surgery
(B) Surgery and chemotherapy
(C) Chemotherapy only
(D) Surgery, chemotherapy and radiation

Guest (guest)

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