Primary Lens Luxation, (PLL)

In brief

Primary lens luxation (PLL) is an inherited condition in dogs that can cause displacement of the ocular lenses. The disorder is caused by degeneration of the zonular fibres that are required for attachment of the lens. When the lens luxates, it may do so either anteriorly or posteriorly. PLL most closely follows an autosomal recessive mode of inheritance though heterozygous dogs also have a low risk of developing PLL.

Clinical overview

PLL is most commonly observed in dogs 3 to 8 years of age with displacement of the lens in the second eye occurring within weeks or months of the first. Subluxation, where the lens is partly detached, commonly occurs before complete luxation. An anterior lens luxation is particularly serious and manifests as squinting, redness, and watering of the eyes, requiring immediate veterinary care. Untreated, PLL results in glaucoma, corneal opacities, corneal edema, and blindness. The second lens tends to become displaced within weeks or months of the first luxation and therefore should be carefully monitored.

References

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

Scientific articles

Mutation(s) found in:
American Hairless Terrier
Australian Cattle Dog
Bull Terrier
Chinese Crested Dog
Chinese Foo Dog
Danish-Swedish Farmdog
Fox Terrier - Wire
German Hunting Terrier
Jack Russell Terrier
Lakeland Terrier
Lancashire Heeler
Lucas Terrier
Miniature Bull Terrier
Mixed breed
Norwich Terrier
Parson Russell Terrier
Patterdale Terrier
Pumi
Rat Terrier
Russell Terrier
Sealyham Terrier
Teddy Roosevelt Terrier
Tenterfield Terrier
Tibetan Terrier
Toy Fox Terrier
Volpino Italiano
Welsh Terrier
Working Jack Russell Terrier
Yorkshire Terrier