ECVP/ESVP Summer School in Veterinary Pathology

Summer School 2014 – Mock Exam

CASE 7 Cat ilececocolic junction Feline gastrointestinal sclerosing fibroplasia

Histologic Description	*Points*
Style	0,5
Colon, ileocecolic junction	0,5
The intestinal submucosa (0,5) ad muscular layers (0,5) are severely expanded (0,5) and partially substituted by intramural (0,5) severe fibroplasia and inflammation	2
Mass composed of	**0**
Branching and anastomosing trabeculae (0,5) of dense eosinophilic fibrillar material (0,5) (collagen 0,5)	1,5
Spindle cells with basophilic cytoplasm Large oval nuclei with dispersed chromatin (fibroblasts)	1
More mature spindle cells with hyeprchromatic nuclei (fibrocytes)	1
Interpreted as fibroplasia	0,5
Elevated numbers of reactive histiocytes/macrophages/	0,5
Aggregates of eosinophils	1
Intensely eosinophilic material at the centre (flame figures)	1
Mast cells	0,5
Hypehaemia/Hemorrhages	0,5
Haemosiderin laden macrophages	0,5
Muscular cell degeneration/necrosis	0,5
COLONIC LUMEN AND MUCOSAL LINING	0
Lumen containing mucin	0,5
Lumen containing necrotic debries/sloughed cells	0,5
Lumen containing bacterial rods	0,5
Goblet cell hyperplasia	0,5
Ulceration	0,5
Follicular hyperplasia	0,5
Morphologic Diagnosis: severe (0,5) chronic mural (0,5) locally extensive (0,5) encircling fibroplasia (1) and pyogranulomatous (0,5) and eosinophilic (0,5) inflammation with colonic ulceration	3,5
Name the Disease Feline gastrointestinal eosinophilic sclerosing fibroplasia	2
	20

HD 90% of the intestinal wall is severely expanded and replaced by a 2.5 x 1.5 cm in diameter, multinodular, intramural irregularely nodular encircling lesion characterized by severe inflammation and fibroplasia, centered on muscular layers and not extending beyond the serosal. The normal layering of the intestinal wall is substituted by branching and anastomosing trabeculae of dense collagen (osteoid-like appearance) separated by a densely cellular population of large spindle shaped cells fiborblasts and more mature fibrocytes (sclerosing fibroplasia) associated with dense infiltrates of macrophaghes and eosinophils with occasional mast cells and fewer number of neutrophils, lymphocytes and plasma cells mixed by the fibroplasia and in the surrounding tissues. Multifocally there are

large areas of eosinophilic cellular and karyorectic debries (lytic and coagulative necrosis) with occasional microabscesses and flame figures. The external muscular layer is compressed and muscle fibers are affected by degenerative changes, with shrunken hypereosinophilic cytoplasm (hypercontraction fibers), hyaline homogeneous cytoplasm with loss of cross striations (hyaline degeneration), fragmentation (Zenker necrosis) or vacuolation (floccular degeneration).

MD: ilececocolic junction, severe diffuse mural chronic eosinophilic enteritis with severe fibroplasia.

References

1: Suzuki M, Onchi M, Ozaki M. A case of feline gastrointestinal eosinophilic sclerosing fibroplasia. J Toxicol Pathol. 2013 Mar;26(1):51-3

2: Sihvo HK, Simola OT, Vainionpää MH, Syrjä PE. Pathology in practice. Severe chronic multifocal intramural fibrosing and eosinophilic enteritis, with occasional intralesional bacteria, consistent with feline gastrointestinal eosinophilic sclerosing fibroplasia. (FIESF). J Am Vet Med Assoc. 2011 Mar 1;238(5):585-7.

3: Craig LE, Hardam EE, Hertzke DM, Flatland B, Rohrbach BW, Moore RR. Feline gastrointestinal eosinophilic sclerosing fibroplasia. Vet Pathol. 2009 Jan;46(1):63-70.

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DIAGNOSTIC PATHOLOGY

Vet Pathol 46:63–70 (2009)

Feline Gastrointestinal Eosinophilic Sclerosing Fibroplasia

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Abstract. A retrospective study of cases of a unique intramural inflammatory mass within the feline gastrointestinal tract was performed in order to describe and characterize the lesion. Twenty-five cases were identified from archival surgical and postmortem tissues. The lesion most often occurred as an ulcerated intramural mass at the pyloric sphincter (n = 12) or the ileocecocolic junction or colon (n = 9); the remaining cases were in the small intestine. Seven cases also had lymph node involvement. The lesions were characterized by eosinophilic inflammation, large reactive fibroblasts, and trabeculae of dense collagen. Intralesional bacteria were identified in 56% of the cases overall and all of the ileocecocolic junction and colon lesions. Fifty-eight percent of cats tested had peripheral eosinophilia. Cats treated with prednisone had a significantly longer survival time than those receiving other treatments. We propose that this is a unique fibroblastic response of the feline gastrointestinal tract to eosinophilic inflammation that in some cases is associated with bacteria. The lesion is often grossly and sometimes histologically mistaken for neoplasia.

Key words: Bacteria; cats; eosinophils; fibrosis; gastrointestinal tract; granulation tissue.

There are several conditions in cats in which eosinophilic inflammation is the predominant feature, including feline indolent ulcer, eosinophilic plaque, eosinophilic granuloma, and hypereosinophilic syndrome.[2,8] In this report we describe another feline eosinophilic lesion that appears to be limited to the gastrointestinal tract and associ-

Materials and Methods

Case selection

Cases were selected during 2005–2008 based on histologic appearance from the biopsy and necropsy submissions to the Department of Pathobiology at the University of Tennessee, College of Veterinary Medicine (9 cases), IDEXX Laboratories (8 cases), Marshfield