

Format: Abstract

Send to

[Vet Ophthalmol.](#) 2018 Aug 15. doi: 10.1111/vop.12597. [Epub ahead of print]

Optical coherence tomography and molecular analysis of sudden acquired retinal degeneration syndrome (SARDS) eyes suggests the immune-mediated nature of retinal damage.

Grozdanic SD^{1,2,3}, Lasic T^{1,2,3}, Kecova H^{1,2}, Mohan K¹, Kuehn MH⁴.

Author information

Abstract

OBJECTIVE: To perform detailed analysis of retinal changes in dogs with SARDS using optical coherence tomography (OCT), funduscopy, and molecular analysis.

ANIMALS: Subjects were 29 dogs from 12 US states and Canada diagnosed with SARDS by 8 ophthalmologists. An additional 7 eyes from 5 deceased SARDS dogs were used for molecular and histological analysis.

PROCEDURES: Dogs were evaluated using chromatic pupil light reflex testing (cPLR), and electroretinography (ERG); subjects underwent complete ophthalmic examination, including funduscopy, retinal photography, and OCT, in addition to complete laboratory analysis, blood pressure evaluation, abdominal and thoracic radiographs, and computerized tomography (CT) imaging to assess possible systemic abnormalities. Histology and immunohistochemistry analysis was performed in 2 SARDS eyes. Microarray analysis was performed in 5 SARDS retinas.

RESULTS: Thirty-eight percent of patients had <1-mm wide retinal detachments (RD) on OCT analysis, which could not be detected by funduscopy or retinal photographs. Systemic hypertension did not seem to be a contributing factor (RD 22.2%; ND 20%, Odds ratio = 1.1). No dogs showed neoplastic changes by thoracic or abdominal radiography, or CT imaging. There was no statistically significant difference in age (RD 7.9 ± 1.9 years (mean ± SD); ND 7.6 ± 1.7 years, p = 0.69) or duration of blindness prior to presentation (RD 18 ± 7 days (mean±SD); ND 21 ± 12 days, p = 0.28). Microarray and histology analysis of SARDS eyes revealed molecular changes suggestive of immune-mediated damage.

CONCLUSIONS: Observed histological, molecular, and OCT changes are highly suggestive of immune-mediated damage in SARDS eyes.

Full text links



Save items

Add to Favorites

Similar articles

Evaluation of retinal morphology of canine sudden acquired ret [Vet Ophthalmol. 2018]

Acute blindness in dogs: sudden acquired retinal degeneration [Vet Ophthalmol. 2008]

Evaluation of retinal status using chromatic pupil light [Invest Ophthalmol Vis Sci. 2007]

Review Sudden acquired retinal degeneration syndr [Vet Ophthalmol. 2016]

Review [Aiming for zero blindness]. [Nippon Ganka Gakkai Zasshi. 2015]

See reviews...

See all...

Recent Activity

Turn Off Clear

[See more...](#)

KEYWORDS: canine; detachment; immune; microarray; optical coherence tomography; retina; sudden acquired retinal degeneration syndrome

PMID: 30109754 DOI: [10.1111/vop.12597](https://doi.org/10.1111/vop.12597)



LinkOut - more resources



You are here: [NCBI](#) > [Literature](#) > [PubMed](#)

[Support Center](#)

GETTING STARTED

- [NCBI Education](#)
- [NCBI Help Manual](#)
- [NCBI Handbook](#)
- [Training & Tutorials](#)
- [Submit Data](#)

RESOURCES

- [Chemicals & Bioassays](#)
- [Data & Software](#)
- [DNA & RNA](#)
- [Domains & Structures](#)
- [Genes & Expression](#)
- [Genetics & Medicine](#)
- [Genomes & Maps](#)
- [Homology](#)
- [Literature](#)
- [Proteins](#)
- [Sequence Analysis](#)
- [Taxonomy](#)
- [Variation](#)

POPULAR

- [PubMed](#)
- [Bookshelf](#)
- [PubMed Central](#)
- [BLAST](#)
- [Nucleotide](#)
- [Genome](#)
- [SNP](#)
- [Gene](#)
- [Protein](#)
- [PubChem](#)

FEATURED

- [Genetic Testing Registry](#)
- [GenBank](#)
- [Reference Sequences](#)
- [Gene Expression Omnibus](#)
- [Genome Data Viewer](#)
- [Human Genome](#)
- [Mouse Genome](#)
- [Influenza Virus](#)
- [Primer-BLAST](#)
- [Sequence Read Archive](#)

NCBI INFORMATION

- [About NCBI](#)
- [Research at NCBI](#)
- [NCBI News & Blog](#)
- [NCBI FTP Site](#)
- [NCBI on Facebook](#)
- [NCBI on Twitter](#)
- [NCBI on YouTube](#)
- [Privacy Policy](#)

