

VETERINARY TECHNICAL DATASHEET

Canine Leukocyte Adhesion Deficiency (CLAD), type III



Mutation Found In :German Shepherd Dog

Disorder Type

- Blood

Disease Severity

- Severe

Background

Canine leukocyte adhesion deficiency (CLAD) type III is a rare immunological disorder encountered in German Shepherd dogs. CLAD type III is characterized by immunodeficiency predisposing affected dogs to recurrent severe infections.

Key Signs

- Persistent leukocytosis
- Pyrexia
- Marked periodontal disease
- Lameness
- Increased mucosal hemorrhages
- Impaired wound healing

Clinical Description

CLAD III results from leukocytes being unable to migrate to the site of inflammation and participate in the phagocytosis of pathogens due to impaired activation of beta integrins. Persistent leukocytosis (increased number of leukocytes in the blood) and platelet dysfunction are characteristic for the disorder. The typical onset of clinical signs is at the age of 6 months. Clinical signs include fever (pyrexia), increased mucosal hemorrhages, marked periodontal disease, poor wound healing, and lameness.

Mode of Inheritance

- autosomal recessive

Gene Name

- FERMT3

Next Steps

Therapy is targeted at treating secondary infections, preventing bleeding episodes, and supportive care. Affected dogs should be monitored closely for excessive and prolonged bleeding during and after any required surgical procedures or after any trauma. Blood or platelet transfusions may be necessary to control episodes of excessive bleeding.

References

Hugo TB, Heading KL. Leucocyte adhesion deficiency III in a mixed-breed dog. Aust Vet J 92:299-302, 2014. Pubmed: 24954630.