Oral presentations

The neutrophil-to-lymphocyte ratio in canine pneumonia

Elizabeth Conway,
Jose Carlos Pizarro Del Valle,
Alison Ridyard

University of Glasgow, Glasgow, United Kingdom

OBJECTIVES

In human medicine the neutrophil-to-lymphocyte ratio (NLR) is a predictor of severity and outcome in community-acquired pneumonia, with higher prognostic accuracy than traditional infection markers. This study aims to assess NLR utility in predicting outcome in canine pneumonia as compared with other routine haematological parameters and systemic inflammatory response syndrome (SIRS) scores.

METHODS

We retrospectively analysed clinical and laboratory characteristics of canine pneumonia patients seen from

July 2011 to December 2016. Inclusion criteria were a clinical and radiographic pneumonia diagnosis, plus reference laboratory haematology at diagnosis. Cases receiving steroids were excluded. The NLR, tWBC, neutrophil count, lymphocyte count, %-bands and % of cases diagnosed with SIRS were compared between survivors and non-survivors.

RESULTS

Two hundred cases were retrieved; 49 fulfilled the inclusion criteria. Of these, 34 (69%) survived to discharge, and 39 could be SIRS scored. The NLR (median $\pm$ SD) did not differ significantly between the survivors (12.4 ± 13.9) and non-survivors (16.9 ± 12.9) ($p=0.306$), neither did tWBC or neutrophil count. Survivors had a lower %-bands (1.0 ± 1.9) than non-survivors (5.0 ± 8.4 , $p=0.00$), and higher lymphocyte count (0.93 ± 1.3 vs 0.67 ± 0.96) ($p=0.04$). The %-survived did not differ significantly between those with (33) and without (6) SIRS (61% and 83% respectively) ($p=0.286$), nor did the NLR (17.2 ± 14.2 and 10.6 ± 7.7 respectively) ($p=0.094$).

STATEMENT (CONCLUSIONS)

Unlike in human medicine, neither NLR nor SIRS scores were prognostic for outcome in this cohort of canine patients with pneumonia. However survivors had a lower %-bands and higher lymphocyte count than non-survivors.

Non-cardiogenic pulmonary oedema in the dog: four individual cases

Eoin Kilkenny¹, Roger Wilkinson²

- 1 Anderson Moores Veterinary Specialists (intern), Winchester, United Kingdom
- 2 Ultrasound4Pets, Leeds, United Kingdom

OBJECTIVES

To report the clinical presentation, pathophysiology, diagnostic approach and response to treatment in four separate cases of non-cardiogenic pulmonary oedema in the dog.

METHODS

Four dogs presented with acute dyspnoea and tachypnoea with no known previous history of cardiorespiratory disease. The patients included an 8 week old entire female German Pointer, a 10 year old female neutered Miniature Bull Terrier, an 8 week old Staffordshire Bull Terrier and a 4 year old male neutered English Bull Terrier. Respectively,

the four dogs described suffered electrocution, near drowning, strangulation and putative opioid toxicity immediately before presentation. Clinical examination was followed by imaging and appropriate treatment in all four cases.

RESULTS

All four dogs were diagnosed with pulmonary oedema using lung ultrasound, thoracic radiography or a combination of both modalities. No patient showed evidence of cardiac disease on clinical exam, echocardiographic examination or thoracic radiography. The patients that presented post electrocution and post near-drowning responded to diuretic treatment. The patients that suffered strangulation and opioid toxicity died despite best efforts to treat medically and resuscitate. Individual aetiologies have varying responses to treatment. However, the outcomes of this series are likely dependent, in part, on the severity of pulmonary oedema as well as the underlying pathophysiological processes.

STATEMENT (CONCLUSIONS)

While the vast majority of cases of pulmonary oedema are cardiogenic, less common causes should not be excluded from a list of differential diagnoses. While imaging is often necessary to make a definitive diagnosis, a concise history and thorough clinical exam is essential to uncovering these rare aetiologies.