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Congress of European Society of Veterinary Clinical Pathology

28th to 31st of August 2024

Satellite meeting:

European Canine Lymphoma
Network (**ECLN**), 30th of August,
Friday, From 9 am. to 2 pm.



Congress site:

University of Veterinary Medicine, Budapest
H-1078, István u. 2. Budapest, Hungary

Gavazza A

A comparative evaluation of two classification systems for assessing neutrophilic toxicity in dogs and cats

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Background: The assessment of neutrophil toxicity provides significant insights into the progression of diseases, the efficacy of treatments, and the prognosis in patients. Two prevalent systems, the Segev-Aroch's and Harvey's grading systems, are employed to evaluate the severity of neutrophil toxicity.

Objectives: To assess the presence and severity of neutrophil toxicity in dogs and cats, comparing how each classification system categorizes toxicity levels.

Material and Methods: 88 complete blood counts and blood smears were evaluated from 39 dogs and 25 cats presenting elevated numbers of banded neutrophils. The smears were reassessed, with toxicity categorized as either “mild,” “moderate,” or “severe” based on predefined criteria from the classifications.

Results: Among the canine samples, 36/60% of blood smears exhibited signs of neutrophilic toxicity, while in felines this figure was 7/25%. According to Segev-Aroch's classification, the breakdown of canine toxicity was 23/64% mild, 12/33% moderate, and 1/3% severe. Conversely, Harvey's classification presented 2/6% mild, 21/58% moderate, and 13/36% severe. In cats, Segev-Aroch's results were 6/85% mild, 1/14% moderate, and 0/0% severe, whereas Harvey's classification indicated a 7/100% moderate toxicity rate.

Conclusion: Notable discrepancies exist between the two systems in assessing cytoplasmic alterations in both dogs and cats. The Segev-Aroch system tends to underestimate the severity, whereas Harvey's system appears to overestimate it. Refining these criteria is imperative for accurately classifying neutrophilic toxicity, which plays a significant role in the prognosis of various pathologies.

Keywords: dog, cat, blood smear, neutrophil toxicity, classification

Reference:

1. Gilad S, Eyal K, Itamar A, 2006, J Vet Intern Med, 20:20-31
2. Harvey WJ, 2012, Veterinary Hematology: A Diagnostic Guide and Color Atlas, 122-273.
3. Itamar A, Eyal K, Gilad S, 2005, J Vet Intern Med, 19:64-73.