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## **USEFULNESS OF THE SYDNEY SYSTEM IN DIAGNOSIS OF GASTRITIS IN DOGS – CLINICAL CASES**

**Key words:** dog, gastritis, Sydney system

### **Introduction**

At present diagnosis of gastritis in humans is based solely on Sydney system. It comprises endoscopic and histological picture of the gastric mucosa. The histological description includes etiological, topographic and morphological parts (1,2,3,4).

### **The aim of the research**

Aim of the study was to evaluate histopathologically inflammatory changes in the gastric musoca in dogs with dyspeptic signs based on Sydney system.

### **Material and methods**

The study presents 3 clinical cases of dogs with district dyspeptic signs referred to the endoscopic laboratory of Department of Internal Diseases with Clinic for Horses, Dogs and Cats, Faculty of Veterinary Medicine, University of Environmental and Life Sciences, for endoscopy of the anterior part of the digestive tract. All the animals underwent gastroscopy during which the appearance of the gastric mucosa was evaluated macroscopically and the samples for the histopathological examinations were collected from the corpus and the pyloric part. The histopathological preparations were stained with H-E and Giemsa methods. The microscopic preparations were evaluated by two independent pathologists.

The inflammation of the corpus and pylorus gastritis was evaluated using the Sydney system histological classification. This classification included evaluation of: degree of chronic inflammation- intensity (a number of mononuclear cells), its activity (density of infiltration from neutrophils), atrophy (a number of gastric glands), intestinal metaplasia, degree of the gastric mucosa colonization by *Helicobacter* microorganisms.

In the system, the enlisted parameters were evaluated according to the points scale:

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- a) intensity: 0 points- the norm- (sporadic mononuclear cells in the stroma), 1 point- (slight mononuclear cells in the stroma), 2 points- moderate, 3 points severe- (massive infiltrations of mononuclear cells in the stroma);
- b) activity: 0 points- ( no evidence of neutrophils), 1point- (sporadic, single neutrophils in the stroma), 2 points- (a moderate number of neutrophils in the mucosa), 3 points- (massive neutrophil infiltration);
- c) atrophy: 0 points- (no evidence of atrophy), 1 point- (slight), 2 points- (moderate), 3 points- (severe);
- d) intestinal metaplasia: 0 points- (no evidence of intestinal metaplasia), 1 point- (slight), 2 points- (moderate), 3 points- (severe);
- e) *Helicobacter spp.* infection: 0 points- (no evidence of bacteria), 1 point- (single bacteria), 2 points- (numerous bacteria in a few fields of vision), 3 points- (numerous bacteria in most glands).

### Results

#### Case I

THE MALE DOG, MIXED BREED, 10 YEARS OLD

The history:

- diarrhea for a year and vomits

Gastroscopy:

- thickened folds of the gastric mucosa
- erythema and edema of the gastric mucosa
- single, large ulcer in the pyloric part

The histopathological evaluation of the gastric mucosa bioptates based on the Sydney system:

a) the gastric angular area:

- o *gastritis chronica profunda activa magni gradus sine neoplasmate*,
- o Sydney system: activity (+++); intensity (+++); glandular atrophy (-); intestinal metaplasia (-)

b)the ulcer area:

- o *gastritis chronica erosive et ulcerative sine neoplasmate activa magni gradus sine neoplasmate*,
- o Sydney system: activity (+++); intensity (+++); glandular atrophy (-); intestinal metaplasia (-)

c)the pyloric area:

- o *gastritis chronica profunda activa medii gradus sine neoplasmate*
- o Sydney system: activity (++); intensity (++); glandular atrophy (-); intestinal metaplasia (-)

#### Case II

THE MALE DOG, SYBERIAN HUSKY, 8 YEARS OLD

The history:

- vomits for a month, 3-4 times daily, containing foamy yellowish chime

Gastroscopy:

- erythema and edema of the gastric mucosa,
- a single, large ulcer in the pyloric area
- two medium ulcers in the cardiac area

The histopathological evaluation of the gastric mucosa bioptates based on the Sydney system:

- *gastritis chronica activa medii gradus sine neoplasmate*,

- Sydney system: activity (++); intensity (++); glandular atrophy (+); intestinal metaplasia (+)

Case III

DOG, PUDLE, 7 YEARS OLD

The history:

- sporadic vomits for about 2 months

Gastroscopy:

- erythema and edema of the gastric mucosa
- erosions and minor ulcerations on the mucosa

The histopathological evaluation of the gastric mucosa bioptates based on the Sydney system:

- a) the corpus area:
  - *gastritis chronica activa medii gradus sine neoplasmate*,
  - Sydney system: activity (++); intensity (++); glandular atrophy (-); intestinal metaplasia (+)
- b) the pyloric area:
  - *gastritis chronica minimi gradus sine neoplasmate*
  - Sydney system: activity (+); intensity (+); glandular atrophy (-); intestinal metaplasia (+)

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#### Summary

**Kubiak K., Jankowski M., Spuzak J., Grzegory M., Glińska-Suchocka K., Nicpoń J., Haloń A., Vlizlo V., Maksymovych I.**

#### **USEFULNESS OF THE SYDNEY SYSTEM IN DIAGNOSIS OF GASTRITIS IN DOGS – CLINICAL CASES**

*The conducted research confirmed the own observations based on long-term experience and opinions of other authors that the endoscopic evaluation of the gastric mucosa should be performed in combination with the histopathological evaluation of the bioptates. That kind of protocol allows a precise diagnosis. Sydney system of the gastric mucosa inflammatory changes may be successfully applied in gastroenterology of dogs.*

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