

Hyperuricosuria, (HUU)

In brief

Hyperuricosuria (HUU) is an inherited disorder in dogs that can cause hyperuricemia and predisposes affected dogs to the development of urolithiasis (urate stones) in the kidneys and bladder. The disease is very common in Dalmatians but is seen in several other breeds as well. Hyperuricosuria is inherited in an autosomal recessive manner.

Clinical overview

HUU predisposes affected dogs to the formation of uric acid stones. In Dalmatians, the disease is more common in males than in females. As much as 34% of all male Dalmatians are diagnosed with uric acid stones. Clinical signs of urolithiasis include hematuria, pain while urinating, and blockage of the urinary tract. Patients with urine stones are more susceptible to urinary tract infections. Blockage in the urinary tract is a life-threatening condition that requires immediate veterinary care.

References

Online database

Online Mendelian Inheritance in Animals, OMIA (<http://omia.angis.org.au/>). Faculty of Veterinary Science, University of Sydney.

Scientific articles

Bannasch D, Safra N, Young A, Karmi N, Schaible GV, Ling GV. Mutations in the SLC2A9 Gene Cause Hyperuricosuria and Hyperuricemia in the Dog. PLoS Genet 4(11):e1000246, 2008.

Karmi N, Brown EA, Hughes SS, McLaughlin B, Mellersh CS, Biourge V, Bannasch DL. Estimated frequency of the canine hyperuricosuria mutation in different dog breeds. J Vet Intern Med 24:1337-42, 2010.

Disease severity

Mild



Clinical signs

- Urolithiasis
- Hyperuricemia

Mode of Inheritance

Autosomal Recessive

Results of the genetic test are reported as follows:

- Clear
-  Carrier
-  At risk

RENAL DISORDERS

HYPERURICOSURIA, (HUU) (2/2)

Mutation(s) found in:

American Bulldog
American Pit Bull Terrier
American Staffordshire Terrier
Australian Shepherd
Black Russian Terrier
Boerboel
Bulldog
Dalmatian
Danish-Swedish Farmdog
German Hunting Terrier
German Shepherd Dog
German Shepherd Dog -
Longhaired
Giant Schnauzer
Giant Schnauzer - Black
Giant Schnauzer - Pepper and
salt
Golden Labrador Retriever
Hungarian Wire-Haired Pointer
(Vizsla)
Jack Russell Terrier
Kromfohländer (non-FCI-
registered)
Labrador Retriever
Lagotto Romagnolo - Romagna
Water Dog
Lagotto Romagnolo - Romagna
Water Dog
Large Münsterländer
Miniature American Shepherd
Mixed breed
Parson Russell Terrier
Pomeranian
Russell Terrier
Schapendoes
Schapendoes
Spaniel de Pont-Audemer
Spanish Water Dog
Swedish Vallhund
Weimaraner
Weimaraner - Longhaired
Weimaraner - Shorthaired
Working Jack Russell Terrier