Alabama rot: where are we now?

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Cutaneous and renal glomerular vasculopathy (CRGV) is a disease of unknown aetiology, characterized by ulceration of the distal extremities in dogs. It is variably associated with clinically significant renal azotaemia secondary to AKI. CRGV has previously been reported in a case series of Greyhounds in the USA, a Great Dane in Germany and a Greyhound within the UK.

Since November 2012, more than 180 dogs across the UK have been identified with clinicopathological findings similar to those reported in Greyhounds in the USA in the 1980s. The annual frequency of reported cases has shown a steady increase since 2012, albeit exhibiting occasional year-on-year variation. Skin lesions, typically appearing as ulcers or erosions on the distal limbs, ventrum or oral cavity/muzzle, commonly appear less than a week before clinical signs attributable to acute kidney disease (AKI).

The major renal histopathological lesion reported in CRGV is thrombotic microangiopathy. Thrombotic microangiopathies are characterized by inflammation and damage to vascular endothelium, leading to widespread formation of microthrombi and resultant consumptive thrombocytopenia.

A range of breeds has been identified with CRGV in the UK, suggesting the disease does not solely affect Greyhounds. Hounds, gundogs and pastoral dogs have been shown to have the highest risk of being diagnosed with CRGV. Cases have been identified across the whole of UK and there is a seasonal distribution, with >90% of cases being identified between November and May. Habitat is thought to be a factor in CRGV development and cases have generally been associated with woodlands, increasing mean maximum temperatures in winter, spring and autumn and increasing mean rainfall in winter and spring.

Thrombocytopenia has been identified in over 70% of affected dogs and is thought to be the result of widespread microthrombi. Mild anaemia and neutrophilia have also commonly been seen. Most dogs affected by CRGV are azotaemic at presentation, although a small proportion develop azotaemia a few days after initial presentation. Hyperbilirubinaemia is occasionally seen and may be the result of microangiopathic injury.

Aside from the renal cortices appearing hyperechoic, abdominal ultrasonography has been largely unremarkable in dogs with CRGV. Hypertension is possible as it is in any patient with AKI.

A definitive diagnosis of CRGV is made by histopathological assessment of the kidneys and/or skin. The aetiology of CRGV remains unknown at this time and common causes of AKI should be considered and excluded when presented with a dog that may be suffering from CRGV.

Current knowledge suggests management should be as for any dog presenting with AKI of unknown cause. Advice should be sought when presented with a patient with suspected CRGV.

A population of dogs has previously been reported with CRGV without biochemical evidence of AKI. Based upon current knowledge, it is likely that a similar population of dogs exists within the UK.

The prognosis for dogs with CRGV and clinically significant AKI appears to be poor, although with intensive management some dogs have survived and regained normal renal function. The outbreak pattern of CRGV in the UK is in accord with the definition of a newly emerging disease.

KEY LEARNING OBJECTIVES

- Understand that CRGV is a disease of unknown aetiology
- Be aware that CRGV affects breeds other than Greyhounds
- Be aware that skin lesions typically appear less than a week before clinical signs attributable to AKI

MULTIPLE CHOICE QUESTIONS

1. Historically, which of the following breeds has typically been associated with CRGV?
(A) Cocker Spaniels
(B) Greyhounds
(C) Boxers
(D) Dalmatians
2. Which of the following clinicopathological abnormalities is often seen?
(A) Thrombocytopenia
(B) Increased alanine aminotransferase activity
(C) Neutropenia
(D) Hypercholesterolaemia
3. How is a definitive diagnosis of CRGV made?
(A) Serum biochemical findings
(B) Clinical signs
(C) Histopathology
(D) Urinalysis